Agricultural Resources Report

Valiano Project

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Valiano Project
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GLOSSARY OF TERMS AND ACRONYMS

Terms

Agricultural Resource

The term Agricultural Resource refers to any of the following: (1) a site with an active agricultural operation; (2) 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 by the California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP); and (3) 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 San Diego County Department of Agriculture, Weights and Measures (AWM), the California Department of Water Resources (DWR) land use data, and vegetation data from the San Diego County Planning & Development Services (PDS).

Active Agricultural Operations

Active agricultural operations refer to the routine and ongoing commercial operations associated with a farm, orchard/grove, dairy, or other agricultural business and shall include: (1) 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; (2) the raising of livestock, fur bearing animals, fish or poultry, and dairying; (3) any practices performed by a farmer on a farm as incident to or in conjunction with farming operations, including the preparation for market, delivery to storage or to market, or delivery to carriers for transportation to market; and (4) 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.

Row/Field Crops

For purposes of this report, the term row/field crops is defined to include commodities such as grains and silage, as well as cultivated (i.e., non-container stock) outdoor vegetable, flower, and berry crops.

Important Agricultural Resource

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

Acronyms and Abbreviations

ºF	Degrees Fahrenheit
A-70	Limited Agriculture (zoning)
AMSL	above mean sea level
APN	Assessor's Parcel Number
AWM	Department of Agriculture, Weights and Measures (County of San Diego)
CDC	California Department of Conservation
CEQA	California Environmental Quality Act
County	San Diego County
CWT	Hundredweight
DCSS	Diegan coastal sage scrub
DU	dwelling unit
DWR	California Department of Water Resources
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FMMP	Farmland Mapping and Monitoring Program
GPA	General Plan Amendment
HARRF	Hale Avenue Resource Recovery Facility
HGSPS	Harmony Grove Sewer Pump Station
HGWRP	Harmony Grove Water Reclamation Plant
HOA	Homeowner's Association
I-	Interstate
kV	kilovolt
LAFCO	Local Agency Formation Commission
LARA	Local Agricultural Resource Assessment
LBZ	Limited Building Zone
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Natural Resources Conservation Service
PACE	Purchase of Agricultural Conservation Easement
PDR	Purchase of Development Rights
PDS	Planning & Development Services (County of San Diego)
PVC	polyvinyl chloride

Acronyms and Abbreviations

RA	Residential or Single-family Residential
RDDMWD	Rincon Del Diablo Municipal Water District
SCS	U.S. Soil Conservation Service
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas & Electric
SF	square foot (or - feet)
SR	State Route or Semi-Rural (zoning)
TM	Tentative Map
TPM	Tentative Parcel Map
USDA	U.S. Department of Agriculture
VWD	Vallecitos Water District
WTWRF	Wastewater Treatment and Water Reclamation Facility
ZOI	Zone of Influence

EXECUTIVE SUMMARY

The proposed Valiano Project (Proposed Project) includes an approximately 238.67-acre site in an unincorporated portion of San Diego County (County) near the cities of San Marcos and Escondido. The Project site is located approximately 1.7 miles west of Interstate 15 (I-15) and 0.6 mile south of State Route (SR) 78, at its closest points. Principal site access is from SR-78, Nordhal Road, and Country Club Drive, from which a number of smaller surface streets (e.g., Hill Valley Drive, Eden Valley Lane and Mt. Whitney Road) extend along or near the northern and eastern property boundaries.

The Proposed Project consists of a residential community with 326 single-family dwelling units (DU) and related facilities within a total on-site disturbance area of approximately 125~~7~~ acres (including areas to be initially graded and subsequently landscaped and/or retained as open space). The residential development is divided into five distinct neighborhoods, with a minimum lot size of 5,630 square feet (SF) and an overall average lot size of approximately 15,050 SF. The proposed development also incorporates a number of related amenities and facilities, including a community recreation area, an on-site wastewater treatment and water reclamation facility (WTWRF), a related~~nd~~ wet weather storage area, three pump (lift) stations, a 3.0-million gallon water tank located on an adjacent 3.2-acre parcel and related access road and pipeline facilities (located partially on-site and partially within the adjacent parcel),~~the retention of an existing barn complex in the southeastern portion of the site,~~ a number of off-site roadway improvements, and three potential off-site sewer line options. An area within the site that ~~currently~~ includes approximately 35.4~~6.5~~ acres of avocado orchards, portions of which were ~~damaged or~~ destroyed by a recent (2014) wildfire, would be retained as a Project design feature and would be dedicated as an agricultural easement. The agricultural easement would be granted to the County of San Diego to protect the availability and viability of this area for potential~~the associated~~ agricultural uses. Specifically, due to the noted wildfire and the current drought conditions, the agricultural easement area may or may not be retained or reestablished as an avocado orchard (with avocadoes typically requiring high irrigation levels). Rather, the easement area would be managed and maintained to ensure that it is available and viable for associated potential agricultural uses. While no specific agricultural activities are currently proposed within the easement area, such uses may potentially include~~, which may include partial retention of the existing viable avocado orchards, as well as additional potential uses such as~~ avocados (should water become available again), vineyards and/or other orchards that require less irrigation (e.g., ~~citrus,~~ pomegranates~~, nuts~~ and olives). The 35.4~~6.5~~-acre agricultural easement would preclude future development or other uses that could prevent or diminish the availability and viability of this area for continued agricultural use. Specifically, all non-agricultural uses would be prohibited, including: (1) the construction or placement of any residence, garage, or any accessory structures designed or intended for human occupancy; (2) the construction or placement of any recreational amenities, such as tennis courts or swimming pools; and (3) other non-agricultural related grading or construction that would render any portion of the noted easement unavailable or non-viable for agricultural use. Exceptions to the described prohibitions may include grading and construction for wells, water distribution systems or other activities/facilities required ~~to continue the~~for agricultural operation (including access to the noted water facilities), as well as fuel management activities required by a written order from the Fire Marshall. To ensure the viability and availability of the easement area for

potential agricultural uses as described, the Project owner(s) or Project Homeowner's Association (HOA) would retain ~~an~~ a qualified ~~agricultural~~ manager/consultant to ~~oversee the continued operation of the orchards~~maintain the easement area, with specific requirements to be included as a Project Design Consideration (and outlined below in Sections 1.2 and 2.4). Irrigation for ~~the ongoing~~potential agricultural operations in the described easement would be provided either from an existing on-site well and related facilities used to irrigate the existing avocado orchards, or potentially from provision of recycled water (when available) to supplement or replace the use of groundwater for agricultural irrigation. In addition, uses such as small orchards and gardens would be allowable within individual residential lots on the proposed development. Such uses would constitute an opportunity on smaller lots (i.e., lots of less than one-half acre) to provide transitional/buffer areas with off-site agriculture and/or open space. On larger lots, however, portions of these uses could potentially be subject to Limited Building Zone (LBZ) easements used to partially defer off-site mitigation requirements (as discussed below in this Summary and in Section 2.4).

On-site topography is generally characterized by a north-south trending ridge extending through much of the western and northern portions of the property, a large knoll in the southeastern-most area, several larger drainages flanking these upland features, and generally level terrain in other on-site areas. Surface drainage from most of the Project site flows primarily to the east and south and ultimately enters Escondido Creek. The northern-most portion of the site, as well as portions of the adjacent 3.2-acre parcel, drain~~s~~ north and west as overland flow and through a small unnamed drainage, before eventually reaching San Marcos Creek. Much of the western and northern portions of the site ~~are currently~~were previously used for commercial agriculture, with extensive areas of ~~active~~ avocado orchards ~~(portions of which were damaged or destroyed in a 2014 wildfire event)~~ and four minor apiary (bee keeping) sites present (portions of which were destroyed in a 2014 wildfire event). ~~Existing c~~Commercial agricultural operations have occurred more or less continuously on-site, since the late 1960s or early 1970s, with historic agricultural uses extending back to the early part of the 20th Century.

The Project site is located within a semi-rural area encompassing a mix of urban development, agriculture, and open space. Local urban development includes high-density residential and commercial uses to the north (San Marcos) and east (Escondido), with nearby areas encompassing agricultural uses, low- to moderate density residential development and open space. Local agricultural sites include relatively large areas of avocado and citrus orchards adjacent to the southern Project site boundary and within the adjacent 3.2-acre parcel; orchards and nurseries to the west, south and southwest; and minor greenhouse uses, vineyards and (apparent) row/field crop cultivation to the east. The nursery operations include relatively large areas of ornamental landscaping and fruit trees, as well as lesser amounts of herbaceous crops. Several of the nursery sites encompass open-air container plants, in-ground plantings, and/or enclosed structures, with the latter facilities ostensibly used for temperature- and/or drought-sensitive varieties. As seen in Figure 9, Agricultural Preserves and/or Williamson Act Lands in the Project vicinity include: (1) a 12-acre parcel located approximately 700 feet southeast of the Project site (and within the Project Zone of Influence [ZOI]) that includes both a Williamson Act Contract (No. 77-45) and an Agricultural Preserve (No. 95); and (2) a 35.3-acre Agricultural Preserve (No. 89) located approximately 0.3 mile southwest of the project site (and outside of the Project ZOI). Local open space includes large expanses of natural areas to the west and south, including the 784-acre Elfin Forest Recreational Reserve.

Pursuant to applicable County Guidelines, identified agricultural resources within the Project site encompass approximately 137.16 acres. Specifically, on-site agricultural resources include areas used currently, recently or ~~/~~historically for commercial agricultural operations, as well as applicable areas of California Department of Conservation (CDC)-designated (FMMP) Important Farmlands. Portions of the site not identified as agricultural resources generally include areas not available or suitable for agricultural use due to soil quality, environmental, right-of-way, and/or economic concerns, such as previously developed/disturbed sites, sensitive biological habitats, transmission line easements, and eucalyptus forest/woodland. The County has approved a local methodology that is used to determine the importance of agricultural resources in the unincorporated area of San Diego County, known as the Local Agricultural Resource Assessment (LARA) Model. The LARA Model takes into account six factors, including water, climate, soil quality, surrounding land uses, land use consistency, and slope, in determining the importance of agricultural resources. Based on evaluation under the described LARA Model, the Project site was determined to be an "important agricultural resource."

The Proposed Project would result in significant impacts to approximately ~~12.98~~13.14 acres of on-site important agricultural resources, based on the results of the LARA Model analysis described in Section 2.0. Pursuant to County Agricultural Guidelines, the Project applicant would be required to either: (1) preserve ~~12.98~~13.14 acres (1:1 mitigation ratio) of applicable on-site areas (i.e., agricultural resources encompassing CDC Prime Farmland or Farmland of Statewide Importance candidate soils) as "available and viable" for agricultural use through LBZ (or other) easements; (2) provide off-site mitigation for the noted ~~12.98~~13.14-acre impact area at a 1:1 ratio, through the acquisition of agricultural mitigation credits via the County Purchase of Agricultural Conservation Easement (PACE) Program; (3) provide off-site mitigation for the noted ~~12.98~~13.14-acre impact area at a 1:1 ratio, through privately-acquired agricultural easements or lands that meet the intent of the County Agricultural CEQA Guidelines; or (4) provide a combination of PACE mitigation credits and establishment of on- or off-site LBZ or agricultural easements, in appropriate areas that meet the intent of the County Agricultural CEQA Guidelines, totaling ~~12.98~~13.14 acres (pursuant to County approval). With the described mitigation, direct Project-related impacts to on-site agricultural resources would be reduced below a level of significance. In addition, if the eastern route segment of the off-site VWD sewer option, extending between Hill Valley Drive and the Casitas del Sol Mobile Home Park (refer to Figure 3e), is ultimately implemented, approximately 0.05 acre of impact to CDC candidate soils would result. Under this scenario, 0.05 acre of mitigation would be required in addition to the ~~12.98~~13.14 acres of described mitigation for on-site Project impacts, for a total mitigation requirement of 13.19~~03~~ acres. This additional mitigation could be implemented either through the PACE Program or a combination of PACE mitigation credits and establishment of on- and/or off-site LBZ easements, as noted above for the Proposed Project.

Project implementation would impact approximately 95.4~~02~~ acres of Local Agency Formation Commission (LAFCO) Prime Agricultural Land, including recently active avocado orchards and qualifying soils. The Proposed Project is considered consistent with related LAFCO policies regarding effects to Prime Agricultural Land, however, as the Project would provide "orderly growth" and "logical and efficient public services." Specifically, this conclusion is based on considerations including: (1) the nearby location of existing and ongoing urban development and related water and sewer district boundaries/infrastructure; (2) the inclusion of Project design elements, such as clustered development, appropriate lot sizes, locations and setbacks, to provide

a “logical” transition between nearby urban and semi-rural uses; (3) the use of extensive open space and easements, including a 35.4~~6.5~~-acre agricultural easement, to minimize the impact footprint and retain areas that are available and viable for ~~existing~~ agricultural use~~s~~ (including Prime Agricultural Land); and (4) the fact that the Proposed Project would maintain consistency with the County General Plan through the adoption of the associated GPA.

The Proposed Project would not result in significant indirect impacts to existing off-site agricultural operations and/or resources including avocado/citrus and mixed-use orchards, nurseries, row/field crops, greenhouses, vineyards, or Williamson Act contract lands. This conclusion is based on considerations including the nature, location and extent of proposed development and off-site agricultural operations/designations; the inclusion of Project site security fencing; the use of setbacks, landscaping and private orchards/gardens on applicable individual lots to provide transitional uses/buffers and screening; and required Project conformance with regulatory standards including National Pollutant Discharge Elimination System (NPDES) hydrology and water quality criteria.

Project implementation would not result in substantial air contaminant generation, and would conform to applicable NPDES hydrology/water quality standards. These design and regulatory conformance measures would ensure that interface conflicts such as noise, dust, and odor would not generate indirect impacts that could result in the conversion of agriculture.

Implementation of the projects within the identified cumulative study area (including the Proposed Project) would result in potentially significant cumulative impacts to CDC Prime and Statewide candidate soils. The Project contribution to this impact would be less than considerable, however, based on the following considerations: (1) Project-related impacts to candidate soils would represent ~~only approximately~~less than 10 percent of the cumulative total (i.e., ~~35.06~~33.14 out of ~~340.83~~338.91 acres); (2) under the Proposed Project design, ~~nearly 38~~over 41 percent of the on-site CDC candidate soils would be preserved (i.e., ~~21.41~~23.33 out of 56.47 acres); and (3) impacts to CDC candidate soils from the Proposed Project would be partially offset by the required mitigation for direct on-site and (if applicable) off-site impacts, which would total between ~~12.98~~13.14 and 13.19~~03~~ acres, as described above.

1.0 INTRODUCTION

1.1 Purpose of The Report

Based on County scoping requirements (County 2013a) and criteria contained in the County of San Diego *Guidelines for Determining Significance and Report Format and Content Requirements, Agricultural Resources* (Agricultural Guidelines, County 2007), the purpose of this report includes the following specific goals:

- Identify direct Project impacts to agricultural resources, as well as Design Considerations and/or mitigation measures that would avoid or minimize significant adverse effects from implementation of the Proposed Project.

- Determine potential indirect impacts to surrounding active agricultural operations and/or Williamson Act contract lands from implementation of the Proposed Project.

- Determine the significance of cumulative impacts to agricultural resources and active operations from the implementation of identified cumulative projects (including the Proposed Project).

- Determine the importance of agricultural resources and Local Agency Formation Commission (LAFCO) "Prime Agricultural Land" within the Project site, and assess potential impacts to those resources from implementation of the Proposed Project.

1.2 Project Location and Description

Project Location

The proposed Valiano Project (Proposed Project or Project) includes an approximately 238.67-acre site in an unincorporated portion of San Diego County (County) near the cities of San Marcos and Escondido (Figures 1 and 2). The site includes 13 individual parcels, with the following Assessor's Parcel Numbers (APNs): 228-31-313, 232-01-301 through 232-01-303, 232-02-055, 232-49-201, 232-50-018 through 232-50-023, and 232-50-024 (refer to Figure 2). In addition, the Proposed Project includes development of a water tank and related facilities on a 3.2-acre parcel owned by the Rincon Del Diablo Municipal Water District (RDDMWD) and adjacent portions of the Project site. Specifically, while the noted 3.2-acre parcel is not part of the Project site, the applicant will be responsible for constructing the water tank and related facilities on the noted parcel and adjacent portions of the site (refer to Figure 2, with additional information provided below under Project Description).

The ~~p~~Project site is located approximately 1.7 miles west of Interstate 15 (I-15) and 0.6 mile south of State Route (SR) 78 at its closest points. Principal site access is from SR-78, Nordhal Road, and Country Club Drive, from which a number of smaller surface streets (e.g., Hill Valley Drive, Eden Valley Lane and Mt. Whitney Road) extend along or near the northern and eastern property boundaries. A number of additional paved and unpaved roads are present in the

Project vicinity and may also provide site access, including Barham Drive, East/West Mission Road and La Moree Road (Figure 2).

Project Description

As shown on Figure 3a, the Proposed Project consists of a residential community with 326 single-family dwelling units (DU) and related facilities within a total on-site "disturbance" area of approximately 125~~7~~ acres (including areas to be initially graded and subsequently landscaped and retained as open space). The residential development is divided into five distinct neighborhoods, with the neighborhood locations, associated lot configurations, and grading limits shown on Figure 3a. The proposed development also incorporates a number of related amenities and facilities as outlined below, including a community recreation area, an on-site wastewater treatment and water reclamation (sewer) facility (WTWRF), a related~~nd~~ wet weather storage area, three pump (lift) stations, ~~an existing barn complex in the southeastern portion of the site that would be retained, and~~ a number of off-site roadway improvements (Figures 3b and 3c), ~~as well as~~ three potential off-site sewer options to the noted WTWRF (Figures 3d through ~~3f~~3g), and the previously noted water tank and related facilities located within and adjacent to the northern portion of the site.

Community Recreation Areas

The 2.7~~1~~-acre Neighborhood Park, located in the southeast portion of the Project site within Neighborhood 5 adjacent to Country Club Drive would include turf areas, seating, picnic facilities, a shade structure, a horse hitching station, a small tot-lot or playground, and active learning areas or structures. The public Neighborhood Park would include off-site parking and restroom facilities.

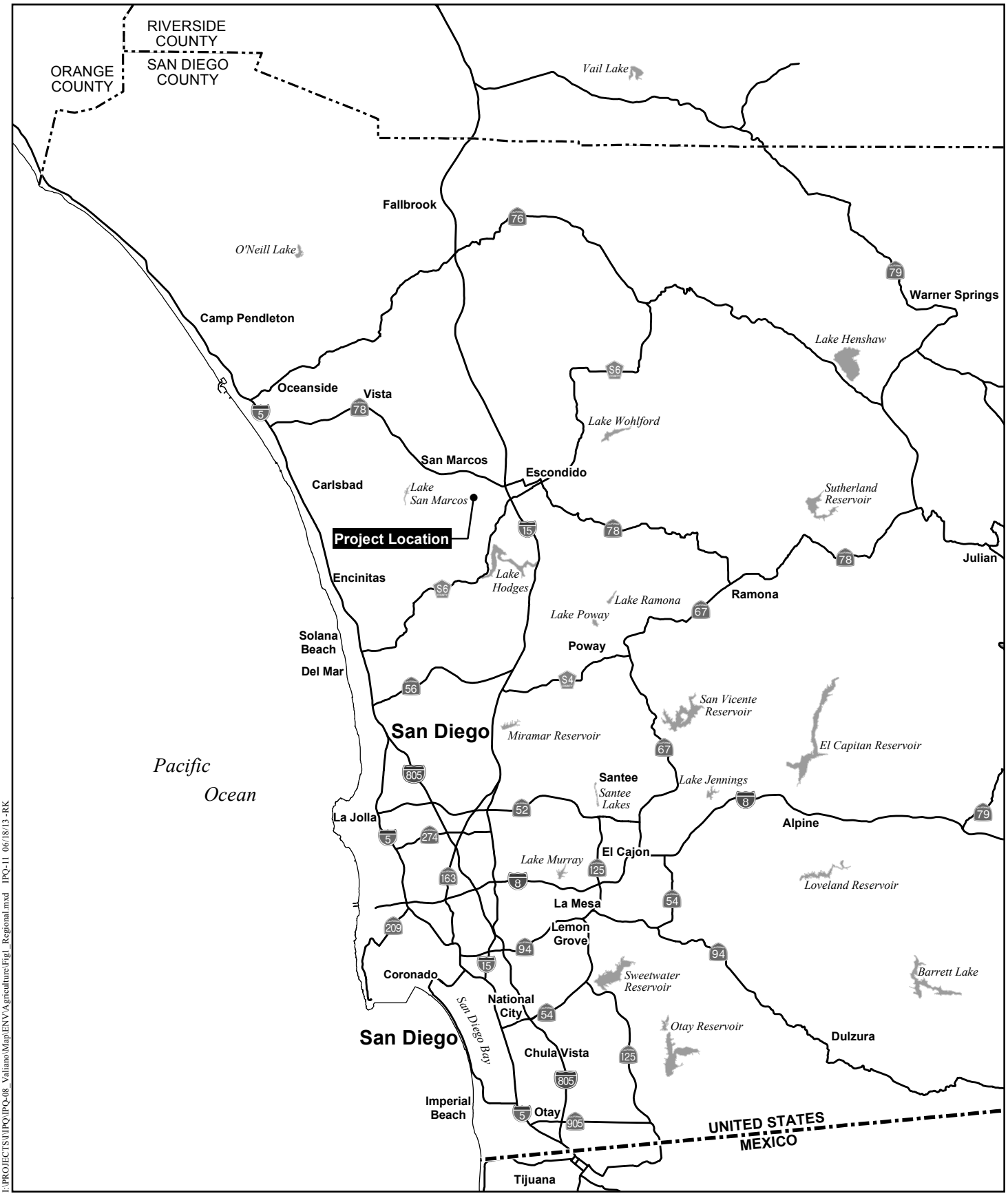
The 1.6-acre private Central Oak Park is located in the central portion of the Project site off Community Parkway. It would be connected to neighborhood walks and the public multi-use trail. The park would maintain existing habitat, and provide picnic areas and walking trails. The park would be privately maintained.

The Community Park and Recreation Center located off of Mt. Whitney Road would be a private facility for residents. The 2.3-acre facility would include a small community building, pool and lawn area, as well as restroom and maintenance facilities. Limited street parking would be provided.

A 0.5-acre Trail Head park is proposed within the eastern portion of the Project site in Neighborhood 2 and would provide the public with convenient access to the trail system to the east of the Project site. The Trail Head Park would also include benches, picnic tables, and a trail map/area information kiosk. The Trail Head Park would be privately maintained.

Water Reclamation Facility/Pump Site and Wet Weather Storage Area

The Project design includes a 0.4-acre on-site WTWRF and pump station located in the southeastern-most portion of the site, near Neighborhood 5. This facility would provide



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Regional Location Map

VALIANO

HELIX Environmental Planning

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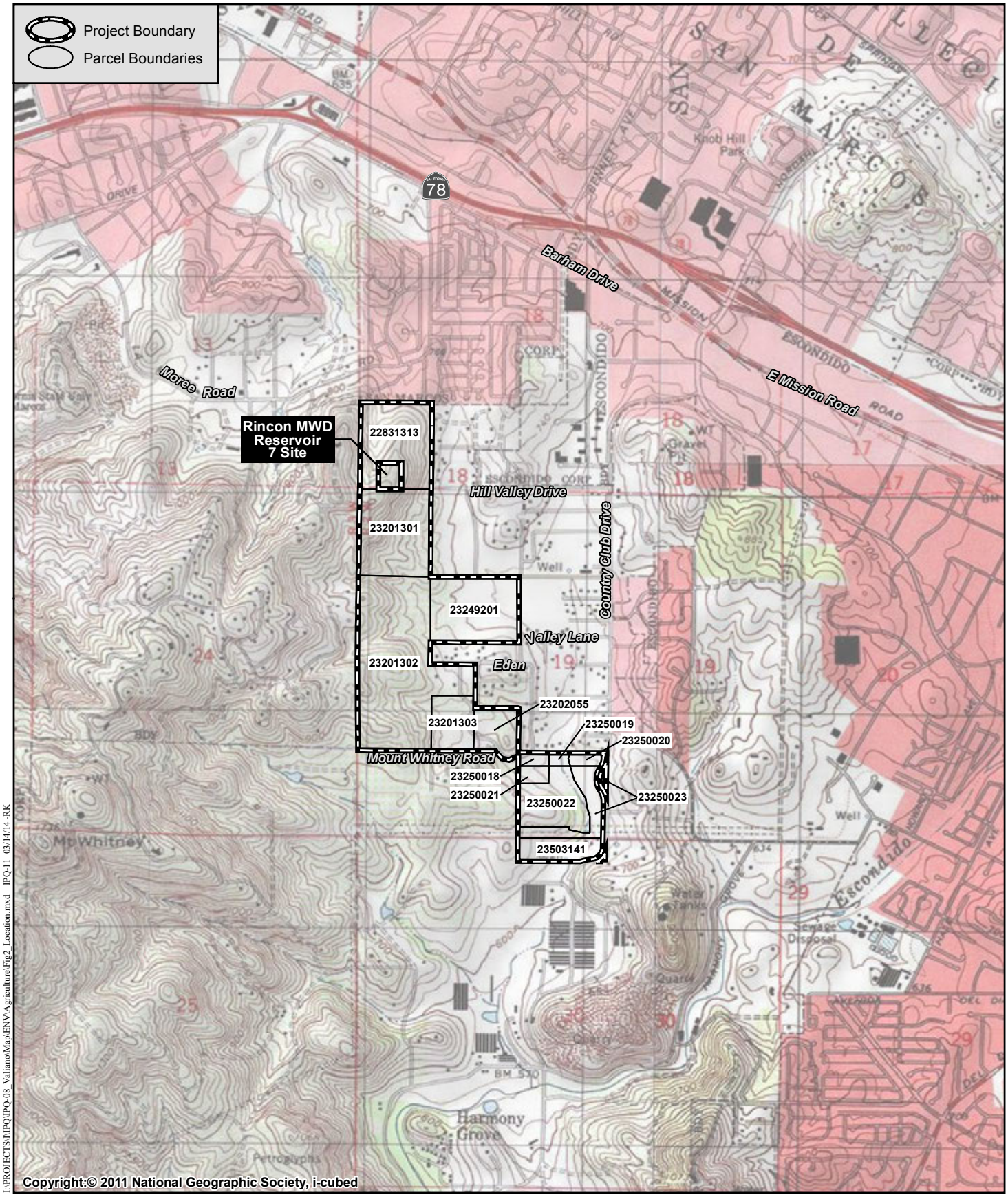
Figure 1



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Project Location Map

VALIANO

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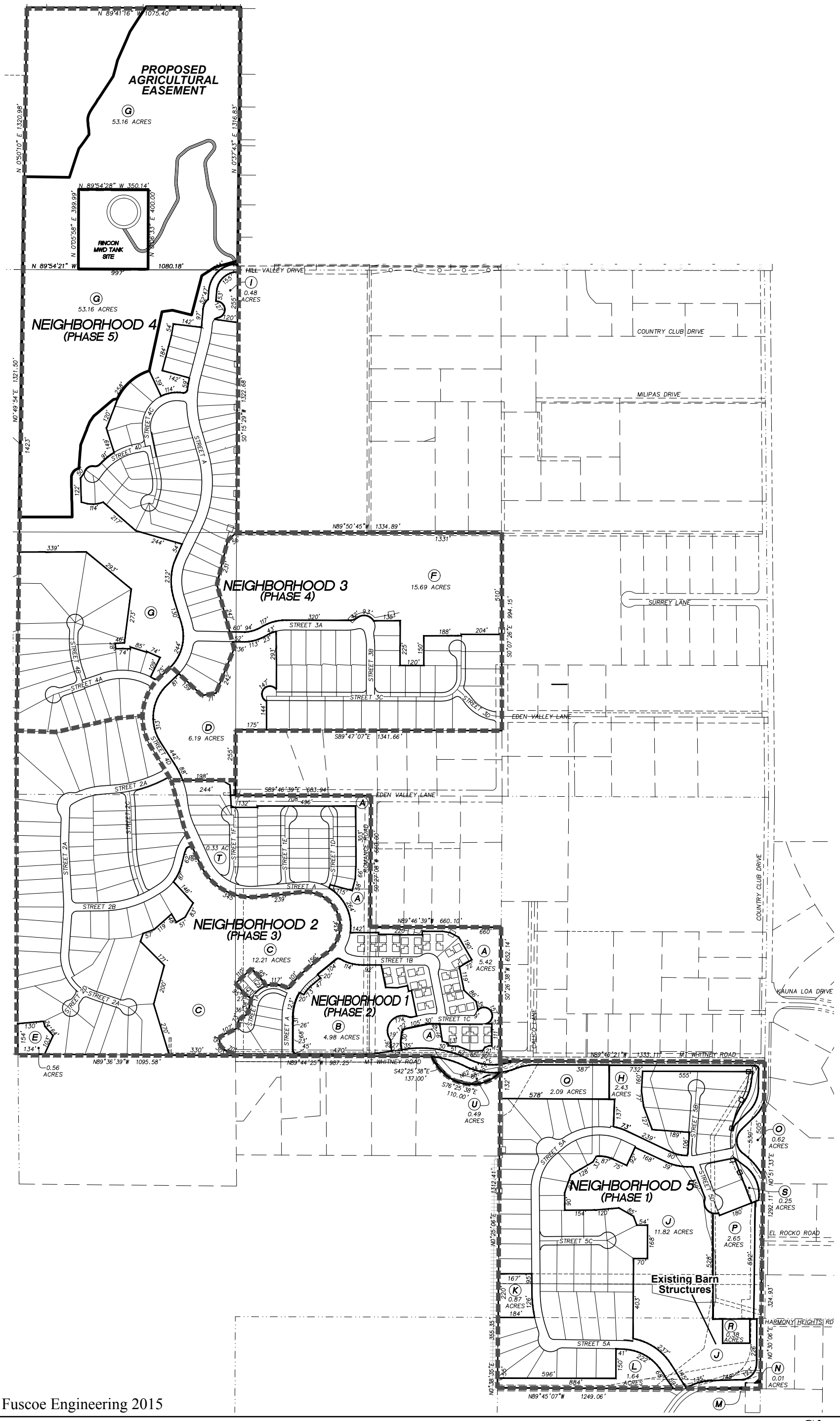
N 0 2,000 Feet

Figure 2



Source: Fuscoe Engineering 2015

Site Plan

VALIANO

Figure 3a

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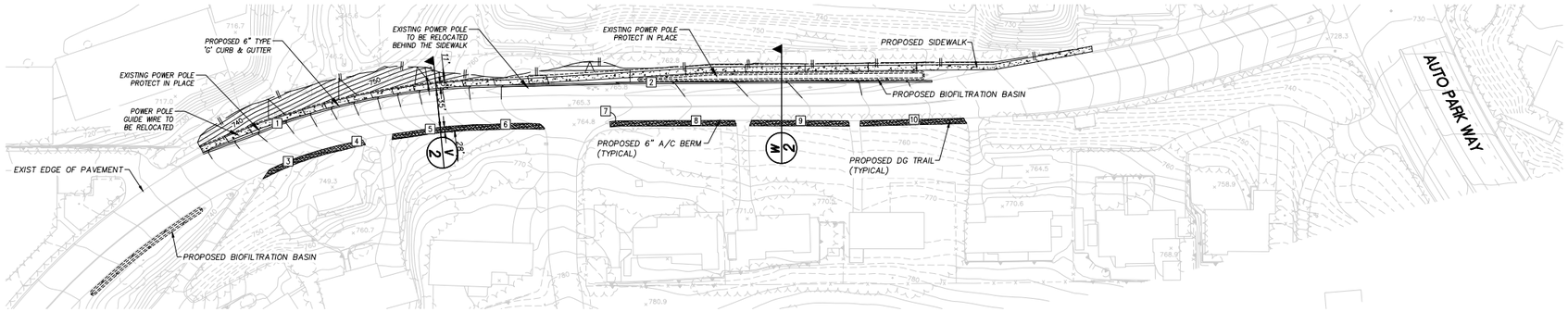
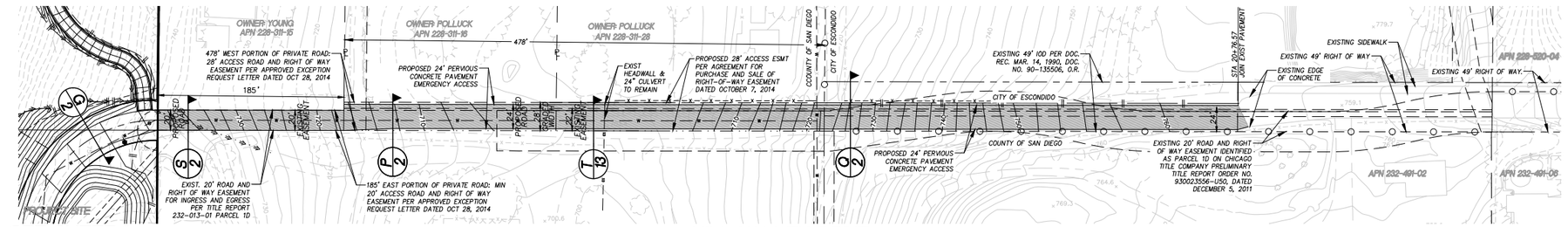
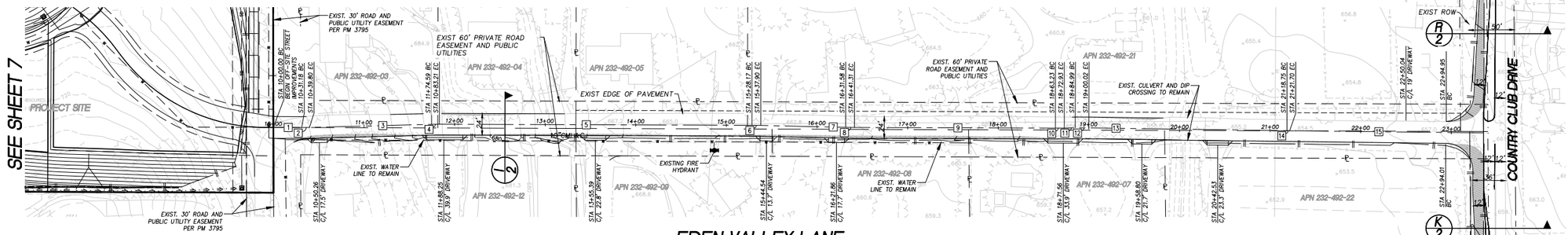


COUNTRY CLUB DRIVE



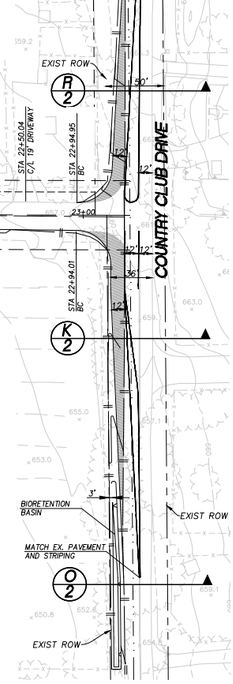
SEE SHEET 9

HILL VALLEY DRIVE



SEE SHEET 7

EDEN VALLEY LANE



PROPOSED PAVEMENT WIDENING

PROPOSED STRIPING

N

Source: Fuscoe Engineering 2015

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Off-site Road Improvements

VALIANO

Figure 3b

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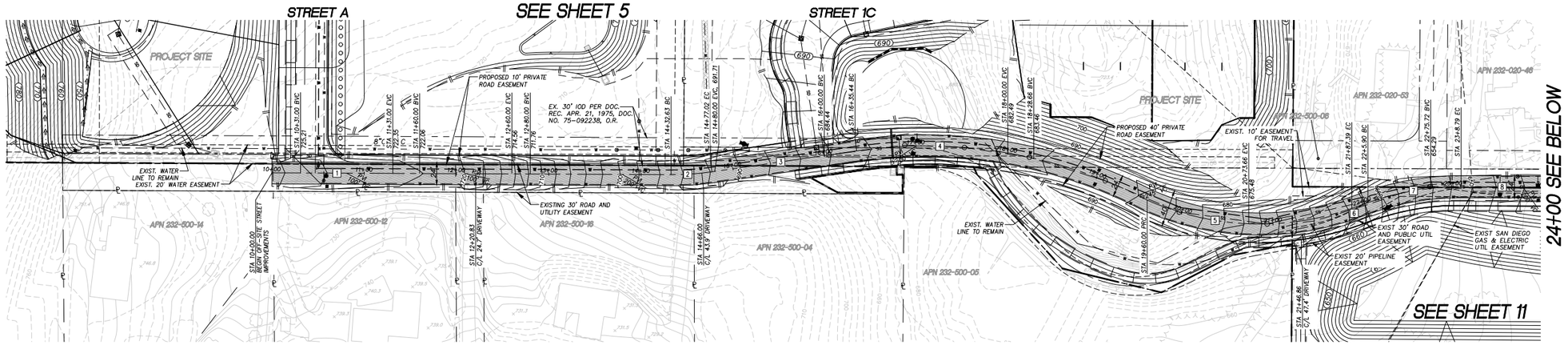

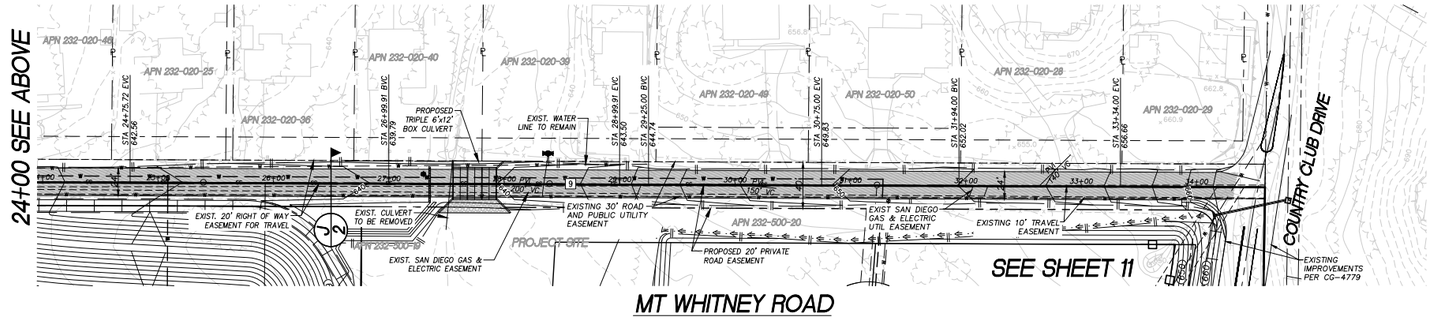

PROPOSED PAVEMENT WIDENING

PROPOSED STRIPING

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Source: Fuscoe Engineering 2015

Off-site Road Improvements

VALIANO

Figure 3c

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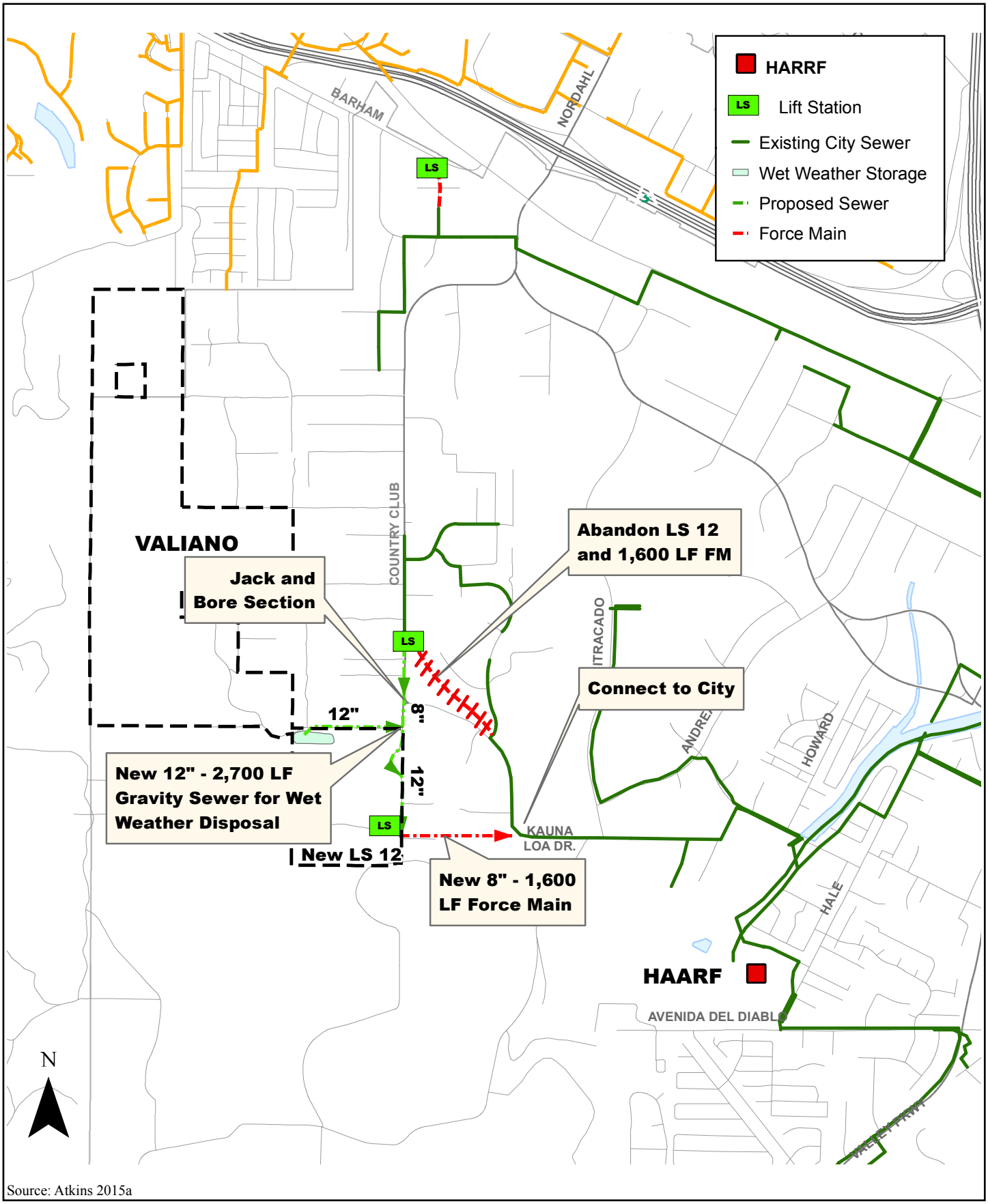

Source: Atkins 2015a

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Connection to City of Escondido Hale Avenue Resource Recovery Facility

VALIANO

Figure 3d

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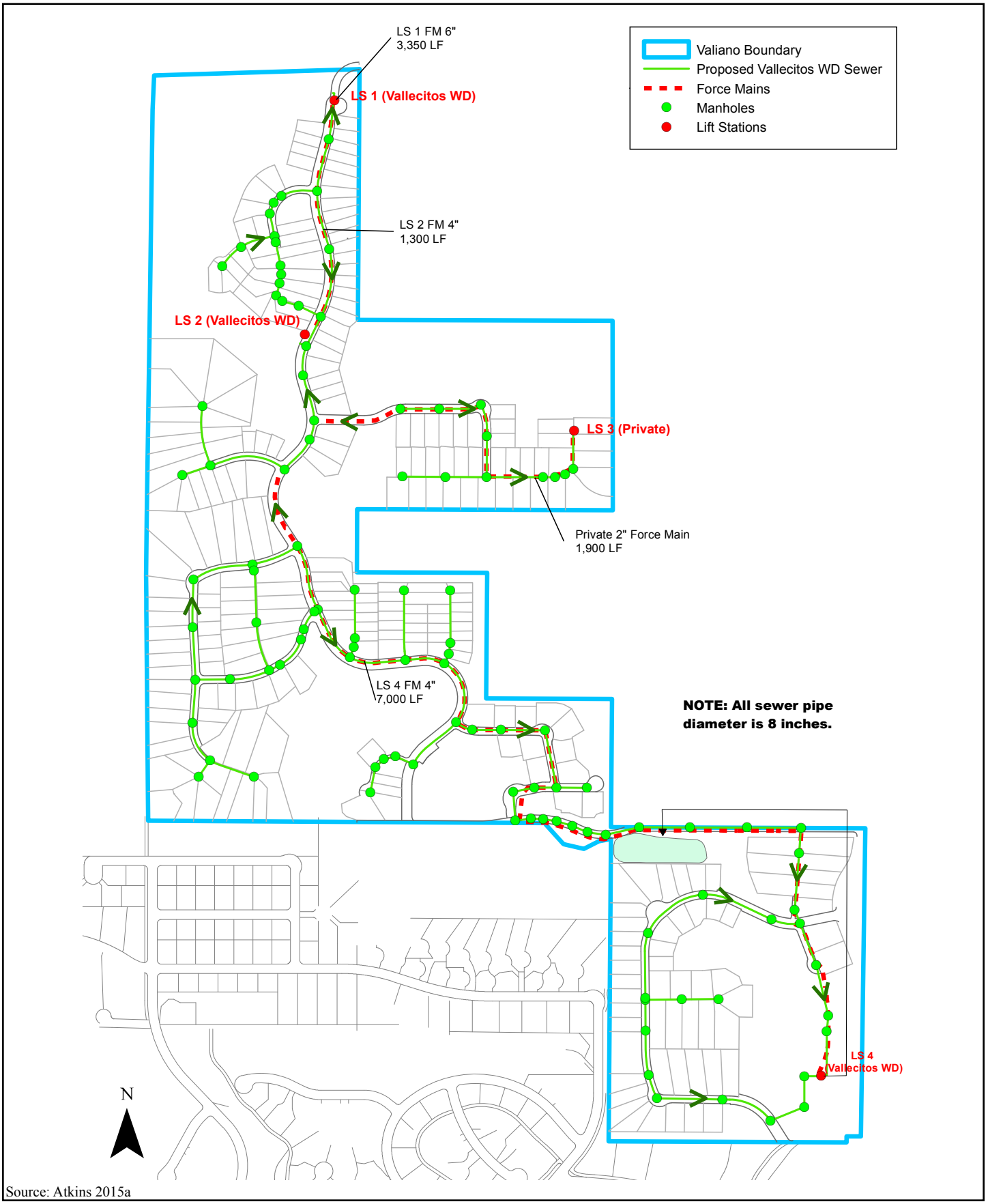

Source: Atkins 2015a

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On-site Connection to Vallecitos Water District Facilities

VALIANO

Figure 3e

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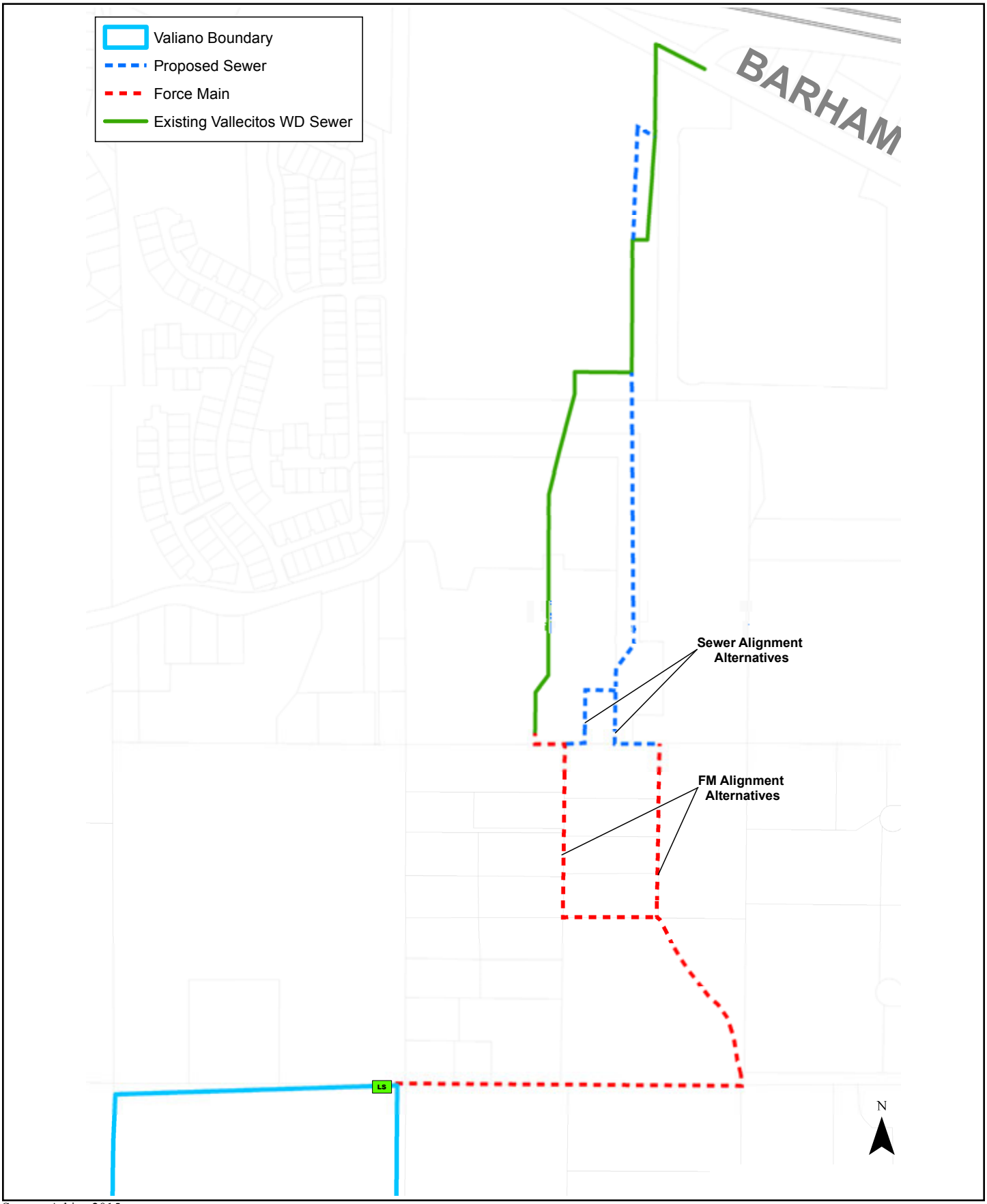

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Source: Atkins 2015a

Off-site Connection to Vallecitos Water District Facilities

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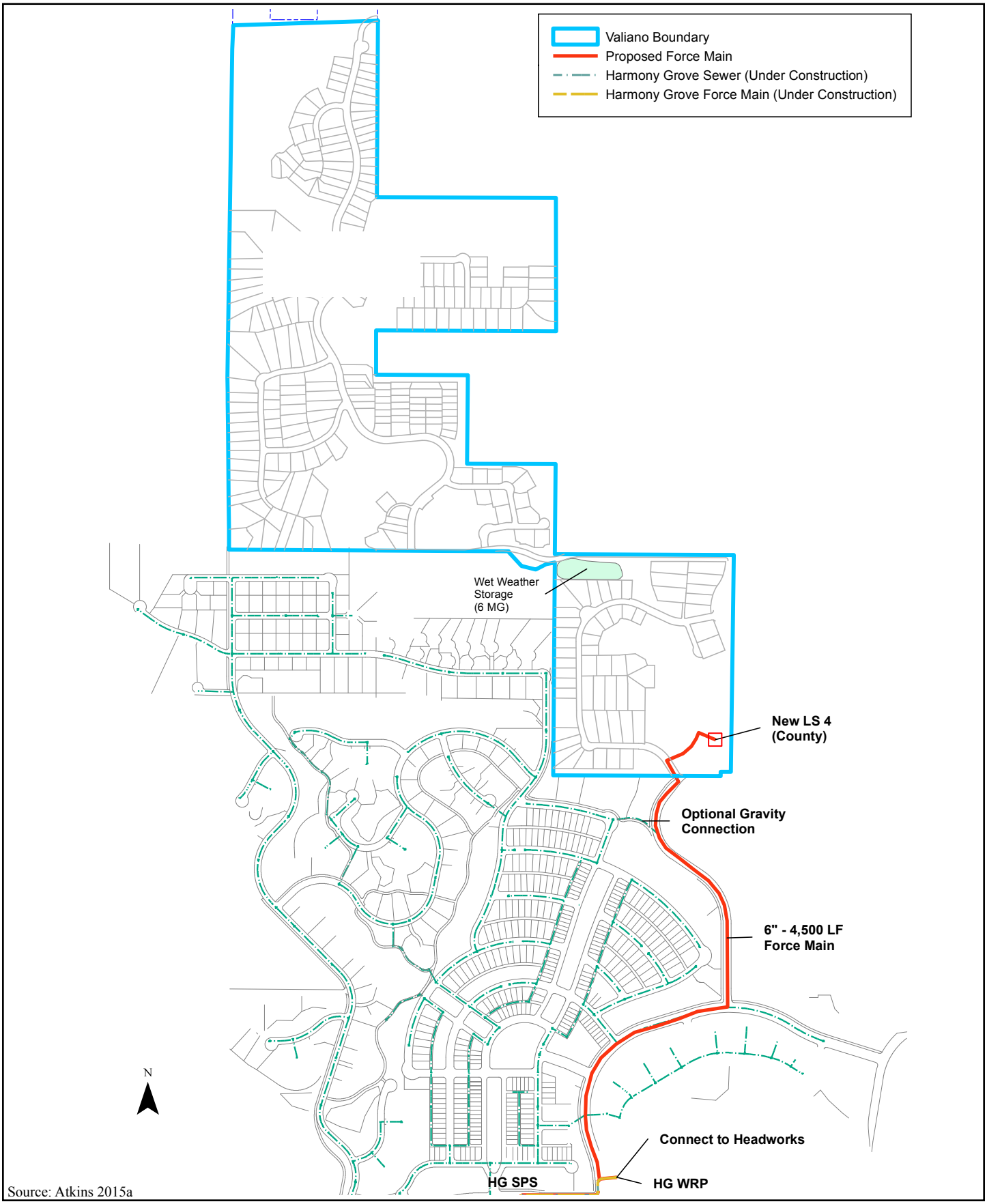
Figure 3f



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Source: Atkins 2015a

Connection to the Harmony Grove Treatment Plant

VALIANO

HELIX Environmental Planning

Figure 3g

treatment for all wastewater generated on site, and would produce reclaimed effluent per applicable regulatory standards for irrigation of on-site landscaping. In addition, a ~~2.0~~1.6-acre wet weather storage area would be located north of Neighborhood 5 to provide storage for excess treated effluent when required (e.g., during winter months when irrigation demand is lower).

Sewer Lift Stations

In addition to the pump station located at the water reclamation facility as noted above, three additional lift (pump) stations would be located in the northern and eastern portions of the site. All three of these sites would include an area of approximately 400 square feet (SF), and would provide lift capacity to deliver wastewater flows to the on-site plant.

~~Existing Barn Complex~~

~~An existing 15,000-SF historic barn complex located in the southeastern portion of the site is currently used in association with the Harmony Grove Equestrian Center, and would be retained under the Proposed Project design.~~

Open Space/Easements

Approximately ~~146.5~~149.4 acres of the Project site would be located outside the "developed" area (including areas to be initially graded and then landscaped, as previously described), including landscaping, natural open space, easements, water quality basins, and approximately ~~36.5~~35.4 acres of existing on-site avocado orchards (portions of which were ~~damaged or~~ destroyed during a 2014 wildfire event). The ~~36.5~~35.4-acre agricultural area would be dedicated as an agricultural easement granted to the County of San Diego, to protect the viability and availability of ~~the~~ this ~~associated~~ area for potential agricultural uses. Specifically, due to the noted wildfire and current drought conditions, the agricultural easement area may or may not be used as an avocado orchard (with avocadoes typically requiring high irrigation levels). Rather, the easement area would be managed and maintained to ensure that it is available and viable for agricultural uses. While no specific agricultural activities are currently proposed within the easement area, such uses may include ~~partial retention of the existing viable avocado orchards, as well as additional potential uses such as~~ avocados (should water become available again), vineyards and/or other orchards that require less irrigation (e.g., ~~citrus,~~ pomegranates ~~, nuts~~ and olives). Agricultural uses within the proposed easement area could be implemented directly through the Homeowner's Association (HOA; i.e., by retaining a qualified manager/consultant/ operator), or though options such as leasing or selling the easement parcel to a third party for agricultural development. The agricultural easement would preclude future residential-related development or other inappropriate uses, with all non-agricultural uses to be prohibited, including: (1) the construction or placement of any residence, garage, or any accessory structures designed or intended for human occupancy; (2) the construction or placement of any recreational amenities such as tennis courts or swimming pools; and (3) other non-agricultural-related grading or construction that would render any portion of the noted easement unavailable or non-viable for agricultural use. Exceptions to the described prohibitions may include grading and construction for wells, water distribution systems or other activities/facilities required for agricultural operation, as well as fuel management activities required by a written order from the

Fire Marshall. To ensure the viability and availability of the easement area for potential agricultural uses as described, the Project owner(s) and/or HOA would retain a qualified~~n agricultural~~ manager/consultant to ~~oversee the continued operation of agricultural activities within~~maintain the ~~36.5~~35.4-acre easement area. This may include activities such as "stumping" the remaining and burned (dead) avocado trees; providing erosion, weed and rodent control; and maintaining the irrigation system used for the ~~ongoing~~ previous agricultural operations ~~would be provided from an existing on-site well and related facilities used to irrigate the existing avocado orchards~~so that it is available for potential future agricultural use within the easement area (unless additional and/or replacement facilities are required, as noted above). Additionally, the use of recycled water (when available) may be implemented to supplement or replace the use of groundwater for agricultural irrigation. Management/maintenance of the noted agricultural easement and operations as described is included as a Project Design Consideration, and will require the development and execution of an Agricultural Maintenance Agreement to ensure that the ~~36.5~~35.4-acre agricultural is properly maintained (with specific conditions outlined in Section 2.4).

Two existing and adjacent San Diego Gas & Electric (SDG&E) easements (with a combined width of 220 feet) extend east to west through the southeastern portion of the site, with associated transmission facilities including two 230 kilovolt (kV) lines, one 136kV line, one 69kV line, and one 12kV line (and these easements/facilities to remain in place). An additional SDG&E easement extends through the northwestern portion of the site, near the proposed agricultural easement area noted above. This SDG&E easement is approximately 12 feet wide, extends approximately 340 linear feet adjacent to the proposed ~~36.5~~35.4-acre agricultural easement, and includes an area of approximately 0.1 acre (with this area not included as part of the proposed ~~36.5~~35.4-acre agricultural easement). A single, wooden pole electric line is located within the described easement, and apparently provides power to an existing residential (mobile home) site and/or irrigation facilities. While the voltage of this power line is unknown, it is likely a 69 kV (or smaller) line due to its small size and limited distribution service. Due to the minor extent and nature of this SDG&E easement and the associated power line, as well as the fact that it is apparently compatible with the ~~existing~~ on-site avocado orchards (based on ~~current~~ simultaneous operations), no conflicts with the proposed adjacent ~~36.5~~35.4-acre agricultural easement (and the ~~continuation~~ potential implementation of related agricultural operations) are anticipated. Additionally, two existing easements associated with proposed access road and waterline corridors extend through the northern portion of the site, adjacent to the proposed agricultural easement (refer to Figures 2 and 3a). These road and pipeline easements are related to the previously noted RDDMWD water tank to be located on an adjacent parcel, and encompass a total combined area of approximately 0.8 acre (with an additional 0.3 acre associated with proposed facility installation/grading, and the total 1.1-acre easement/grading area not included as part of the proposed 35.4-acre agricultural easement). The described road and pipeline easements (and related facilities) are considered compatible with the proposed agricultural easement (and potential agricultural operations) for similar reasons as noted above for the SDG&E easement/power line, with additional description of the water tank and related facilities provided below.

Internal Roadways and Access

The Proposed Project design includes a network of internal private access within the described disturbance area, as shown on Figure 3a. The Project site would have five access points, including two in Neighborhood 5 and one each in Neighborhoods 1, 3 and 4, as depicted on Figure 3a.

RDDMWD Water Tank, Pipeline and Access Road

As previously noted, the Proposed Project would include construction of a water tank and related pipeline and access road facilities, with the tank to be located on a 3.2-acre parcel surrounded by (but not part of) the Project site, and the pipeline/access road to extend through portions of the noted 3.2-acre parcel and adjacent areas of the Project site (refer to Figures 2 and 3a). The proposed water tank (the "R7 Reservoir") would consist of a steel structure measuring approximately 32 feet high and 130 feet in diameter, with a capacity of 3.0 million gallons. The proposed access road would include a paved, 15-foot wide surface within an existing 20-foot wide roadway easement, while the proposed pipeline would be a 16-inch diameter steel or polyvinyl chloride (PVC) underground facility within an associated 20-foot wide easement corridor. As previously noted, these facilities would be designed and constructed by the Project applicant as part of the Proposed Project implementation, with the RDDMWD responsible for all subsequent operation, maintenance and related activities. Additionally, as indicated above, the described 3.2-acre parcel is not part of the Proposed Project site, and the portions of the access road and pipeline easement areas (and related facilities/grading) within the Project site (totaling approximately 1.1 acres) are not included as part of the previously described 35.4-acre agricultural easement.

Additional Project Elements/Actions

In addition to the Proposed Project elements described above, Project implementation would include the following actions: (1) a General Plan Amendment (GPA) and Rezone to accommodate the proposed development (refer to Section 1.4.4); (2) a Specific Plan to establish criteria such as setbacks, height limits, design parameters and landscaping palettes; and (3) a LAFCO action to accommodate the proposed annexation of the Project site into the County Sanitation District, for sewer service.

Off-site Facilities

Off-site Roadway Improvements

The Project design includes a number of off-site improvements associated with relatively minor modifications along existing roadways. Specifically, these include minor widening, turn pockets and/or other modifications to Hill Valley Drive, Eden Valley Lane, Mt. Whitney Road and Country Club Drive in the vicinity of the Project site, with these proposed improvements depicted on Figures 3b and 3c.

Off-site Sewer Options

The Proposed Project design includes three potential options for the provision of sewer service, in lieu of the proposed on-site WTWRF and related facilities described above. Specifically, these potential options are summarized below and shown on Figures 3d through ~~3f~~3g.

Connection to the City of Escondido Hale Avenue Resource Recovery Facility (HARRF)

This potential option involves the following off-site facilities/activities (Figure 3d): (1) installation of approximately 2,700 linear feet of new 12-inch diameter sewer main from the Project site to an existing City pump station, with these facilities to be located within existing City of Escondido (City) and County streets; (2) installation of a new lift station (LS 12) and approximately 1,600 linear feet of new 8-inch diameter force main pipeline from the Project site to an existing City sewer line, with the new facilities to be located within an existing SDG&E easement; and (3) abandonment of existing LS 12 and approximately1,600 linear feet of existing sewer force main located in City/County streets (with force main abandonment proposed to encompass slurry fill rather than removal).

Connection to Vallecitos Water District (VWD) Facilities

This potential option (Figures 3e and 3f) would involve the installation of approximately 3,400 feet of new 12-inch diameter force main from the Project site to an existing VWD pipeline. These facilities would all be located within existing roadways, with the exception of a portion of the eastern route option extending between Hill Valley Drive and the Casitas del Sol Mobile Home Park.

This alternative also would require a number of on-site pipelines (all within Proposed Project streets) and four on-site pump stations and back-up power generators. The on-site pump stations would be located along Project roadways within the proposed development area, including two in Neighborhood 3, one in Neighborhood 4, and one in Neighborhood 5 (within the WTWRF site).

Connection to the Harmony Grove Treatment Plant

This potential option (Figure ~~3f~~3g) involves: (1) the installation of approximately 4,500 linear feet of 6-inch diameter force main extending south from the Project sewer lift station site to the Harmony Grove treatment plant, with this facility to be located within existing City/County streets; and (2) the construction of a new pump station and backup power generator within the WTWRF site.

Construction Phasing

Project construction is broken down into three main sequential phases. The first phase focuses on overall site grading and rock blasting, which would last approximately two years. The second phase would entail infrastructure installation, including the WTWRF, utility connections/facilities, and roadways, and would last approximately one year. The third phase,

which addresses "vertical" development of the Project and includes constructing the residential buildings and coating the pavement/architecture, would take approximately 2.5 years. Each individual neighborhood area would be constructed separately, with the exception of Neighborhoods 1 and 2 which would be constructed together.

1.3 Analysis Methods

Methods used in the analysis of agricultural resources and potential Project-related effects involved a variety of data sources and evaluation techniques as summarized below. These data sources and methods were chosen based on direction in the County Agricultural Guidelines (2007), as well as coordination with County planning and technical staff.

- Review/use of the following information sources: (1) current and historical aerial photographs dated 2012, 2005, 1995/1994, 1990, 1980, 1974, 1963, 1953, 1947, and 1929/1928 (Affinis Environmental Services, 2013; GEOCON, Inc. [GEOCON] 2013, 2012a; HistoricAerials.com 2013; and Google Earth 2013, refer to Appendix C); (2) U.S. Geological Survey topographic quadrangle maps; (3) the Project Cultural Resources Study (Affinis Environmental Services, 2013); (4) pesticide use records for the site from the San Diego County Department of Agriculture, Weights and Measures (AWM; County 2013b); (5) California Department of Conservation (CDC) Farmland Mapping and Monitoring Program (FMMP) data bases (including Important Farmland Maps, CDC 2007a, 2004); (6) Williamson Act Contract records (CDC 2007c); (7) local planning documents (including the San Diego County General Plan [2011], San Diego County Zoning Ordinance, and San Dieguito Community Plan [2012b]); (8) the AWM 2012 Crop Statistics and Annual Report (2012c); (9) project files from San Diego County and the cities of Escondido and San Marcos (for cumulative analyses); (10) climatic data bases (e.g., the Generalized Western Plantclimate, or "Sunset" Zones); (11) soil data bases (e.g., the U.S. Soil Conservation Service [SCS] San Diego Area Soil Survey [SCS 1973], and Natural Resources Conservation Service [NRCS] 2007); (12) the CDC FMMP Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, San Diego County (CDC FMMP 2010); and (13) the Project Phase I/II Environmental Site Assessments (ESAs, GEOCON 2013 and 2012a).

- Reconnaissance of agricultural and other land uses within the Project site and the identified agricultural cumulative study area (as described in Section 4.0) by vehicle and on foot, on February 7 and 9, 2013.

- Completion and interpretation of a Project-specific Local Agricultural Resource Assessment (LARA) Model, pursuant to the County Agricultural Guidelines (2007). Specifically, the LARA Model involves the consideration of water, climate and soil quality factors (required factors), as well as surrounding land uses, land use consistency and topography (complementary factors), to determine if the Project site is an "important agricultural resource," as defined in the referenced Guidelines.

- Evaluation of potential indirect effects relating to potential conflicts with surrounding agricultural uses identified within the Project Zone of Influence (ZOI), including the

conversion of farmland operations or designations (e.g., Williamson Act Contract lands) to non-agricultural use, that may result from project-related "changes in the environment." Specifically, such changes may encompass physical effects from the proposed development (e.g., air or water contamination), restrictions on agricultural uses such as chemical pesticide/herbicide applications in surrounding areas, due to the development of sensitive uses within the Project site, and the resultant development pressures to convert existing off-site farmlands to non-agricultural uses.

- Assessment of potential impacts to "Prime Agricultural Land" within the Project site, pursuant to the LAFCO definition in Government Code §56064.

- Assessment of potential impacts from the cumulative loss of existing agricultural resources relative to the agricultural cumulative study area and the associated list of projects (including the Proposed Project).

- Identification of Project Design Considerations and mitigation measures that would avoid or minimize significant adverse effects from implementation of the Proposed Project.

1.4 Environmental Setting (Existing Conditions)

1.4.1 Regional Context

The Project site is located south of SR-78 and west of I-15 in a semi-rural area encompassing a mix of urban development, agriculture, and open space (Figure 4). Nearby urban development includes high-density residential and commercial uses to the north (San Marcos) and east (Escondido), with nearby areas to the west and south encompassing agricultural uses, low- to medium-density residential development and open space. Local agricultural sites include relatively large areas of avocado and citrus orchards adjacent to portions of the southern and southwestern Project site boundaries (with similar uses ~~present~~ remaining on-site, refer to Sections 1.2 and 1.4.2 ~~below~~); smaller orchards and nurseries to the west, south and southwest (with these orchards primarily related to estate residential properties); a minor greenhouse area to the east; and minor (apparent) row/field crop and vineyard cultivation to the east (with these areas also associated with estate residential properties, refer to Figures 5a and 5b). The nursery operations include uses such as decorative crops (e.g., dollar eucalyptus), ornamental landscaping and fruit trees, as well as lesser amounts of herbaceous crops. Several of the nursery sites encompass open-air container plants, in-ground plantings, and/or enclosed structures, with the latter facilities ostensibly used for temperature- and/or drought-sensitive varieties. It should also be noted that an area of former agricultural uses is located just south of the Proposed Project, on the current Harmony Grove Village project site. This property formerly encompassed over 300 acres of agricultural uses, including approximately 135 acres of egg ranches/poultry farms and 81 acres of dairy operations that have been completely terminated and/or removed, as well as 91 acres of citrus (lemons) and avocado orchards that have been partially removed or abandoned (including most areas adjacent to the southern site boundary), and are proposed (and approved) for complete removal/development (HELIX 2006). Specifically, the Harmony Grove Village Specific Plan was approved on an associated 468-acre property (including the described agricultural uses) in 2007, with the site currently being

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Project Location and Surrounding Region

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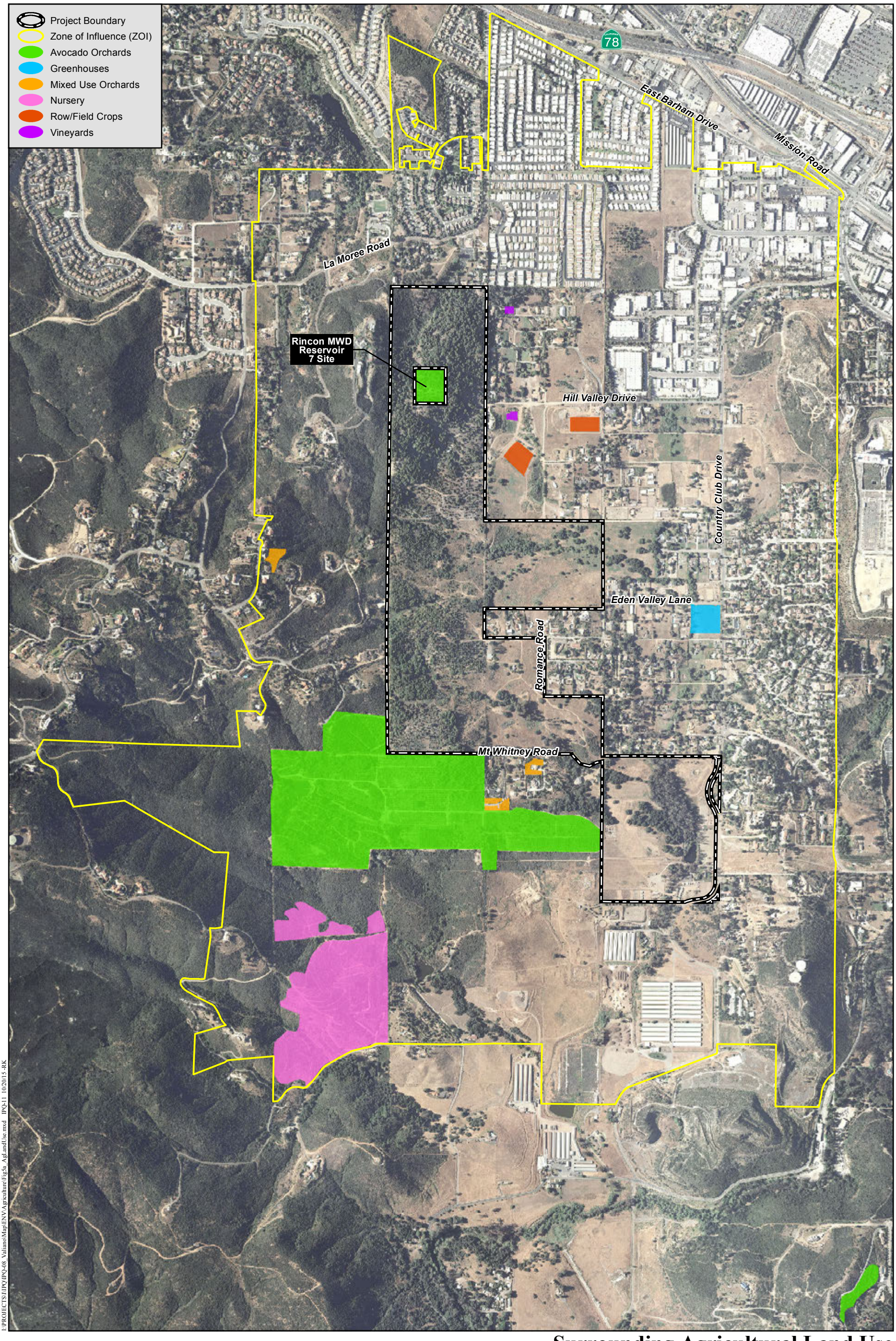
Figure 4



Surrounding Agricultural Land Use

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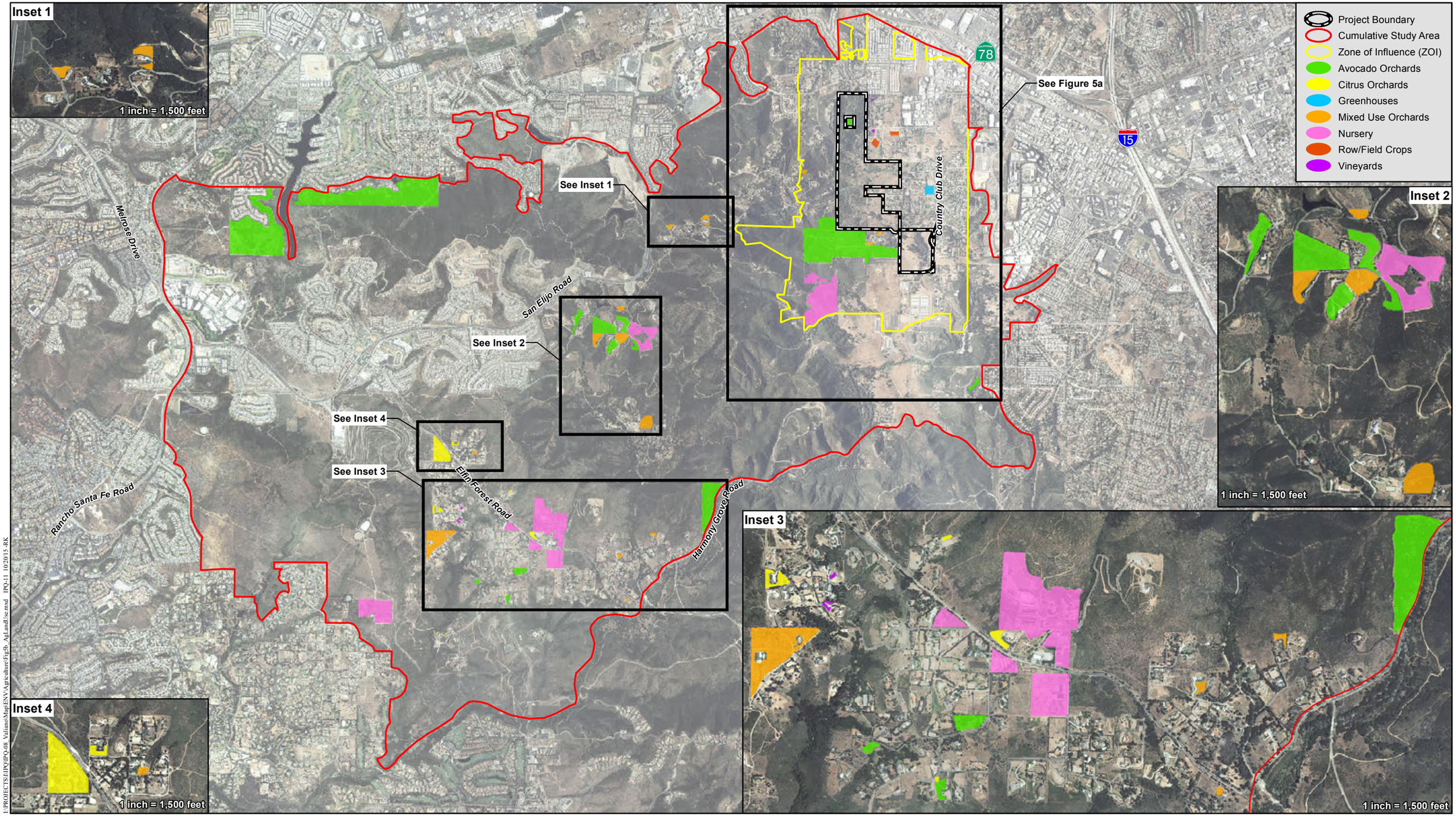
Figure 5a



Surrounding Agricultural Land Use

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Figure 5b

developed and the noted egg/poultry, dairy and orchard uses observed to be removed, demolished and/or abandoned during the Proposed Project field surveys conducted on February 7 and 9, 2013 and review of current aerial photographs (Google Earth 2013). Additional discussion of off-site agricultural resources in the vicinity of the Project site is provided below in Section 1.4.3.

The above-described areas in the Project site vicinity are bordered by more intensive urban development in the cities of San Marcos and Escondido to the north and east, respectively; and large expanses of natural open space to the west, south and southwest (refer to Figure 4). Local elevations range from approximately 500 feet above mean sea level (AMSL) along portions of San Marcos Creek to the northwest, to 1,736 feet AMSL at Mt. Whitney approximately one mile southwest of the site. The Project site region is characterized by a Mediterranean climate, with moderate year-round temperatures and relatively low precipitation levels, most of which falls during the winter months. Municipal water service is available in much of the described area (particularly the more developed portions), including the Project site which is served by the ~~Rincon Del Diablo Municipal Water District (~~RDDMWD~~)~~, with a number of associated water lines located along or adjacent to the eastern site boundary. The more rural outlying areas within the region likely utilize groundwater in lieu of (or to supplement) municipal service. Additionally, as previously noted, groundwater from an on-site well ~~is~~ was used to irrigate the ~~existing~~ avocado orchards within the site.~~, with continued use of t~~This well may also be ~~proposed~~ used for irrigation of potential agricultural uses within the ~~36.5~~35.4-acre area ~~portion of these orchards (and/or other agricultural uses, as previously discussed in the above Summary Section)~~ to be retained via easement in the northwestern portion of the site after project implementation. Alternatively, as discussed above in Section 1.2, recycled water (when available) may be used to supplement or replace the use of groundwater for agricultural irrigation.

Soils in the Project site region are characterized by generally well- to excessively drained loams, sandy loams and silt loams with clayey subsoils in the valleys, and coarse sandy to rocky loams overlying weathered bedrock in the upland areas. On-site soils consist primarily of moderately well- to excessively-drained sandy loams, with additional description provided below in Section 1.4.2.

As referenced above in Section 1.3, the FMMP produces Important Farmland maps and statistical data used for categorizing agricultural lands and analyzing related impacts (CDC 2007a, 2004). Agricultural lands are rated according to soil quality and irrigation status, with Important Farmland maps scheduled for update every 2 years based on aerial photograph review, computer mapping analysis, public input, and field reconnaissance. There are eight land use categories identified on the Important Farmland maps, including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-up Land, Other Land and Water (with applicable designations defined below in Section 1.4.2). The locations of mapped Important Farmland designations within the Project site, the associated ZOI (refer to Section 1.4.3), and the Project agricultural cumulative study area (as defined below in Section 4.0) are shown on Figure 6. As seen from this figure, the Project site region includes large contiguous areas of Other Land in developed and open space areas, smaller blocks of Urban and Built-up Land in denser urban development, relatively small areas of Unique Farmland and Farmland of Local Importance to the east, west and/or south, and

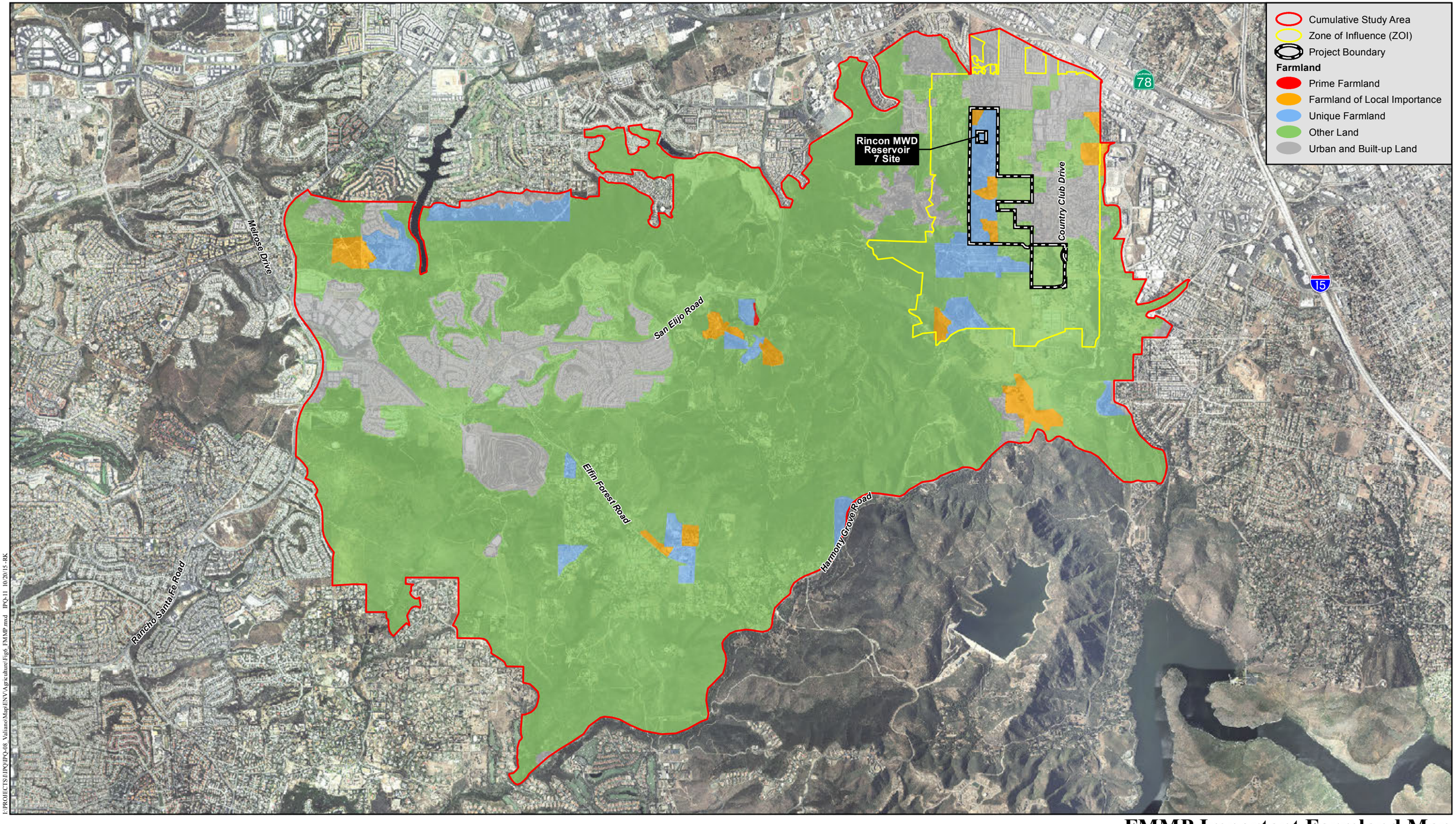
one minor area of Prime Farmland to the west. The Farmland of Statewide Importance, Grazing Land and Water designations are not mapped within the Project site or surrounding areas. Additional discussion of FMMP Important Farmland designations within the Project site and surrounding areas is provided below in Sections 1.4.2 and 1.4.3.

The majority of the Project site region is privately owned, with surrounding public lands limited primarily to a number of local parks, schools, and a habitat/recreation reserve. Specifically, local public lands in the project vicinity include: (1) Jack's Pond Park, a 23-acre park located approximately 0.3 mile north of the Project site; (2) The Elfin Forest Recreational Reserve, a habitat/recreation reserve that includes approximately 784 acres (including the Olivenhain dam and reservoir) and is located approximately 1.3 miles to the south; (3) Lake Moree Park approximately 0.5 mile to the northwest; (4) Double Peak Park approximately 2.2 miles to the west; (5) Discovery Lake/Lakeview Park approximately 2.2 miles to west (6) Del Dios Community Park approximately 2.3 miles to the south-southeast; (7) Knob Hill Elementary and Knob Hill Park approximately 1.2 miles to the northeast; and (8) California State University San Marcos approximately 1.3 miles to the west. None of the described public lands are located within the Project site, with only Jack's Pond Park located within the related ZOI.

One Williamson Act contract parcel and two agricultural preserves are also located south of the Project, including one overlying contract/preserve located within the ZOI. This existing contract/preserve site (Contract No. 77-45, Preserve No. 95) is owned by the Harry and Shirley Houtman Trust. Based on field reconnaissance and a previous investigation of this property (HELIX 2006), it is not currently in agricultural use. Additional discussion of the Williamson Act, as well as the noted contract lands and agricultural preserves, is provided below in Section 1.4.3.

1.4.2 Description of On-site Conditions and Agricultural Resources

On-site topography is generally characterized by a north-south trending ridge extending through much of the western portion of the property, a large knoll in the southeastern-most area, several larger drainages flanking these upland features, and generally level terrain in other on-site areas. On-site elevations range from approximately 1,013 feet AMSL along the ridge top in the northwestern portion of the site, to 614 feet AMSL along the southeastern property boundary. Surface drainage from most of the Project site flows primarily to the east and south, with some variability in direction due to local topography. Associated off-site flows continue generally south before ultimately entering Escondido Creek. The northernmost portion of the site drains north and west as overland flow and through a ~~number of~~ small unnamed drainage~~s~~, and eventually flows into San Marcos Creek (with this area including ~~a~~ portions of the previously described ~~36.5~~35.4-acre agricultural easement, the 3.2-acre water tank parcel, and other areas not proposed for development under the Proposed Project design). The Project site ~~is currently~~was previously used for commercial agriculture, with extensive areas of ~~active~~ avocado orchards ~~(portions of which were damaged or destroyed in a 2014 wildfire event), as well as~~ and four minor apiary (bee keeping) sites present (portions of which were destroyed in a 2014 wildfire event as previously discussed). As described below in this section under History of Agricultural Use, commercial agricultural operations on the Project site were initially conducted in the early



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FMMP Important Farmland Map

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Figure 6

part of the 20th Century, with ~~current~~ more recent (avocado orchard and apiary) operations having occurred more or less continuously on site since the late 1960s or early 1970s.

The determination of on-site agricultural resources was based on the following efforts/data sources: (1) site visits conducted on February 7 and 9, 2013; (2) review of current/historic aerial photographs dated 2012, 2005, 1995/1994, 1990, 1980, 1974, 1963, 1953, 1947, 1929/1928, and 1928; (3) review of the previously referenced Project Cultural Resources and Phase I/II ESA reports; (4) review of the Project Biotechnical Report (HELIX 2015~~4a~~); and (5) review of FMMP Important Farmland maps, and Prime Farmland/Farmland of Statewide Importance candidate soils.

For purposes of this analysis, and pursuant to Attachment A of the County Agricultural Guidelines (2007), agricultural resources are generally defined to include areas that are available and viable for agricultural use, and include: (1) active agricultural operations; (2) areas designated as, and meeting the associated definition of, FMMP Prime Farmland, Farmland of Statewide Importance, Unique Farmland or Farmland of Local Importance (as defined below in this section); and (3) areas with a history of agricultural production based on data sources such as aerial photographs. Identified agricultural resources within the Project site encompass a total of approximately 137.16 acres, including areas used ~~currently~~ recently and/or historically for agricultural operations (orchards, row/field crops, and apiary sites, refer to Section 1.4.1), as well as portions of the FMMP-designated Unique Farmland and Farmland of Local Importance (Figures 7a and 7b). Because the agricultural use areas and Important Farmland designations overlap in several portions of the site, the total on-site agricultural resource acreage is less than the sum of the individual acreages for these two categories. Specifically, the 137.16 acres of agricultural resources within the site encompass: (1) 116.96 acres of recently active avocado orchards; (2) 0.4 acre of recently active apiary uses; (3) 100.5 acres of Unique Farmland; (4) 27.3 acres of Farmland of Local Importance; (5) 12.9 acres of historic (circa 1928) orchard use in the southeastern portion of the site; (6) 1.59 acres of historic orchard use in the east-central portion of the site; and (7) 1.35 acres of historic row/field crop production in the east-central portion of the site (refer to the discussion of historical agricultural use below in this section for additional information). Portions of the site not identified as agricultural resources include: (1) areas that do not encompass active agricultural use or applicable FMMP designations, as noted above (and with no history of agricultural use); (2) developed and unavailable areas such as roads, structures and power line easements; (3) sensitive biological habitats; and (4) eucalyptus forest and woodland habitats (Figures 7a and 7b). The exclusion of these areas from on-site agricultural resources is due to the fact that they have likely not been previously used for agriculture, as well as their assumed unavailability for future agricultural use based on the following considerations:

- The underlying soil quality in developed areas has likely been compromised through grading, compaction and/or fill placement (per the discussion in Section 3.1.3 of the County Guidelines, refer to Footnote 9), and areas within transmission line easements are unavailable for current or future agricultural use.

- Sensitive habitat areas would either be precluded from agricultural use based on environmental concerns, or would require mitigation that would likely be prohibitively

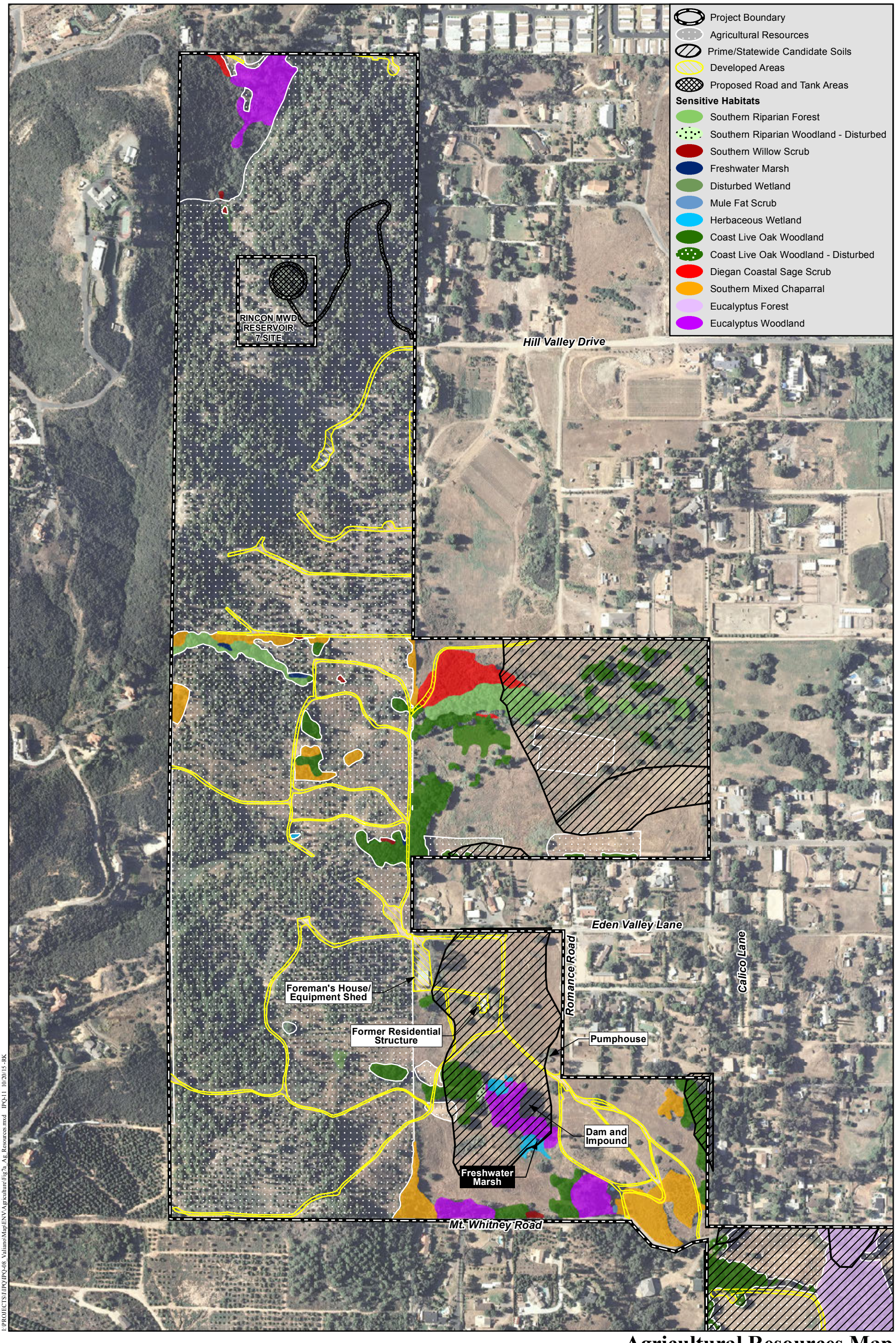
expensive (e.g., habitat restoration and/or the purchase of off-site mitigation credits). Specifically, in the Project site area, approximate mitigation costs for purchase of select native upland and wetland habitat credits would be as follows: (1) for Diegan coastal sage scrub (DCSS), estimated costs at the closest mitigation bank likely to be used for the Proposed Project (Red Mountain) would be approximately $35,000 per acre for unoccupied habitat (i.e., unoccupied by sensitive species including the California gnatcatcher); and (2) for most wetland habitats, estimated costs in the Escondido region would range between approximately $350,000 and $500,000 per acre, with potential mitigation bank sites including Red Mountain, Brook Forest, San Luis Rey and Moosa Creek (HELIX 2014a~~b~~).

- Removal of eucalyptus forest or woodland habitats to accommodate commercial agriculture would likely be prohibitively expensive, due to requirements including tree and stump/root system removal. Specifically, costs for a recent (2012) eucalyptus removal effort on a nearby property (Harmony Grove Village) ranged between approximately $50,000 to $75,000 per acre (including tree/stump/root system removal and disposal), based on site-specific conditions such as access and equipment requirements (HELIX 2014b~~c~~). While the referenced effort entailed more difficult access conditions than the Proposed Project site, even costs at or below the low end of the listed range would likely represent a substantial economic burden to implementing agricultural operations in areas of eucalyptus forest or woodland habitat on the Project site.

On-site soils, Important Farmlands, agricultural history, climate and water resources associated with the Project site (and the identified 137.16 acres of on-site agricultural resources) are described below, along with Williamson Act contract/agricultural preserves and Prime Agricultural Land considerations pursuant to LAFCO criteria.

Soils

Soils within the Project site and vicinity have been mapped by the NRCS (formerly the SCS, 1973). As shown on Figure 8 and Table 1, the Project site includes nine distinct soil series and 14 individual soil types. The SCS soil classification system also includes assessments of Land Capability Classification and Storie Index ratings, with summary definitions provided below and on-site soil ratings included in Table 1. Five of the identified soil types within the Project site are identified as meeting the criteria for CDC *FMMP Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance* (2010), as depicted in Table 1. While the entire site has been mapped for topsoils as shown on Figure 8, approximately 16.57 acres have been developed for uses such as structures and roads, with the underlying soils likely altered or lost due to grading, compaction, and/or placement of fill. Mapped soils within the on-site portions of the previously described R7 Reservoir access and pipeline easements/facilities include Cieneba Very Rocky Coarse Sandy Loam, 30 to 75 Percent Slopes (CmrG) and Fallbrook-Vista Sandy Loams, 15 to 30 percent slopes (FvE, with these areas reflected in Table 1). The entire 3.2-acre parcel that would encompass the reservoir structure and related easement/facility areas includes CmrG soils.



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Agricultural Resources Map

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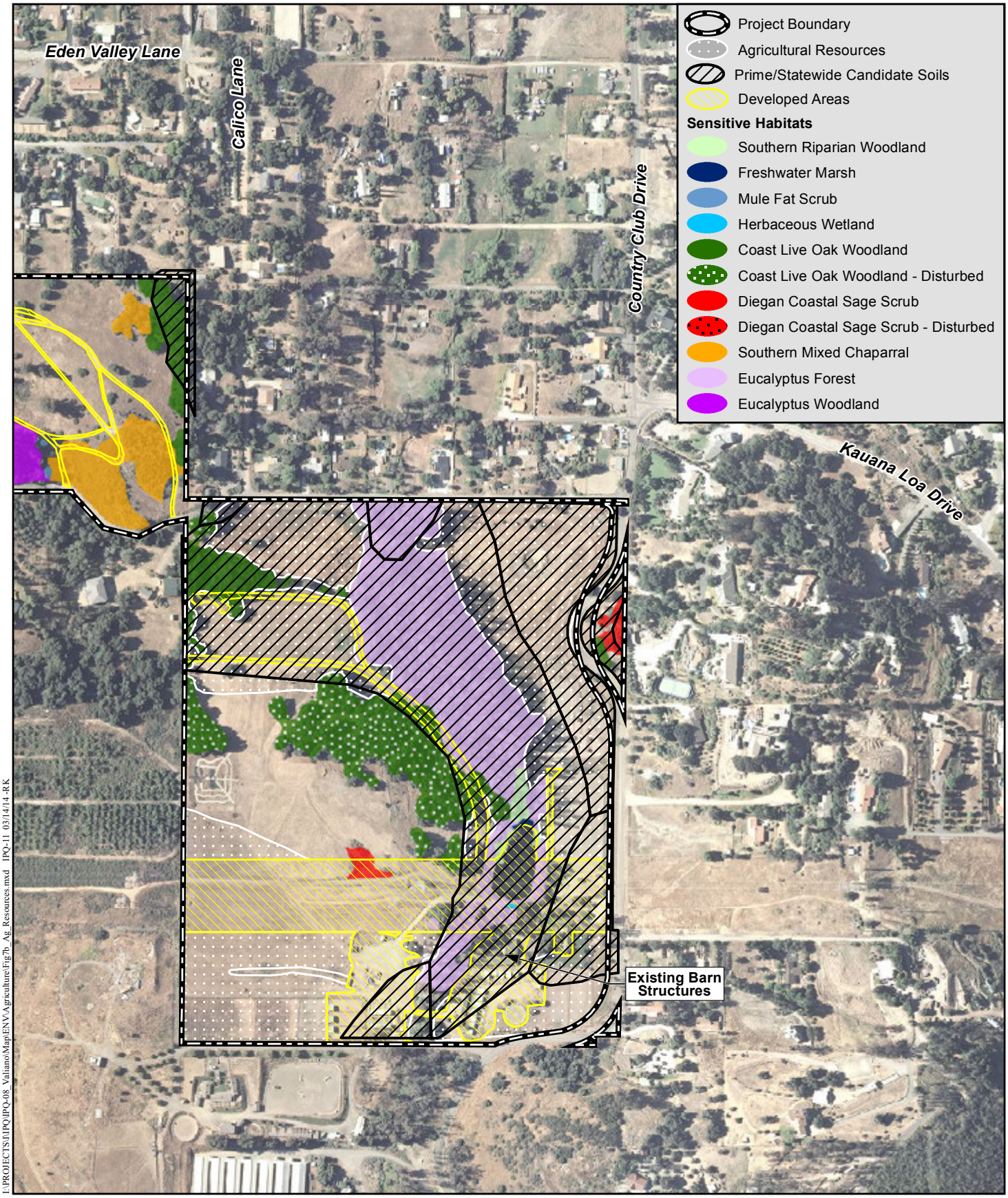
Figure 7a



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Agricultural Resources Map

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HELIX Environmental Planning

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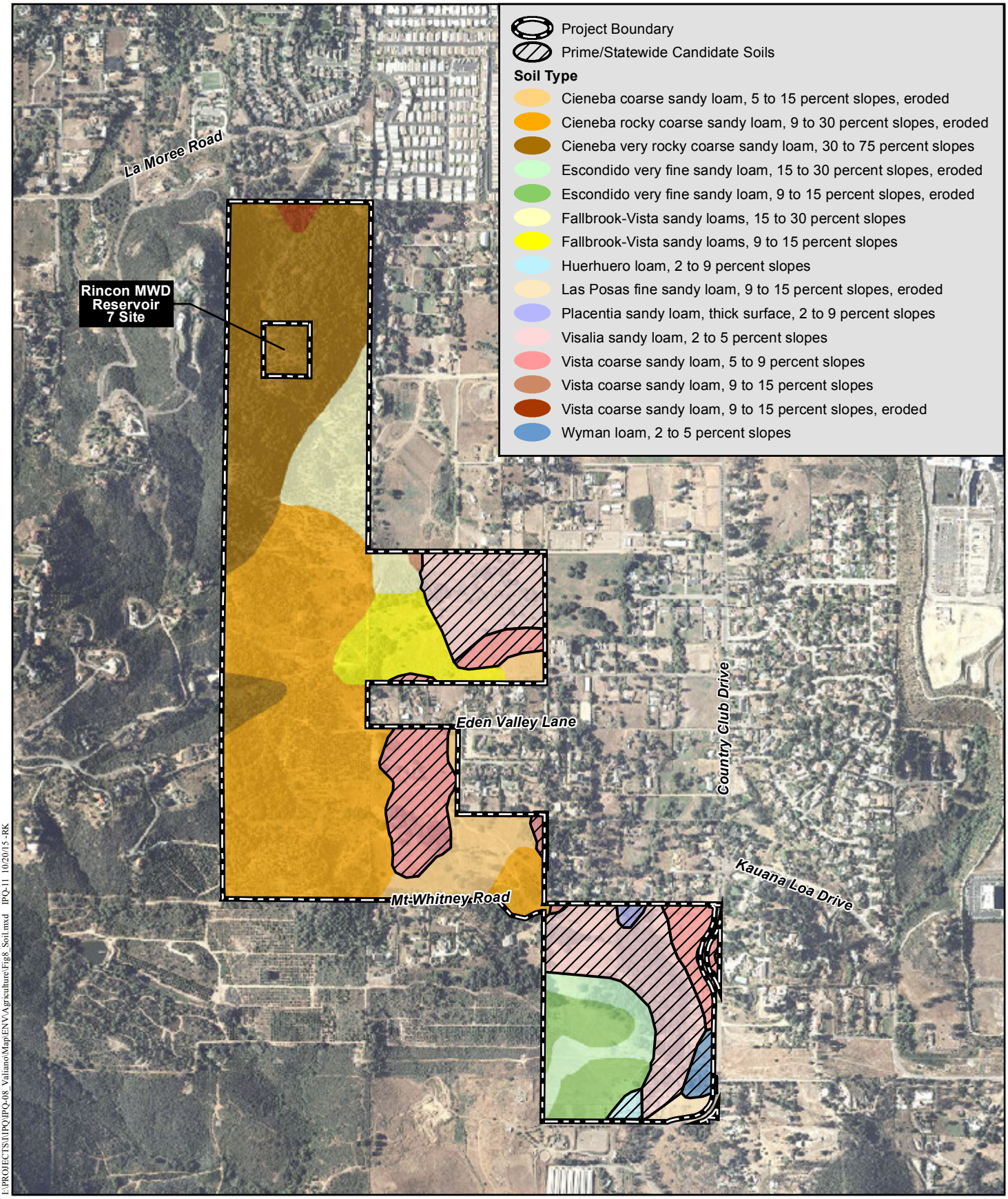
0 400 Feet

Figure 7b



I:\PROJECTS\1\IPQ\IPQ-08_Valiano\Map\ENV\Agriculture\Fig8_Soil.mxd IPQ-11 10/20/15 - RK

NRCS Soils Map

VALIANO

HELIX Environmental Planning

N 0 1,000 Feet

Figure 8

Storie Index

The Storie Index designation "[e]xpresses numerically the relative degree of suitability, or value, of a soil for general intensive agriculture. The rating is based on soil characteristics only. It does not take into account other factors such as the availability of water for irrigation, climate, and distance from markets, which might determine the desirability of growing specific crops in a given locality" (SCS 1973). The four factors that represent the inherent characteristics and qualities of the soil (profile characteristics, texture of surface soil, slope, and other conditions that limit use of the soil) are considered in the index rating. The final rating can fall between 100 (excellent) and less than 10 (very poor), with Storie Index ratings for soils within the Project site shown in Table 1. The noted ratings of <5 to 81 represent Grade 1 through Grade 6 soils, with the following characterizations provided from the Soil Survey (SCS 1973): (1) Grade 1 soils (34.58 acres on site) have few or no limitations that restrict their use for crops; (2) Grade 2 soils (0.67 acre onsite) are suitable for most crops but exhibit minor limitations that narrow the choices; (3) Grade 3 soils (60.33 acres onsite) are suitable for a few, or special crops, with management; (4) Grade 4 soils (9.06 acres onsite) are severely limited for all crops and require special management; (5) Grade 5 soils (86.22 acres onsite) are not suited for cultivated crops but may be used for pasture or range; and (6) Grade 6 soils (47.8 acres onsite, as well as the entire previously described 3.2-acre R7 Reservoir parcel) are generally not suitable for agriculture.

Land Capability Classification

The Land Capability Classification concept is defined as follows in the *San Diego Area Soil Survey* (SCS 1973):

> Capability groupings show, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, or other characteristics of the soils; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management. In the capability system, all kinds of soils are grouped at three levels: the capability class (Roman numeral designation), the subclass (letter designation), and the unit (Arabic numeral designation).

Soils are divided into Classes I through VIII, with these designations representing a range in quality from Class I soils that have few limitations for agricultural use, to Class VIII soils that have no commercial crop production capability. Capability Classes are further divided into subclasses and capability units to define limitations for agricultural use. Subclasses indicate soil limitations based on erodibility (e), water regime (w), depth and/or texture (s), and climate area (c). Capability units further reveal the main limitation for the placement of a soil into the given class and subclass. Numerals used to designate units within the classes and subclasses include: (0) sand and gravel in the substratum; (1) erosion hazard; (2) wetness caused by poor drainage or flooding; (3) slow or very slow permeability; (4) coarse texture or excessive gravel;

(5) fine or very fine textured soil; (6) salts or alkali; (7) cobblestones, stones or rocks; (8) nearly impervious bedrock or hardpan; and (9) toxicity or low fertility. Capability classifications within the Project site are shown in Table 1, with the associated ratings indicating soils with moderate to severe limitations based on the noted criteria (SCS 1973).

Table 1
ON-SITE SOILS, LAND CAPABILITY UNITS, STORIE INDEX RATINGS, CROP SUITABILITY AND CANDIDATE SOIL STATUS

Soil Symbol[1]	Capability Unit	Storie Index Rating/Grade	Acreage On Site	Crop Suitability	Prime/Statewide Candidate Soil?
ClD2	VIe-1	16/5	12.15	Fair for avocados and flowers.	No
CmE2	VIIs-8	10/5	74.07	N/A	No
CmrG	VIIs-8	<5/6	47.8	N/A	No
EsE2	Vie-8	32/4	7.57	Fair for citrus.	No
EsD2	IVe-8	43/3	11.05	Fair for citrus, tomatoes, and flowers.	No
FvE	VIe-1	45/3	14.86	Fair for avocados and citrus.	No
FvD	IVe-1	54/3	11.67	Fair for avocados, citrus, tomatoes, and flowers.	No
HrC	IIIe-3	41/3	1.03	Good for tomatoes; fair for truck crops and flowers.	Yes
LpD2	IIIe-1	34/4	1.49	Good for flowers; fair for citrus, truck crops, and tomatoes.	No
PfC	IIIe-3	60/2	0.67	Good for flowers; fair for tomatoes.	Yes
VaB	IIe-1	81/1	32.71	Good for avocados, citrus, truck crops, and flowers; fair for tomatoes.	Yes
VsC	IIIe-1	45/3	20.19	Good for avocados and flowers; fair for citrus, truck crops, and tomatoes.	Yes
VsD	IVe-1	43/3	1.53	Good for avocados; fair for citrus, tomatoes, and flowers.	No

Table 1 (cont.)
ON-SITE SOILS, LAND CAPABILITY UNITS, STORIE INDEX RATINGS, CROP SUITABILITY AND CANDIDATE SOIL STATUS

Soil Symbol[1]	Capability Unit	Storie Index Rating/Grade	Acreage On Site	Crop Suitability	Prime/Statewide Candidate Soil?
WmB	IIe-1	81/1	1.87	Fair for citrus, truck crops, tomatoes, and flowers	Yes
		TOTAL	**238.66[2]**	--	

Source: SCS (1973)
[1] Refer to Figure 8 for soil locations and Appendix B for soil names.
[2] Totals may vary slightly from those in other portions of this report due to rounding.
N/A = No listing in the referenced Soil Survey.

FMMP Important Farmland Designations

The CDC Division of Land Resource Protection, FMMP, produces Important Farmland maps and statistical data as described in Section 1.4.1. Four of the previously listed eight Important Farmland designations are located within the Project site, including Unique Farmland, Farmland of Local Importance, Urban and Built-up Land, and Other Land. These designations, are summarized below, and are shown on Figure 6 and Table 2 (along with mapped FMMP Important Farmlands in the Project site ZOI and the agricultural cumulative study area, refer to Sections 1.4.3 and 4.0). Additionally, although not present on the Project site, the definitions of Prime Farmland and Farmland of Statewide Importance are also provided below.

Important Farmland Designations Within the Project Site

Unique Farmland

Unique Farmland includes areas that do not meet the criteria for Prime Farmland or Farmland of Statewide Importance (as defined in Section 1.4.3), but that have been used for the production of specific high economic value crops during the two update cycles prior to the mapping date. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to current farming methods. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers. Approximately 100.5 acres of Unique Farmland are present within the Project site, with these areas concentrated mainly in the western and northern portions of the property and associated previous on-site agricultural uses consisting of commercial avocado orchards. The entire previously described 3.2-acre R7 Reservoir parcel, as well as the on-site portions of the associated roadway and pipeline easement/facility areas (which are included in the 100.5-acre total noted above), are also mapped as Unique Farmland (refer to Figure 6).

Farmland of Local Importance

Farmland of Local Importance includes areas other than Prime Farmland, Farmland of Statewide Importance or Unique Farmland that are either currently producing crops, have the capability of such production, or are used for the production of confined livestock. Farmland of Local Importance may be important to local economies due to its productivity or value, and is defined by each county's local advisory committee and adopted by its Board of Supervisors. For San Diego County, the definition of Farmland of Local Importance is given by the CDC (2007b) as:

> Land that meets all the characteristics of Prime and Statewide, with the exception of irrigation. Farmlands not covered by the above categories but are of significant economic importance to the county. They have a history of good production for locally adapted crops. The soils are grouped in types that are suited for truck crops (such as tomatoes, strawberries, cucumbers, potatoes, celery, squash, romaine lettuce, and cauliflower) and soils suited for orchard crops (avocados and citrus).

Approximately 27.32 acres of Farmland of Local Importance are mapped in the western and northern portions of the Project site, with associated previous agricultural uses consisting of commercial avocado orchards.

Urban and Built-up Land

Urban and Built-up Land includes areas used for residential, industrial, commercial, institutional, and other developed purposes. Transportation facilities (e.g., highways and railroads) and vacant (non-agricultural) areas surrounded by urban development and less than 40 acres in size are mapped as part of associated Urban and Built-up Land, while uses such as farmsteads, commercial feedlots, and poultry facilities are not included within this designation. Approximately 1.19 acres of this designation are located along the property boundaries in the southeastern and northern portions of the Project site.

Other Land

Areas not included in any other Important Farmland mapping category are designated as Other Land. Common examples include low density rural developments; brush, timber, wetland and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; vacant and non-agricultural areas larger than 40 acres and surrounded by urban development; and strip mines, borrow pits and water bodies smaller than 40 acres. Approximately 109.70 acres of Other Land are mapped in the northern, eastern and southeastern portions of the site.

Important Farmland Designation Not Present Within the Project Site

Prime Farmland

Prime Farmland includes areas that have the best combination of physical and chemical characteristics for the production of crops, including (but not limited to) moisture regime, soil temperature, pH, groundwater depth, sodium content, flooding, erodibility, permeability, rock fragment content and rooting depth. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. Prime Farmland must have been used for the production of irrigated crops at some time during the two update cycles (4 years) prior to the mapping date.

Farmland of Statewide Importance

Farmland of Statewide Importance includes areas other than Prime Farmland that have a good combination of physical and chemical characteristics for the production of crops (including all characteristics listed for Prime Farmland except permeability and rooting depth). It must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date.

Table 2
FMMP IMPORTANT FARMLAND DESIGNATIONS WITHIN THE PROJECT SITE, ZOI AND AGRICULTURAL CUMULATIVE STUDY AREA (acres)[1]

Important Farmland Designations	Project Site	ZOI	Cumulative Study Area[2]
Prime Farmland	0	0	2.43
Farmland of Statewide Importance	0	0	0
Unique Farmland	100.49	131.58	516.20
Farmland of Local Importance	27.32	35.59	217.68
Urban and Built-up Land	1.19	462.33	1,881.92
Other Land	109.70	797.25	10,187.17
TOTAL	**238.70[3]**	**1,426.75[3]**	**12,805.40[3]**

[1] See Figure 6 for mapped locations.
[2] Includes all area within the cumulative study area and the ZOI, but not the Project site. Refer to Section 4.0 of this report for a discussion of the cumulative study area and related impact analysis.
[3] Totals may vary slightly from those in other portions of this report due to rounding.

History of Agricultural Use

Available historic information from the Project Cultural Resources Investigation (Affinis Environmental Services, 2013) indicates that portions of the site were originally patented (conveyed to private ownership) in the late 19th Century, with a number of "farm-related" facilities reportedly erected in the late-19th to mid-20th centuries. Specifically, the Cultural

Resources Investigation identifies two "historic farm complexes" within the site, including one (P-37-026762) in the south-central portion of the site, and one (the "Fines Complex") in the southeastern site corner. Both of these areas, along with other applicable on-and off-site resources, are evaluated below in the discussion of historic aerial photographs. This discussion encompasses photos from the Project Cultural Resources and Phase I/II ESAs dated 1928, 1928/1929, 1947, 1953, 1963, 1974, 1980, 1990, 1994/1995, and 2005, as well as a current (2012) photo provided as Figure 4. Because two separate ESAs were conducted for different portions of the Project site, a number of the associated historic photos occur in both reports for the same years, with the individual photos encompassing different areas of coverage. Specifically, two separate photos are included in the ESAs and reviewed below for the following dates: 1947, 1953, 1963, 1974, 1994/1995, and 2005 (with these photos included in Appendix C, along with the 1928, 1928/1929 and 1980 photos, and identified by the associated ESA). Additional aerial photos available from online sources (http://www.earth.google.com, and http://www.historicaerials.com) were also used to review areas not visible in the Cultural Resource and Phase I/II ESA photos, with these photos described below where appropriate but not included in Appendix C.

- 1928 and 1928/1929 Photographs – The 1928 photo from the Cultural Resources Investigation encompasses the southeastern and south-central portions of the site, including the two "historic farm complexes" noted above. This photo depicts relatively extensive orchard cultivation in the southeastern portion of the site, with this area assumed to be associated with the "Fines Complex." Additional orchards and related residential uses are also present in adjacent/nearby off-site areas to the east, west, north, and south. Both photos show development associated with historic site P-37-026762, including a "farmhouse" (as termed in the Cultural Resources Investigation) and related structures in the south-central portion of the site (refer also to Figures 7a and 7b, with the "farmhouse" labeled as "Former Residential Structure"). While associated areas within the Project site have been subject to clearing or grading, there is no definitive evidence of related agricultural uses such as cultivation (e.g., orchard/crop plantings or furrows) or livestock production (e.g., barn structures or corrals). The 1928/1929 photo from the Cultural Resources Investigation also clearly depicts cultivated areas (orchards) in adjacent off-site properties north of P-37-026762. Based on the described information, the "Fines Complex" and associated areas in the southeastern Project site were in agricultural production by at least 1928, while no agricultural uses are attributed to historic site P-37-026762 and adjacent areas within the Project site at that time. Additional development within visible portions of the site in the referenced photos is limited to unpaved roads and trails. The majority of the western Project site is not visible in either photograph, although it is assumed that no agricultural activities were present in these areas based on evidence from subsequent photos as outlined below.

- 1947 Photographs – The 1947 photos from the Project Phase I/II ESA reports include all but the northern-most portion of the Project site, along with adjacent off-site areas. In these photos, the orchard cultivation previously noted in association with the "Fines Complex" in the southeastern portion of the site is absent, with a small water impoundment present along the main drainage extending generally north-south through this area. A number of buildings and unpaved roads and trails are also present in this area

by 1947, although no associated agricultural uses are visible. The portions of the site associated with P-37-026762 do not include visible cultivation or other apparent agricultural uses, and are generally similar in nature to the 1928 and 1928/1929 photos. A potential exception to this assumption involves a linear structure present in the area just southwest of the "farmhouse" structure. While this facility could possibly be interpreted as an agricultural-related structure (e.g., a greenhouse or poultry barn), it is considered most likely to be non-agricultural in nature (e.g., a storage facility) due to its limited extent (i.e., a single structure) and small size (approximately 90 feet by 6.5 feet) relative to similar local agricultural structures (which are typically on the order of 200 to 300 feet long and 20 to 30 feet wide). Accordingly, no agricultural use is attributed to historic site P-37-026762 and adjacent areas in 1947. An approximately 1.6-acre area of apparent orchard cultivation is present in the east-central portion of the site, in association with similar adjacent off-site uses to the south. Based on the location and minor extent of this use, this on-site orchard use may have resulted from a surveyor's error or other misinterpretation of the on-the-ground property boundary. Additional on-site uses in 1947 include an apparent residential site in the north-central portion of the property and a number of unpaved roads and trails. Off-site orchard uses to the east and south (the Harmony Grove Village site) are less extensive than in 1928/1929, while small additional areas of off-site orchard development and related facilities (roads, structures, etc.) are present to the southwest and immediately north of historic site P-37-026762 (and extend into the site, as previously noted).

An additional 1947 photo was reviewed online (historicaerials.com) to observe the northern-most portion of the site not visible in the Phase I/II ESA 1947 photos described above. Based on this photo, the northernmost portion of the site was undeveloped in 1947 and supported native vegetation, with no agricultural activity present.

- 1953 Photographs – The 1953 photos from the Project Phase I/II ESA reports provide similar on-site coverage and slightly less off-site coverage to the north and south than that noted above for the Phase I/II ESA 1947 photos. Conditions within the visible portions of the site and surrounding areas were similar to those described for the Phase I/II ESA 1947 photos, with on-site agricultural uses limited to a 1.6-acre area of orchards in the east-central portion of the property, and agricultural activity (orchards) located in several adjacent off-site areas. The water impoundment noted in the southeastern portion of the site on the 1947 photos was expanded somewhat by 1953, although no evidence of associated agricultural uses, such as cultivation or animal activity is visible.

  An additional online (historicaerials.com) 1953 photo was also reviewed, with the northernmost portion of the Project site supporting native vegetation and no agricultural uses present. Surrounding areas encompassed extensive open space in 1953, with minor (albeit more extensive) orchard development to the south and east, and more extensive orchards than are currently present in surrounding areas further from the site. The following two notable changes also occurred in surrounding areas to the north and south: (1) an area of apparent row/field crops and an animal facility (i.e., a small dairy or feed lot) are present northwest of the site (north of the current SR-78 corridor); and (2) portions of the large area of orchard cultivation to the south on the Harmony Grove Village site were apparently graded, with no evidence of cultivation or other agricultural

activity observed in these graded sites (although substantial orchard uses remained in the other, ungraded, portions of this area).

- 1963 Photographs – The 1963 photos from the Project Phase I/II ESA reports are generally similar in extent to the 1953 Phase I/II ESA photos described above, with more coverage to the north and slightly less to the south. On-site conditions in 1963 were generally similar to those described in 1953, although the 1.6-acre area of orchards in the east-central area appears abandoned (with no trees present), the related off-site orchard operations to the south are also largely gone, no additional on-site agricultural activities are visible, and the linear structure noted in association with historic site P-37-026762 on the 1947 and 1953 photos was absent. Additional development was present on-site in the form of new roads and trails, an apparent equestrian facility (i.e., a horse ring) in the east-central portion of the site, and a pump house and water impoundment associated with historic site P-37-026762 (refer also to Figures 7a and 7b). While the latter facilities are described as part of a "farm complex" in the Project Cultural Resources Report, no associated cultivation or other agricultural facilities/uses are visible onsite. It should also be noted that several areas of cultivated orchards are present in adjacent or nearby off-site areas to the north, east and southwest, with the described irrigation facilities potentially used to support water for those off-site uses.

  An additional online (historicaerials.com) photo dated 1964 was also reviewed to assess the northernmost portion of the site and off-site areas. The northernmost site area supports native vegetation, while additional off-site agricultural development is present in this photo to the east in the form of orchards, as well as to the south on the Harmony Grove Village site. Specifically new development on the Harmony Grove site included a number of apparent dairy-related facilities (corrals and barns), as well as chicken coop structures. Agricultural uses in areas further to the west and southwest are more extensive than documented in previous photos, with large-scale orchards, as well as additional uses such as row/field crops and nursery sites. Agricultural uses consisting mainly of orchards are more prevalent in areas further to the north than current conditions (similar to the previous photos), although some reduction in these uses occurred between 1953 and 1964 as a result of ongoing urban development. The dairy or feed lot site identified to the northwest in 1953 is present and somewhat larger in 1964, and an additional animal-related facility is present just south of the dairy/feed lot.

- 1974 Photographs – The 1974 photos from the Phase I/II ESA reports include the majority of the Project site, although the western and northernmost areas are not visible. Conditions in the southeastern, south-central and central portions of the site are similar to those described for the 1963 photos, with no agricultural uses present and some additional development such as roads and minor structures. The visible portions of the western site area include extensive orchard cultivation similar to current (pre-wildfire) conditions, although with generally smaller trees. As a result, the majority of the ~~current~~ on-site avocado orchards are assumed to have been planted during the late 1960s and early 1970s. Off-site areas visible in this photo are limited mainly to adjacent properties to the east and south, with conditions generally similar to those described above for the 1963 and 1964 photos.

- 1980 Photograph – The 1980 photo from the 2012 Phase I ESA Report is limited to the southeastern site area, a small portion of the south-central site area, and adjacent off-site properties to the east and south. On-site conditions in the noted locations are generally unchanged from the 1974 photos, with no agricultural uses present. Additional agricultural uses are visible in off-site areas to the east and south, including orchards in several locations and more extensive egg ranch/dairy structures on the Harmony Grove Village site to the south.

  An additional online (historicaerials.com) photo dated 1980 was reviewed to assess applicable on- and off-site areas not visible in the Phase I 1980 photo. Based on this review, the nature and extent of on-site agricultural (orchard) uses in the western and northern portions of the site were similar to current (pre-wildfire) conditions, although the orchards in the northernmost area appear to be more recent (as evidenced by smaller trees). A number of additional on-site facilities are also present, however, including an apparent residential structure in the northern portion of the Project site (which is still present), an apparent equestrian facility (a horse ring) in the east-central portion of the site (which is no longer present and was in a different location than a similar facility noted on the 1963 photos), and an additional residence/equipment shed associated with historic site P-37-026762 (refer to Figures 7a and 7b). Additional orchard and nursery development is also present in adjacent off-site areas to the south (on the Harmony Grove Village site) and southwest, with these areas similar in nature and extent to current conditions. Agricultural uses to the east (orchards) are similar to those described on the 1964 online photo, while additional egg ranch/dairy uses are present on the Harmony Grove Village site to the south (i.e., compared to previous photos). Much of the previous agricultural use (orchards) further north of the Project site had been replaced with ongoing urban development by 1980, with only minor cultivation remaining in association with estate residential uses. The previously noted animal-related facilities to the northwest, however, are still present in 1980. The overall extent of agricultural use in areas further to the southwest is similar to that noted above in 1964, although some previous agricultural uses were replaced with low-density urban development, while new agricultural uses, including orchards, row/field crops, and nurseries were present.

- 1990 Photographs – The 1990 photos from the Project Phase I/II ESA reports include all but the northern-most portions of the Project site, along with adjacent off-site areas. Conditions in the visible portions of the site are similar to current (pre-wildfire) conditions, with extensive avocado orchards in the western and northern areas and agricultural uses in other portions of the site limited to minor apiary facilities. A number of additional apparent equestrian facilities (horse rings and trails) are also present in the southeastern portion of the site, and the horse ring present in the east-central portion of the site on previous photos is no longer visible. Off-site uses are generally similar to those described in 1980, although additional urban development is present to the east.

  An additional 1989 photo was reviewed online (historicaerials.com) to assess the northernmost portions of the site, with these areas supporting avocado orchards similar to current (pre-wildfire) conditions.

- 1994/1995 Photographs – The 1994/1995 photos from the Project Phase I/II ESA reports are similar in extent to the 1990 Phase I/II ESA photos described above, with slightly less on- and off-site coverage to the north, and slightly more off-site coverage to the south. On-site conditions are generally the same as those described in 1990, with extensive avocado orchards and minor apiary facilities in the western portion of the site and no other on-site agricultural uses present. A transmission line easement/corridor is visible within the southeastern portion of the site for the first time, with these facilities still present as previously described. Visible off-site areas in these photos are essentially similar to current conditions, with extensive orchards and nurseries present to the south and southwest, and smaller areas of orchards and other agricultural uses to the east, south, and west (often associated with estate residential development). In addition, large-scale egg ranch/dairy facilities are present on the Harmony Grove Village site to the south in 1994/1995, although as previously described these facilities were observed to be completely removed/demolished, during February 2013 field surveys.

  An additional online (earth.google.com/) 1994 photo was also reviewed to assess the northern portion of the site and off-site areas to the north and west not visible in the 1994/1995 phase I/II photos. Observed conditions in the noted on- off-site areas are similar to current (pre-wildfire) conditions, with avocado orchards in the northern portion of the Project site, small-scale orchards to the west (typically associated with estate residential uses), estate residential uses to the northwest, and increasing urban development farther north.

- 2005 Photographs – The 2005 photos from the Project phase I/II ESA reports include all but the northernmost portions of the Project site, along with adjacent off-site areas. Conditions in the visible portions of the site are generally similar to current (pre-wildfire) conditions, with extensive avocado orchards and several small apiary facilities present in the western area. An additional area of on-site agricultural use is also visible in 2005, however, consisting of a small (1.35-acre) area of apparent row/field crops in the east-central portion of the site likely associated with nearby estate residential development. Visible off-site areas in the 2005 photos are essentially the same as those described in 1994/1995.

  A number of additional online (earth.google.com/) photos dated 1996, 2002, 2003, 2006, and 2008 through 2010 were also reviewed to assess the northern portion of the Project site, as well as to determine the historical timing and extent of the noted row/field crop cultivation in the east-central portion of the site visible in the 2005 photos. The northern portion of the site exhibited avocado orchards similar to current (pre-wildfire) conditions in all the listed online photos. The row/field crop cultivation was first visible as a smaller area (approximately one acre) in 2002 (i.e., this use was not present in the 1996 photo), and is present at varying sizes until 2009 when this use was apparently discontinued (with no subsequent agricultural use of this area, refer also to the 2012 photo description below). Accordingly, this use is assumed to have been initiated sometime between 1997 and 2002, and was active for a period of approximately 7 to 12 years before being discontinued in 2009 (with the described conditions on the 2005 photos representing the maximum extent of cultivation).

- 2012 Photograph – The 2012 photo included as Figure 4 displays current (pre-wildfire) conditions in the site and most off-site areas. Specifically, on-site agricultural uses are similar to those described from 2005, with the following exceptions: (1) the row/field crop cultivation in the east-central portion of the site is no longer present (with this use apparently terminated in 2009 as previously noted); and (2) some additional avocado cultivation is present in the west-central portion of the site and a few areas exhibit smaller trees, suggesting replacement of mature trees. Conditions in the southeastern portion of the site are also similar to 2005, with some minor modifications related to additional structures and road/trail reconfigurations. Additional off-site orchard cultivation is present in adjacent areas to the south and southwest (with areas along the southern site boundary removed or abandoned, as previously described), as well as nearby locations to the west associated with estate residential uses. While all of the previously described orchard areas to the east of the site have been replaced by urban development in 2012, several new agricultural uses are present east of the property boundary, including minor orchards and small areas of apparent row/field crop, greenhouse and vineyard operations (with all uses except greenhouses apparently associated with estate residential sites). All of the previously described agricultural uses in areas further north of the site have been replaced with urban development by 2012. The previously described egg ranch and dairy uses at the Harmony Grove Village site to the south are still partially present in the 2012 photo, although as previously noted this site is currently being developed and all egg- and dairy-related uses/facilities had been terminated/removed, as of February 2013. Agricultural uses in areas further to the southwest are similar to those described in 2005, with numerous small orchards related to estate residential sites, and a number of relatively large commercial nursery operations.

Pursuant to the above information, the following conclusions are provided: (1) commercial agricultural operations (orchards) on the Project site were initially conducted in the southeastern portion of the site during the early part of the 20th Century, with these activities discontinued by the late 1940s; (2) minor and short-lived agricultural activities occurred on-site in the east-central portion of property during the 1950s (orchards) and late 1990s/early 2000s (row crops); and (3) ~~existing~~ commercial orchard operations in the western and northern portions of the site ~~have~~ occurred more or less continuously since the late 1960s or early 1970s, with portions of these areas destroyed in the 2014 wildfire event as previously described.

Based on the nature and extent of current (pre-wildfire) and historical on-site agricultural use, limited soil testing, and information received from the County AWM, pesticide use (and the potential for associated residues) at the site is considered low. Specifically, current (pre-wildfire) and historical agricultural operations within the site and nearby areas consist predominantly of avocado or citrus orchards; as well as small-scale mixed-use orchards, row/field crop cultivation, vineyards, and greenhouses. Orchards and greenhouses typically entail only minor pesticide use, while other noted on- and off-site agricultural uses are minor in scale, associated with estate residential sites, and unlikely to be commercial in nature. A total of 13 soil samples from the western and central portions of the site were laboratory tested for organochlorine pesticides and arsenic, as part of the limited Phase II ESA, with none of the noted compounds detected at or above laboratory reporting limits (GEOCON 2013). Agricultural-related pesticide use records for the Project site obtained from the AWM indicate that no

recorded pesticide use and/or storage occurred on site, during the period of 2008 to 2012 (County 2013b).

Climate

As noted in Section 1.4.1, the Project site region is characterized by a Mediterranean climate, with moderate year-round temperatures and relatively low precipitation levels, most of which falls during the winter months. Average annual precipitation at the nearest reporting station (City of San Marcos, 92078) is approximately 15.11 inches, with the highest average rainfall totals occurring in January (3.03 inches), February (3.52 inches), and March (2.65 inches). The driest months are June, July, and August, with average rainfall totals of 0.12, 0.08, and 0.08 inches, respectively (weather.com 2013). July, August, and September are the warmest average months in the Project site region, with average daily highs of 87ºF for July and September, and 89ºF for August. Corresponding average lows are 62ºF for July and September, and 63ºF for August. December and January represent the coldest months, with average high temperatures of 68º and 69ºF respectively, and corresponding average lows of 42 and 43ºF. Temperature extremes are relatively uncommon in the Project vicinity, with a record high temperature of 112ºF recorded in 2006, and a record low of 25ºF in 2007 (weather.com 2013).

The County is divided into a series of "plant climates," which are defined as areas "[i]n which specific plants, groups or associations are evident and will grow satisfactorily, assuming water and soil are favorable." (Gilbert 1970). Plant climates in San Diego County occur as a series of five generally north-south trending linear zones, including the Maritime, Coastal, Transitional, Interior and Desert zones. These areas are influenced by factors including topography and proximity to the ocean and are generally gradational inland, with the Project site located in the Transitional Zone (County 2006). The Maritime and Coastal zones located west of the Project site exhibit relatively low relief and are dominated by oceanic influences, with typically narrow diurnal and seasonal temperature changes and relatively high humidities. These factors begin to decline further inland, with the Transitional Zone displaying more topographic and climatic variation and often alternating between (or combining characteristics of) both the oceanic and inland areas. Specifically, the Transitional Zone includes a series of valleys that are partially screened from maritime/coastal and interior/desert influences by topography, and exhibits more variable temperature and humidity fluctuations than areas further west, but has generally higher humidity levels and lower temperature extremes than the Interior and Desert zones to the east.

More localized climate zones were adapted from the described plant climates, and are termed Generalized Plant Climate Zones, or Sunset Zones, based on the Sunset Western Garden Books that popularized their use (County 2007, 2006). Sunset Zones differentiate local microclimates, freeze/frost potential, and air/water drainage based on conditions such as latitude, elevation, topography and the influence of oceanic and/or continental air masses. The Project site and vicinity are located in Sunset Zones 20 and 21, which consist of: (1) Zone 20 – a cold air basin that can be dominated by both coastal and inland influences, with low temperatures ranging from 23º to 28ºF; and (2) Zone 21 – an air drained thermal belt, with low temperatures ranging from 23º to 36ºF (and rarely dropping below 30ºF). Sunset Zones also incorporate the U.S. Department of Agriculture (USDA) hardiness ratings, which designate 11 zones depicting the lowest temperature at which individual plant species will thrive (County 2007). The Project site

is located in USDA hardiness Zone 10a, which exhibits an average minimum temperature range of 30º to 35ºF (USDA 2007a).

Based on the described information, the Project site climate exhibits generally mild year round temperatures and infrequent episodes of freezing and severe frost. These conditions make it potentially suitable for a number of temperature-sensitive crops such as citrus, avocados, nuts, row/field crops, and nursery products (e.g., flowers).

Water Resources

Municipal water service is currently provided to the Project site area by the RDDMWD, with a number of associated water lines located along or adjacent to the eastern site boundary. One existing groundwater well is located onsite as previously described and reportedly extends to a depth of 100 feet, although no known data are available regarding associated ~~well~~/water depths or yield. Shallow groundwater was encountered in alluvial deposits during subsurface geotechnical explorations in the central and east-central portions of the site, and is also anticipated to occur in the southeastern portion of the site (GEOCON 2012b and 2012c). These observed/anticipated occurrences were interpreted as perched aquifers, which consist generally of unconfined (i.e., not under pressure) groundwater contained by impermeable or semi-permeable strata. The presence and/or extent of perched groundwater bodies are typically associated with and influenced by seasonal precipitation and local irrigation.

Williamson Act Contracts and Agricultural Preserves

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act (California Administrative Code §51200 et. seq.), enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. The issuance of such a contract precludes non-agricultural development of the subject property for a period of 10 years. In return, the landowner receives property tax assessments that are lower than normal because the assessments are based on farming and/or open space uses rather than full market value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971. Contracts issued under the Williamson Act automatically renew each year for a new 10-year period, unless the landowner files a Notice of Non-renewal to terminate the contract at the end of the current 10-year period. During the 10-year cancellation period, property taxes are gradually raised to the appropriate level for developable land.

The Williamson Act also authorizes cities and counties to establish agricultural preserves, with these areas intended to identify locations wherein the issuing city or county is willing to enter into Williamson Act contracts. Agricultural preserves are generally intended to avoid areas where public utility improvements and related land acquisitions may be required. The Williamson Act does not specifically address the issue of compatible land uses in sites adjacent to agricultural preserves or contract lands, other than to require that "[c]ities and counties shall determine the types of uses to be deemed 'compatible uses' in a manner which recognizes that a permanent or temporary population increase often hinders or impairs agricultural operations." (California Administrative Code §51220.5).

No Williamson Act contract lands or agricultural preserves are located within the Project site. An existing Williamson Act parcel and overlying agricultural preserve are located southeast of the site boundary, however, and within the Project site ZOI. These designations and other preserves and contract lands in surrounding areas are described below in Section 1.4.3.

Prime Agricultural Land

As previously noted, the Proposed Project includes an annexation into the County Sanitation District for sewer service. The described annexation would be conducted pursuant to related LAFCO requirements, with the San Diego LAFCO to serve as a California Environmental Quality Act (CEQA) Responsible Agency for the Proposed Project. Part of the LAFCO review will entail evaluating the conversion of Prime Agricultural Land, pursuant to San Diego LAFCO Policy L-101, Preservation of Open Space and Agricultural Lands. Prime Agricultural Land is defined by LAFCO in Government Code §56964 to include "[a]n area of land…that has not been developed for a use other than agricultural use and that meets any of the following qualifications:

(a) Land that qualifies, if irrigated, for rating as Class I or Class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not the land is actually irrigated, provided that irrigation is feasible.

(b) Land that qualifies for rating 80 through 100 Storie Index Rating.

(c) Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the USDA in the *National Handbook on Range and Related Grazing Lands*.

(d) Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than 5 years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars ($400) per acre.

(e) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars ($400) per acre for 3 of the previous 5 calendar years.

As described above under Soils (Land Capability Classification) and shown in Table 1, approximately 34.58 acres of mapped soils within the Project site exhibit a Capability Class II and a Storie Index rating of 80 or more, with no additional on-site soils meeting the stated soil criteria. Specifically, the described areas include 32.71 aces of Visalia Sandy Loam, 2 to 5 percent slopes, and 1.87 acres of Wyman Loam, 2 to 5 percent slopes (refer to Table 1 and Figure 8 for soil data and locations). The Project site does not include any livestock operations, but does encompass approximately 116.96 acres of ~~active~~ avocado orchards, portions of which were ~~damaged or~~ destroyed in a 2014 wildfire event as previously described (and were active prior to that event). Based on these conditions, the Project site would not meet Prime Agricultural Land qualification "c," but would meet qualifications "a," "b," "d" and "e," for applicable portions of the site (i.e., recently active orchards and qualifying soils as described).

Per the previous discussion of on-site agricultural resources in this section, however (as depicted on Figures 7a and 7b), portions of the site are considered unavailable for agricultural use (and are thus not considered Prime Agricultural Land), due to the presence of roads/structures and utility easements, sensitive habitats, and mature eucalyptus woodland. The exclusion of these areas is based on the same considerations previously identified for agricultural resources in Section 1.4.2, including: (1) the underlying soil quality in developed areas has likely been compromised through grading and compaction, and areas within utility easements are unavailable for agricultural use; (2) sensitive habitat areas would likely either be precluded from agricultural use based on environmental preservation concerns, or would require mitigation that would likely be prohibitively expensive (e.g., habitat restoration and/or the purchase of off-site mitigation credits); and (3) removal of eucalyptus woodland/forest to accommodate agriculture would likely be prohibitively expensive (i.e., tree and stump/root system removal).

Based on the on-site land that meets the LAFCO definition of Prime Agricultural Lands and the information presented above regarding the property's areas that are unavailable for agricultural production, approximately 140.22 acres of LAFCO Prime Agricultural Land are present on site. Specifically, this area includes the noted 116.96 acres of recently active orchards, as well as 23.26 acres of qualifying soils that are not encumbered with roads, structures, easements, sensitive habitats, or mature eucalyptus woodland/forest (including 22.08 acres of Visalia soils and 1.18 acres of Wyman soils). The previously described 3.2-acre R7 Reservoir parcel includes 3.1 acres of Prime Agricultural Land (i.e., active or recently active orchards), based on the noted LAFCO definition and the presence of several unpaved roads, with a total combined area of 143.32 acres of Prime Agricultural Land within the Project site and the adjacent 3.2-acre parcel.

1.4.3 Off-site Agricultural Resources

A ZOI was identified for the Project site pursuant to the County agricultural resource guidelines (County 2007), and includes an area of approximately 1,427 acres (and encompasses the previously described 3.2-acre R7 Reservoir parcel). As shown on Figures 5a, 6 and 9, a Williamson Act contract parcel and two agricultural preserves, FMMP Important Farmland designations, and active agricultural operations are present within the Project ZOI, with these designations and uses outlined below.

Williamson Act Contract Lands/Agricultural Preserves

One active Williamson Act contract parcel and an associated (overlying) agricultural preserve is located within the Project ZOI, as depicted on Figure 9. The noted Williamson Act contract parcel/agricultural preserve (Contract No. 77-45, Preserve No. 95) is owned by the Harry and Shirley Houtman Trust, is located approximately 700 feet southeast of the Project site, and includes 12 acres. Based on field reconnaissance and a previous investigation of this property (HELIX 2006), it is not currently in agricultural use. Agricultural Preserve No. 89, Ward Egg Ranch, is located just outside of the ZOI, approximately 0.3 mile southwest of the Project site. This designation includes approximately 35.3 acres, although as previously noted, the associated property is currently being developed as a mixed-use residential site, all associated facilities/uses have been removed/terminated, and the preserve designation has likely been (or will be) removed.

An additional agricultural preserve (No. 105, Revelle) is located outside of the Project ZOI to the southwest, approximately 3.9 miles from the site (with this Preserve partly within the Project cumulative study area, as depicted on Figure 9). This area includes open space and urban development (e.g., residential and golf course), but does not encompass any current agricultural uses. As seen on Figure 9, an additional preserve (Ralphs, No.60) is located farther southeast of the Project site (south of Lake Hodges), with this designation outside of the Project ZOI and cumulative study area boundary.

FMMP Important Farmland Designations

Important Farmland designations mapped within the Project site, ZOI and surrounding areas are depicted on Figure 6, with associated mapped acreages provided in Table 2. As seen from these data, four of the eight previously identified Important Farmland categories occur within the Project ZOI, including Unique Farmland, Farmland of Local Importance, Urban and Built-up Land, and Other Land. All of these Important Farmland categories were previously defined in Section 1.4.2, with a summary description of the Important Farmland categories within the Project ZOI provided below.

Unique Farmland

Approximately 131.58 acres of Unique Farmland are present within the ZOI, with these areas located south of the Project site and within the previously described 3.2-acre R7 Reservoir parcel. Existing (or recently active) agricultural uses associated with Unique Farmland include orchards and nurseries.

Farmland of Local Importance

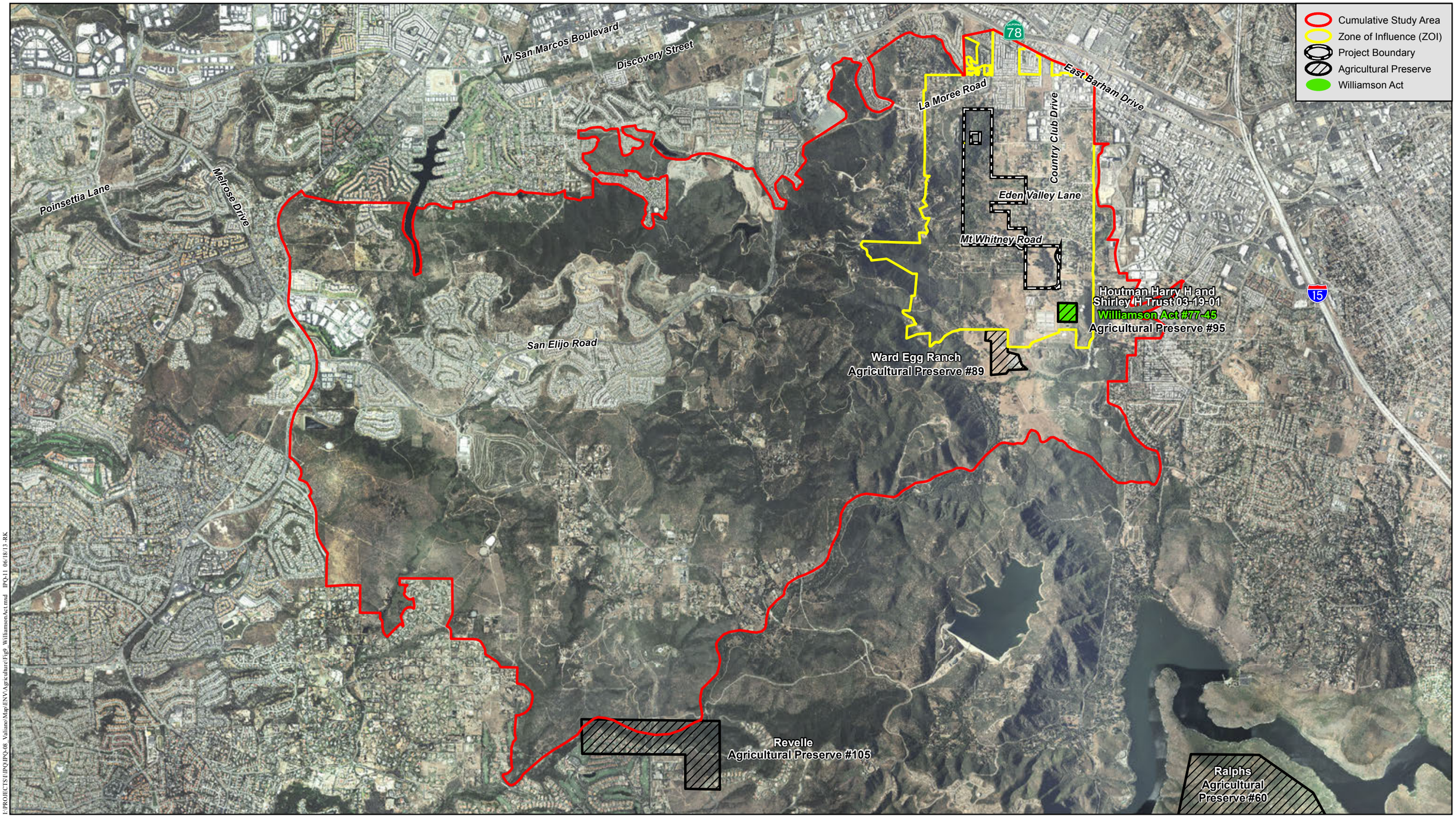
Approximately 35.59 acres of Farmland of Local Importance are present within the ZOI, with these areas located south and east of the Project site. Associated existing agricultural uses within the ZOI include nurseries in areas to the south.

Urban and Built-up Land

Approximately 462.33 acres of this designation are located within the Project ZOI, with these areas occurring mainly to the north, east and west of the site. Agricultural uses in this designation include minor areas of orchards and greenhouses.

Other Land

Approximately 797.25 acres of Other Land are present within the Project ZOI in areas to the west, south and east of the site. Agricultural uses present within this designation include minor areas of orchards, (apparent) row/field crops, and vineyards.



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Williamson Act and Agriculture Preserves

VALIANO

HELIX Environmental Planning

0 3,500 Feet

Figure 9

Active Agricultural Operations

As described in Section 1.4.1 and shown on Figures 5a and 5b, the Project site region encompasses generally scattered agricultural operations, including relatively large blocks of avocado orchards, smaller areas of mixed-use and citrus orchards, several relatively large nursery operations, and minor areas of row/field crops, greenhouses and vineyards. In addition, a number of former agricultural facilities/operations located just south of the Project site have been recently removed or abandoned, as part of the Harmony Grove Village project development approved in 2007 (e.g., egg ranches/poultry farms, dairy operations and orchards, refer to Sections 1.4.1 and 1.4.2). Because the egg ranch and dairy facilities and uses are no longer present/active, they are not discussed further, in the following analysis. While portions of the associated off-site orchards have been removed, ~~or~~ abandoned or affected by the 2014 wildfire event as previously described, the bulk of these uses are likely still in place and are assumed to be active for purposes of the following evaluation~~ed below~~. Summary descriptions of assumed active agricultural operations within the Project ZOI are provided below, with more regional descriptions given in Section 4.0, Cumulative Impacts.

Avocado and Citrus Orchards

Relatively large areas of active avocado and citrus orchards are located adjacent to the southern Project site boundary, with these operations including approximately 89.8 acres (and portions of this area recently removed, ~~or~~ abandoned or destroyed as previously noted). In addition, approximately 3.1 acres of the previously described 3.2-acre R7 Reservoir parcel include active (or recently active) avocado orchards. Avocado and citrus orchards within the Project ZOI are located on variable slopes in areas designated primarily as Unique Farmland.

Nurseries

A 40.76-acre nursery operation is located south of the site in areas designated as Unique Farmland and Farmland of Local Importance. This site consists of intensive operations for predominantly in-ground plantings of decorative varieties (e.g., dollar eucalyptus). While the cultivated plants themselves were observed to be in generally good condition, the operation as a whole exhibited evidence of disuse or abandonment, such as unrepaired access roads and irrigation hardware. Additionally, no evidence of commercial or wholesale operation was observed (e.g., offices, signs, or customer/staff activity).

Mixed-use Orchards

This designation consists primarily of citrus orchards in the Project ZOI, with minor additional uses such as avocados, nuts and other fruits (e.g., persimmons). Observed mixed-use orchards within the Project ZOI are small and associated with estate residential development. A total of 2.06 acres of mixed-use orchards are mapped within three areas inside the Project ZOI, with these areas located approximately 1,000 feet west, and 50 to 475 feet south of the Project site.

Greenhouses

Greenhouse operations within the ZOI encompass one small (2.46-acre) area approximately 1,000 feet east of the Project site. The associated greenhouse structures were fully enclosed and opaque, with no outdoor use (e.g., container or in-ground), plantings, or signs to identify the associated uses.

Vineyards

Two small (0.18- and 0.24-acre) vineyards are located within the Project ZOI, with both of these areas approximately 250 feet east of the nearest Project site boundary (and 300 feet or more from Proposed Project development) and associated with estate residential properties.

Row/Field Crops

Two small (1.61- and 1.21-acre) areas of apparent row/field crops are located approximately 200 and 900 feet east of the site (and 300 to 1,000 feet from Proposed Project development), within the Project ZOI. These areas are associated with estate residential properties and could not be directly accessed to verify the nature of the use or associated crop type(s), although both areas appeared to be fallow or between seasonal plantings, during the February 7 and 9, 2013 field surveys.

1.4.4 Zoning and General Plan Designation

The Project site is currently zoned for residential (RS) and Limited Agriculture (A-70), with minimum lot sizes of 1 to 2 acres. The RS designation is intended primarily for large-lot (estate) residential development, with agricultural uses, including tree crops, also allowable. The A-70 designation is intended to create and preserve areas primarily for agricultural crop production. Additional allowable agricultural uses within this zoning designation include keeping limited numbers of small farm animals and processing agricultural products raised on the premises. The A-70 zone is typically applied to areas throughout the County to protect moderate to high quality agricultural land.

The existing regional land use category for the Project site is Semi-Rural (SR), with associated General Plan designations of SR-1 and SR-2. The SR-1 designation allows one DU per 1, 2 or 4 gross acres; while the SR-2 category allows one DU per 2, 4 or 8 gross acres (County 2011). Certain types of agricultural use, including orchards and vineyards, are allowable in the SR-1 and SR-2 designations.

Implementation of the Proposed Project would entail a GPA to change the land use category to SR 0.5 and a rezone to change the A-70 areas to RS, with the minimum lot size to be reduced to 5,000 SF (as proposed in the Project design).

2.0 IMPACTS TO ON-SITE AGRICULTURAL RESOURCES

2.1 Local Agricultural Resource Assessment (LARA) Model

The County of San Diego has approved a local methodology that is used to determine the importance of agricultural resources in the unincorporated area of San Diego County, known as the Local Agricultural Resource Assessment (LARA) Model. The LARA Model takes into account six factors, including water, climate, soil quality, surrounding land uses, land use consistency, and slope, in determining the importance of agricultural resources.

The following subheadings provide a description of the Project site rating for each LARA Model factor, including justification for the factor ratings assigned to the Project site. Each factor receives a rating of high, moderate or low importance based on site-specific information, as detailed in the LARA Model instructions (*Section 3.1, LARA Model Instructions, from the Agricultural Guidelines for Determining Significance,* County 2007, see Appendix A). The factor ratings for the Project site are summarized in Table 3, LARA Model Factor Findings, with the final LARA Model results based on the associated combination of factor ratings shown in Table 4, Interpretation of LARA Model Results (refer to Section 2.1.2).

2.1.1 LARA Model Factors

Descriptions of the LARA Model factor evaluations conducted for the Proposed Project are outlined below, with additional information provided in the referenced LARA Model Instructions included as Appendix A of this report.

Required Factors

Water

The LARA Model water rating for the Project site is high, based on the site location within the San Diego County Water Authority (SDCWA) service area, and the fact that existing water infrastructure and metered water service is currently provided by the RDDMWD (refer to Sections 1.4.1 and 1.4.2). The Project site is located within a fractured crystalline rock groundwater aquifer, with one existing on-site well (as previously described), and within shallow groundwater that is associated with alluvium (refer to Section 1.4.2). Pursuant to Section 3.1.1 and Table 3 of Appendix A, sites where imported water is available receive the highest water rating in the LARA Model, regardless of groundwater availability. This conclusion is based on the fact that imported water is considered essential to long-term agricultural use in San Diego County, due to the limited availability of local rainfall and groundwater resources.

Climate

The Project site climate rating is high, based on its location within Sunset Zones 20 and 21, as described under the Climate heading in Section 1.4.2. Specifically, both Zones are rated high in Table 6 of Appendix A, based on factors including the favorable climate, the associated infrequency of freezing temperatures, and proximity to urban areas.

Soil Quality

Pursuant to the LARA Model, soil quality within the Project site is rated as moderate, based on the fact that the site yielded a Soil Quality Matrix score of 0.15, and has a minimum of 10 acres of contiguous mapped CDC Prime Farmland or Farmland of Statewide Importance candidate soils (refer to Table 2 and Figure 8 in this report, and Table 8 in Appendix A). A copy of the Soil Quality Matrix Worksheet used to determine the Project site score is included as Table B-1 in Appendix B of this report. As outlined in Section 3.1.3 of Appendix A, the presence of CDC Prime Farmland and Farmland of Statewide Importance candidate soils is used in the LARA Model soil quality rating because these designations are used in the corresponding FMMP Prime Farmland and Farmland of Statewide Importance categories (as defined in Section 1.4.2), as well as the fact that limited quantities of these high quality soils occur in San Diego County.

Complementary Factors

Surrounding Land Use

The surrounding land use rating for the Proposed Project is high, based on the fact that more than 50 percent of lands within the Project ZOI are "compatible with agriculture," as shown on Table 9 of Appendix A. Specifically, approximately 1,050 acres (or 73.6 percent) of the 1,427-acre ZOI encompass lands that are compatible with agriculture (per Section 3.1.4 of Appendix A), including existing agricultural uses (see Figure 5a), protected resource lands (e.g., a Williamson Act contract/agricultural preserve, see Figure 9), and areas developed or zoned as rural residential areas (i.e., areas with parcel sizes of 2 acres or more). Surrounding land use is included as a complementary factor in determining the importance of agricultural resources due to the fact that compatible land uses make a site generally more attractive for agricultural use. This is based on the expectation that such compatible uses will result in fewer potential nuisance issues (noise, dust, etc.) from non-agricultural neighbors than would likely occur in association with more urban uses. Accordingly, while agricultural uses can be viable in a more urban setting (depending on the type of agricultural use), the likelihood of establishing agricultural operations and the long-term viability of such pursuits will generally be higher in areas with compatible land uses as described.

Land Use Consistency

The land use consistency rating for the Proposed Project is low, based on the fact that the parcel size of the Project site is more than 10 acres larger than the median parcel size within the ZOI (per Table 10 in Appendix A). Specifically, the Project site includes 13 parcels with a median size of 11.34 acres, while the ZOI includes 700 parcels with a median size of 0.98 acre. As outlined in Section 3.1.5 of Appendix A, land use consistency is included as a complementary factor in determining the importance of agricultural resources based on the assumption that larger parcel sizes will generally represent areas that have not been significantly urbanized and are more likely to support and be compatible with viable agricultural operations. Median parcel size is used in the analysis to account for the fact that a small number of very large or very small parcels could potentially skew the results if the average parcel size was utilized.

Topography

The topographic (slope) rating identified for the portion of the Project site that is "available for agricultural use" (as shown in Table B-1 of Appendix B) in the LARA Model is moderate, based on the fact that the noted portion of the Project site exhibits an average slope between 15 and 25 percent. The Project site slope is included as a complementary factor in the LARA Model to reflect the fact that topography can represent an important element in the overall viability of a property for agricultural use. Specifically, sites with more level terrain can typically accommodate a greater range of potential agricultural uses, and are more amenable to efforts such as the use of mechanized operations and the effective management of irrigation runoff and erosion.

2.1.2 LARA Model Results

A summary of the LARA Model factor ratings described above are in provided in Table 3, followed by an interpretation of these results in Table 4.

Table 3
SUMMARY OF LARA MODEL FACTOR RATINGS

Factors	LARA Model Rating		
	High	Moderate	Low
Required Factors			
Climate	X		
Water	X		
Soil Quality		X	
Complementary Factors			
Surrounding Land Use	X		
Land Use Consistency			X
Topography (Slope)		X	

Table 4
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	N/A	The site is not an important agricultural resource
Scenario 6	All other model results		

Source: County (2007)

As seen from the information in Table 3, the LARA Model results exhibit: (1) high ratings for two required factors (climate and water); (2) a moderate rating for the third required factor (soil quality): (3) a high rating for one complementary factor (surrounding land use); (4) a moderate rating for one complementary factor (topography); and (5) a low rating for the third complementary factor (land use consistency). Accordingly, per the rating factors shown in Table 4, the site conforms to Scenario 2 and is an important agricultural resource.

2.2 Guidelines for Determination of Significance

The following significance guideline is the basis for determining the significance of impacts to important on-site agricultural resources, as defined by the LARA Model, in San Diego County. Direct impacts to agricultural resources are potentially significant when a project would result in the following:

> 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.

2.3 Analysis of Project Effects

2.3.1 Project Site Effects Related to the LARA Model Results

Based on the information provided above in Sections 1.4.2 and 2.2, the Project site includes approximately 137.16 acres of agricultural resources (including approximately 14.55 acres located within Prime Farmland or Farmland of Statewide Importance candidate soils), and was determined to be an important agricultural resource based on the noted LARA Model results. From the described information on agricultural resources and candidate soils (refer to

Figures 7a, 7b and 8), Project-related impacts to identified on-site agricultural resources that occur within areas of Prime Farmland or Farmland of Statewide Importance candidate soils encompass approximately ~~12.98~~13.14 acres. Specifically, this includes 11.64~~58~~ acres of historic orchard use in the southeastern portion of the site, 0.19~~21~~ acre of historic orchard use in in the east-central area, and 1.31~~19~~ acres of historic row/field crop production in the east-central area, with the noted locations shown on Figures 7a and 7b. It should also be noted that a small (0.06 acre) area of on-site agricultural resources encompassing apiary uses overlaps the area of on-site Prime/Statewide candidate soils, as shown on Figures 7a and 7b. This area was not included in the on-site agricultural resource impact total, however, due to the fact that apiary activities are generally temporary (seasonal) in nature, not dependent on physical conditions, such as soil quality, and therefore flexible with respect to location.

Based on the described considerations, the significance guideline identified in Section 2.2, and the related criteria identified in the County Agricultural Guidelines (2007), the Proposed Project would impact a total of ~~12.98~~13.14 acres of on-site agricultural resources that encompass Prime Farmland or Farmland of Statewide Importance candidate soils, and thus would substantially impair the ongoing viability of the site for agricultural use. Accordingly, associated potential direct impacts to important agricultural resources within the site would be significant.

2.3.2 Direct Impacts From the Proposed R7 Reservoir and Related Facilities

As previously described, the proposed R7 Reservoir and related facilities include areas within the project site (i.e., portions of the proposed access road and pipeline), as well as within an adjacent parcel surrounded by the site (i.e., the water tank and portions of the access road/pipeline, refer to Figures 2 and 3a). Accordingly, the following analysis includes both the on-site and adjacent facilities as described, with the results also included in the following assessment of LAFCO consistency where appropriate. Construction of the proposed R7 Reservoir and related facilities would result in total direct impacts to approximately 1.8 acres of active or recently active avocado orchards (as previously described), including the following: (1) approximately 1.1 acres associated with the on-site portions of the access road and pipeline corridor (including associated grading and the related bioretention facility); (2) approximately 0.61 acre associated with the reservoir structure on the adjacent 3.2-acre parcel (including associated grading/disturbance); and (3) approximately 0.09 acre associated with the portion of the combined access road/pipeline corridor on the adjacent parcel (including associated grading and the related bioretention facility). While all of the described areas would constitute agricultural resources under County Guidelines as previously described (i.e., due to recent agricultural operations), none of the associated impacts would be significant (with the noted on-site areas included in the LARA Model and related analysis described above in Section 2.3.1, refer also to Figure 7a). Specifically, this conclusion is based on the fact that all of the described water tank and related facility areas encompass either CmrG or FvE soils as previously described. Because neither of these soil types are designated as Prime Farmland or Farmland of Statewide Importance candidate soils (refer to Table 1), associated impacts would be less than significant under County Guidelines (as outlined above in Sections 2.2 and 2.3.1).

2.3.3~~2~~ LAFCO Consistency

As noted above in Section 1.4.2, the Project site includes approximately 140.22 acres of Prime Agricultural Land as defined by LAFCO, with an additional 3.1 acres of Prime Agricultural Land located within the previously described 3.2-acre R7 Reservoir parcel (~~with~~ and no additional LAFCO Prime Agricultural Land associated with the proposed off-site roadway improvements). Of the~~is~~ total described area of LAFCO Prime Agricultural Land (143.32 acres), approximately 95.4~~95.02~~ acres would be directly impacted by Project implementation (including ~~80.46~~82.26 acres of avocado orchards and ~~14.56~~13.14 acres of qualifying soils). The San Diego LAFCO will serve as a CEQA Responsible Agency for the Proposed Project, with their review to include an evaluation of the conversion of Prime Agricultural Land to non-agricultural use. The LAFCO Commission goals include the following: (1) encourage orderly growth; (2) promote logical and efficient public services for cities and special districts; (3) streamline governmental structure; and (4) discourage premature conversion of prime agricultural and open space lands to urban uses (LAFCO 2013). With respect to the last goal, LAFCO Legislative Policy L-101 states:

> LAFCO's are required to consider how spheres of influence or changes of local governmental organization could affect open space and Prime Agricultural Lands. Commissions are directed to guide development away from Prime Agricultural Lands - unless that action would not promote the planned, orderly and efficient development of an area - and to encourage development of existing vacant or non-Prime Agricultural Lands within a jurisdiction before approving any proposal that would allow the development of open space lands outside of an agency's boundary (Govt. Code §56377). Proposals must be further reviewed for their effect on maintaining the physical and economic integrity of agricultural lands (Govt. Code §56668).
>
> It is the policy of the San Diego Local Agency Formation Commission to:
>
> 1. Discourage proposals that would convert Prime Agricultural Lands or open space to other uses unless such an action would not promote the planned, orderly, efficient development of an area *or* the affected jurisdiction has identified all Prime Agricultural Lands within its sphere of influence and adopted measures that would effectively preserve Prime Agricultural Lands for agricultural use;
>
> 2. Require pre-zoning of territory (city only) to identify areas subject to agricultural/preservation and planned development;
>
> 3. Follow San Diego LAFCO's adopted procedures to define agricultural and open space lands and to determine when a proposal may adversely affect such lands.

Pursuant to guidance in the San Diego County Agricultural Guidelines (County 2007), the above Policies 1 and 3 are addressed in the following analysis (with Policy No. 2 not applicable to the Proposed Project).

The Proposed Project is concluded to be consistent with the described LAFCO Policies 1 and 3, based on the following considerations:

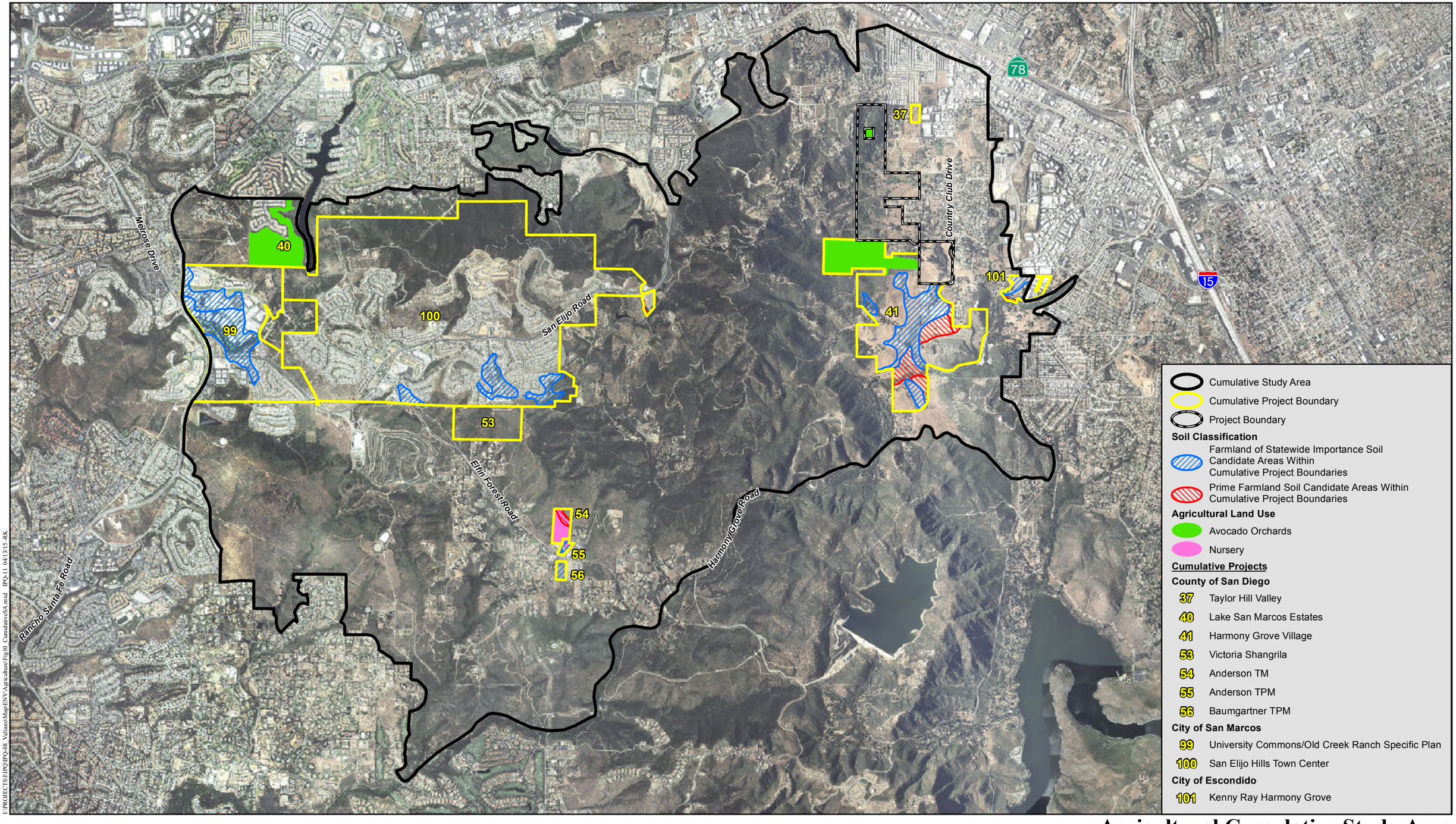
- Pursuant to Policy No. 1, "discouraging" the Proposed Project on the basis of converting Prime Agricultural Land would not "[p]romote the planned, orderly, efficient development…" of the Project site. This conclusion is based on the fact that, despite its described ~~existing~~ recent and historic agricultural history, the Project site is within an area that encompasses extensive existing urban development to the north (City of San Marcos) and east (City of Escondido, with additional urban development occurring in areas to the south, east and west. This is most directly evidenced by the 468-acre Harmony Grove Village project site adjacent to the south, along with a proposed 24-acre business park to the east and larger mixed-use developments to the west (refer to Figure 10). Specifically, the Harmony Grove Village site is currently under development, and involved the establishment of a County Sewer Maintenance District (the Harmony Grove District, County 2010) that borders the Project site, as well as extending existing RDDMWD water lines/facilities and other utilities to provide service in this area. Additionally, as described in Section 1.4.2, the Proposed Project site is located within the existing service area boundaries of the RDDMWD (with existing water lines/meters located in adjacent areas to the east). The Project site is also located adjacent to the Meadowlark Basin of the Vallecitos Water District (VWD) sewer service area (VWD 2010), and is within approximately 0.5 to 0.75 mile of the City of Escondido sewer service area, HARRF (wastewater treatment plant), and related facilities such as sewer trunk lines and lift stations (with the current City Wastewater Master Plan identifying several additional "future customers" within approximately 0.5 mile of the Project site, City of Escondido 2012). Based on the noted considerations, the Project site is within an area of mixed urban and rural uses, although substantial ongoing and planned urban development is occurring, along with the related addition/expansion of public services. As a result, the Proposed Project has been designed to serve as a transitional or buffer area between the surrounding high-density urban communities to the north and east in the cities of San Marcos and Escondido, and the lower-density areas to the west and south (including Harmony Grove Village). To this end, proposed residential and related development would be clustered to limit the impact footprint and provide transitional areas, through efforts such as appropriate lot size locations (e.g., providing larger lots in areas with adjacent low-density uses) and setbacks (including graded and ungraded setbacks within lots adjacent to off-site agricultural areas, refer to Figures 3a and 5a). The Project design would also establish open space connections with lower density off-site uses, with approximately ~~146.5~~149.4 acres (or over 6~~2~~1 percent) of the Project site located outside of the proposed development footprint (including areas within proposed residential lots that would be graded during initial site development but subsequently landscaped and retained as open space). Specifically, this includes approximately ~~28~~31.2 acres of biological open space easements, ~~56.4~~55.7 acres of common areas (e.g., parks, landscaping and trails), ~~25.4~~27.1 acres of slope easements,

and the previously described ~~36.5~~35.4-acre agricultural easement. The combined effect of the noted design features would help to maintain the semi-rural character of the site vicinity and provide a smoother rural-to-urban transition, as noted above. As outlined in Section 1.4.4, the Proposed Project also includes a GPA to reflect the described site design and resulting on-site density ranges. Once adopted, this GPA would ensure Project consistency with applicable goals and policies in the County General Plan, including associated requirements in the Land Use Element.

Based on the above discussion, the Proposed Project development would: correspond with the nature of existing and ongoing urban and semi-rural development now exhibited; foster "planned, orderly, efficient development" in the Project vicinity; and provide a logical transition between these uses, consistent with the associated LAFCO Policy No. 1.

- Pursuant to Policy No. 3, the identification of Prime Agricultural Land within the Project site was based on LAFCO criteria "a", "b", "d" and "e" from Government Code §56964, with criterion "c" not applicable to the Project site (refer to Section 1.4.2). The determination of Prime Agricultural Land was further refined through consideration of site-specific conditions affecting soil quality and/or the availability of individual areas for agricultural use, including the presence of existing development/disturbance, utility easements, native habitats, and mature eucalyptus forest/woodland as described in Section 1.4.2. Accordingly, the resulting identification of approximately 143.32 total acres ~~140.22 acres~~ of Prime Agricultural Land (including 140.22 acres within the Project site and 3.1 acres on the previously described R7 Reservoir parcel) is consistent with "…LAFCO's adopted procedures to define agricultural…lands and to determine when a proposal may adversely affect such lands."

The Proposed Project is also considered consistent with the noted LAFCO Commission goals to: (1) encourage orderly growth; (2) promote logical and efficient public services for cities and special districts; (3) streamline governmental structure; and (4) discourage premature conversion of prime agricultural and open space lands to urban uses. Goals 1 through 3 would be addressed through the Proposed Project development review process, including evaluation of potential Project effects under CEQA; annexation of the Project site into the County Sanitation District; and requirements to obtain a GPA, Rezone, Vesting Tentative Map, and Major Use Permit (with associated development conditions). Additionally, the Project would be consistent with the promotion of "…logical and efficient public services for cities and special districts." As noted above under the discussion of Policy No. 1, based on the description of local sewer and water district facility/boundary locations relative to the Proposed Project site, as well as assessments of existing capacity and plans for future expansion ensure adequate capacity for projected growth. Specifically, all of the identified local districts exhibit generally adequate water and/or wastewater capacity for current demands (with operations in the previously described Harmony Grove District related to the pending Harmony Grove Village development, County 2010c), and address existing shortfalls and projected future demands through extensive capital improvement programs identified in the associated master plans. As previously indicated, these master plans include numerous additional planned facilities such as treatment and conveyance structures, with the intent of ensuring adequate service capabilities for future demands projected in local



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Agricultural Cumulative Study Area

VALIANO

HELIX Environmental Planning

0 3,500 Feet

Figure 10

(e.g., general plans) and regional (e.g., San Diego County Association of Governments) forecasts. Specifically, the City of Escondido and VWD Master Plans identify over $35 million and $30 million in capital improvements over the next 15 years, respectively, with a number of these planned facilities/improvements located in the Project site vicinity (including 1,300 feet of force main upgrade along Harmony Grove Road east of the site, and installation/upgrade of several additional pipeline/force main segments and lift stations to the east and north; VWD 2010, City of Escondido 2012). With respect to Goal 4, the described conversion of Prime Agricultural Land within the Project site is not considered premature. Specifically, this conclusion is based on: (1) the previously described locations of existing and ongoing urban development in the Project vicinity; (2) the noted locations and projected extension of utility district service areas/facilities, including planned future capital improvements; (3) the inclusion of Project design elements to minimize the impact footprint, preserve open space (including ~~existing~~ an agricultural ~~uses~~ easement that encompasses Prime Agricultural Land), provide buffers and setbacks in appropriate areas, and establish a transition between nearby urban and rural uses; and (4) the fact that the Proposed Project would maintain consistency with applicable Goals and Policies in the County General Plan through adoption of the associated GPA.

Based on the above described conditions, the Proposed Project is considered to be consistent with applicable LAFCO goals and policies related to the proposed conversion of Prime Agricultural Lands.

2.3.4~~3~~ Direct Impacts From Off-site Facilities

Proposed Off-site Roadway Improvements

As described in Section 1.2, proposed off-site facilities involve widening and related improvements along four off-site roadways, including Hill Valley Drive, Eden Valley Lane, Mt. Whitney Road, and Country Club Drive (refer to Figures 3b and 3c). Because none of the off-site roadway improvements would affect areas of CDC candidate soils, no associated significant impacts would result.

Potential Off-site sewer Options

As described in Section 1.2, two of the three potential off-site sewer options, the HARRF and Harmony Grove options, would be located completely within existing City/County roadways, utility easements, or the Proposed Project WTWRF site (which is included in the Project site impact total noted above). Accordingly, neither of these potential sewer options would result in any impacts to CDC candidate soils available for agricultural use and no associated potential significant impacts would result. The third option, the VWD option, includes approximately 100 linear feet of pipeline that would extend through an area of CDC candidate soils (i.e., Visalia sandy loam, 2 to 5 percent slopes) within the eastern route segment extending between Hill Valley Drive and the Casitas del Sol Mobile Home Park (refer to Figure 3e). Based on a proposed 12-inch diameter pipeline, a conservative disturbance width of 20 feet is assumed for this segment, resulting in an impact of 0.05 acre (2,000 SF) within the noted CDC candidate soils. If the noted segment of the VWD off-site sewer option is ultimately implemented, the noted 0.05 acre of impact to CDC candidate soils would require mitigation as outlined below in Section 2.4.

2.4 Mitigation Measures and Design Considerations

Proposed Project

Mitigation Measures

Based on the above discussion in Section 2.3, implementation of the Proposed Project would result in approximately ~~12.98~~13.14 acres of direct impacts to identified on-site agricultural resources that encompass Prime Farmland or Farmland of Statewide Importance candidate soils, with no impacts to CDC candidate soils from proposed off-site roadway improvements.

Pursuant to Section 5.1.1 of the County Agricultural Guidelines, on-site mitigation of the described impacts to ~~12.98~~13.14 acres of agricultural resources encompassing candidate soils would require preservation of suitable agricultural resources at a 1:1 ratio. Accordingly, if ~~12.98~~13.14 acres of on-site agricultural resources encompassing Prime or Statewide candidate soils were preserved as "available and viable" for agricultural use, the associated impacts would be considered less than significant. The use of on-site agricultural resource preservation to fully mitigate Project impacts is considered infeasible, however, based on the following considerations: (1) the Project design does not include lots of 2 acres or larger in size, with all proposed lots in appropriate areas of agricultural resources and candidate soils less than one acre in size (and most less than one-half acre, refer to Figures 3a, 7a and 7b); and (2) on-site preservation of approximately ~~12.98~~13.14 acres of applicable agricultural areas would create substantial land use effects (and related financial impacts) for the Proposed Project, due to the required loss of several residential lots in Neighborhoods 3 and/or 5, as well as associated potential effects to proposed open space, parks, landscaping, wastewater, storm water and/or recycled water facilities. As a result, a potential redesign to preserve the described agricultural elements onsite is considered infeasible and would cause the project to be economically unviable (Integral Communities 2014; personal communication).

Based on the above discussion, the Proposed Project would be required to provide appropriate mitigation at a ratio of 1:1 for identified impacts per the referenced County Guidelines. Potential options to implement mitigation for the described direct impacts to agricultural resources include either: (1) providing off-site mitigation for the noted ~~12.98~~13.14-acre impact area at a 1:1 ratio through the acquisition of agricultural mitigation credits via the County Purchase of Agricultural Conservation Easement (PACE) Program (if adopted by the Board of Supervisors as a mitigation program); (2) providing a combination of PACE mitigation credits and establishment of on- and/or off-site limited building zone (LBZ) easements or agricultural easements (off-site) in appropriate areas (e.g., larger residential or other lots encompassing CDC candidate soils) totaling ~~12.98~~13.14 acres (pursuant to County approval); or (3) purchasing off-site agricultural lands or easements totaling ~~12.98~~13.14 acres that meet the intent of the County Agricultural Guidelines. Additional discussion of the PACE Program and the noted mitigation options is provided below. With implementation of the described mitigation, direct Project-related impacts to on-site agricultural resources would be reduced below a level of significance.

The PACE Program is intended to promote the long-term preservation of agriculture in the County, as part of the General Plan Update process. Under the PACE Program, willing

agricultural property owners are compensated for placing a perpetual easement on their agricultural property to limit future non-agricultural uses and development potential. As a result, the agricultural land is preserved and the property owner receives compensation that can make its continued use for agriculture more viable. The pilot phase of this Program was completed in Year 2013, with several agricultural easements established (County 2013c). On September 17, 2014, the Board of Supervisors approved the PACE Program as an agricultural mitigation credit Program. It is anticipated that under this scenario project applicants may purchase "mitigation credits" for impacts to agricultural resources (County 2014).

The noted potential mitigation option to preserve appropriate on-site areas could potentially include applicable portions of appropriate residential lots (e.g., undeveloped areas on larger lots) or other areas that encompass CDC candidate soils as previously described. Specifically, the preservation of such areas would require the establishment of LBZ easements to ensure the availability and viability of the subject areas for future agricultural use. The establishment of an LBZ easement typically restricts non-agricultural development to ensure that the underlying areas remain available for agricultural use. Any LBZ easements established on the Project site would be granted to the County of San Diego, with the following non-agricultural uses to be prohibited: (1) the construction or placement of any residence, garage, or any accessory structures designed or intended for human occupancy; (2) the construction or placement of any recreational amenities such as tennis courts or swimming pools; and (3) other non-agricultural related grading or construction that would render any portion of the noted easement unavailable or non-viable for agricultural use. Exceptions to the described prohibitions may include grading and construction/maintenance activities for wells, water distribution systems, other activities/facilities required for agricultural operation, or fuel management activities required by a written order from the Fire Marshall. Any applicable construction or maintenance activities within LBZs would also require the removal, on-site storage and reapplication of topsoil to protect agricultural viability (with specific language to be developed as part of the easement process and approval by the County). While individual locations within the Project site that may be suitable for the establishment of LBZ easements have not been specifically identified, they may potentially include applicable areas in Neighborhood 1 (e.g., appropriate portions of proposed common area lots), Neighborhood 3 (e.g., undeveloped areas near the proposed detention basin), and Neighborhood 5 (e.g., larger applicable residential lots and undeveloped areas associated with the WTWRF and wet weather storage area, refer to Figures 3a, 7a and 7b).

Design Considerations

The proposed 35.4-acre agricultural easement would preclude future residential-related development or other inappropriate uses, with all non-agricultural uses to be prohibited, including: (1) the construction or placement of any residence, garage, or any accessory structures designed or intended for human occupancy; (2) the construction or placement of any recreational amenities such as tennis courts or swimming pools; and (3) other non-agricultural-related grading or construction that would render any portion of the noted easement unavailable or non-viable for agricultural use. Exceptions to the described prohibitions may include grading and construction for wells, water distribution systems and related access thereto, other activities/facilities required for agricultural operation, and fuel management activities required by a written order from the Fire Marshall. Due to the 2014 wildfire event and current drought

conditions that have affected the easement area (and associated agricultural use), the 35.4-acre agricultural easement may not be retained or reestablished as an avocado grove (with avocadoes typically requiring high irrigation levels). Rather, the easement area would be managed and maintained to ensure that it is available and viable for associated potential agricultural uses. Agricultural uses within the proposed easement area could be implemented directly through the HOA (i.e., by retaining a qualified agricultural manager/consultant/operator), or though options such as leasing or selling the easement parcel to a third party for agricultural development in conformance with the Specific Plan. An Agricultural Maintenance Agreement (Agreement) between the easement land owner(s) or lessee(s), and the County of San Diego, will be developed to ensure proper maintenance of the ~~36.5~~35.4-acre agricultural easement. The Agreement may be transferred to individual property owners/lessees or the HOA, and will address the following elements to the satisfaction of PDS:

- The property owner(s), lessee(s), and/or HOA will employ a qualified ~~n agricultural~~ manager/consultant to ~~oversee ongoing orchard (and/or other agricultural) operations within~~maintain the ~~36.5~~35.4-acre easement area in perpetuity and ensure that it is available and viable for associated potential agricultural uses. This may include activities such as "stumping" the remaining and burned (dead) avocado trees; providing erosion, weed and rodent control; and maintaining the irrigation system used for the previous agricultural operations (as outlined below).

- Agricultural fencing and signage shall be installed along the easement boundaries prior to approval of Project Grading and/or Improvement Plans, and shall be maintained as necessary.

- Signage will be corrosion resistant, a minimum size of 6 inches by 9 inches, spaced 100 feet apart, attached to fencing not less than 3 feet in height from the ground surface, and will state "County Easement: Agricultural Uses Only (Project Ref: TM-5575)."

- The wells and water distribution facilities used for ~~the~~ previous agricultural operations within the ~~36.5~~35.4-acre easement area will be properly maintained (including replacement as necessary). Specifically, the irrigation system will be maintained in an operable condition so that it is available for potential future agricultural use within the easement area, unless additional and/or replacement facilities are required/proposed. This could entail grading and construction for installation of additional (or replacement) wells and related facilities, as well as infrastructure for delivery of recycled water (when available) to supplement or replace the use of groundwater for agricultural irrigation.

- ~~Prior to approval of the Final Map, a security~~The Project Bureau of Real Estate HOA budget will include ~~adequate to cover~~ 10 years of maintenance operations ~~in~~ for the ~~36.5~~35.4-acre easement area (as described above)~~will be provided~~, unless conveyed to a third party operator (which would then develop and implement the maintenance operation), based on a cost estimate generated by the Project applicant and/or HOA and approved by the Director of PDS.

Off-site Sewer Options

Mitigation Measures

As described above in Section 2.3, if the eastern route segment of the VWD option, extending between Hill Valley Drive and the Casitas del Sol Mobile Home Park (refer to Figure 3e), is ultimately implemented, approximately 0.05 acre of impact to CDC candidate soils would result. Under this scenario, an additional 0.05 acre of mitigation would be required in addition to the ~~12.98~~13.14 acres of described mitigation for the Proposed Project, for a total mitigation requirement of 13.19~~03~~ acres. This additional mitigation could be implemented either through the PACE Program or a combination of PACE mitigation credits and establishment of on- or off-site LBZ easements as noted above for the Proposed Project.

2.5 Conclusions

Proposed Project

Potential Project-related impacts to applicable on-site agricultural resources would total ~~12.98~~13.14 acres, and would be significant pursuant to the County Agricultural Guidelines (County 2007). Based on these Guidelines, the Project applicant would be required to provide associated mitigation at a 1:1 ratio, or a total of ~~12.98~~13.14 acres. This mitigation may be provided through: (1) acquiring ~~12.98~~13.14 acres of off-site mitigation credits via the County PACE Program; (2) using a combination of PACE mitigation credits and on- or off-site establishment of LBZ easements in appropriate areas (with County approval) that totals ~~12.98~~13.14 acres; or (3) applicant-purchase of off-site agricultural lands or easements totaling ~~12.98~~13.14 acres that meet the intent of the County Agricultural Guidelines. With the described mitigation, direct Project-related impacts to on-site agricultural resources would be reduced below a level of significance.

Project implementation would impact approximately 95.4~~02~~ acres of ~~on-site~~ LAFCO Prime Agricultural Land, including ~~80.46~~82.26 acres of avocado orchards and ~~14.56~~13.14 acres of qualifying soils. The Proposed Project is considered consistent with related LAFCO policies regarding effects to Prime Agricultural Land, however, as the Project would provide "orderly growth" and "logical and efficient public services." Specifically, this conclusion is based on considerations including: (1) the nearby location of existing and ongoing urban development and related water and sewer district boundaries/infrastructure; (2) the inclusion of Project design elements, such as clustered development, appropriate lot sizes/locations and setbacks, to provide a "logical" transition between nearby urban and semi-rural uses; (3) the use of extensive open space and easements, including a ~~36.5~~35.4-acre agricultural easement, to minimize the impact footprint and retain ~~existing~~ areas that are available and viable for agricultural use~~s~~ (including Prime Agricultural Land); and (4) the fact that the Proposed Project would maintain consistency with the County General Plan through adoption of the associated GPA.

Off-site Sewer Options

If the eastern route segment of the VWD option, extending between Hill Valley Drive and the Casitas del Sol Mobile Home Park (refer to Figure 3e), is ultimately implemented, approximately 0.05 acre of impact to CDC candidate soils would result. Under this scenario, 0.05 acre of mitigation would be required in addition to the ~~12.98~~13.14 acres of described mitigation for the Proposed Project, for a total mitigation requirement of 13.19~~03~~ acres. This additional mitigation could be implemented either through the PACE Program or a combination of PACE mitigation credits and establishment of on- and/or off-site site LBZ easements, as noted above for the Proposed Project.

3.0 IMPACTS TO OFF-SITE AGRICULTURAL RESOURCES

3.1 Guidelines for Determination of Significance

The following significance guidelines are derived from the San Diego County Agricultural Guidelines (2007), and are the basis for determining the significance of indirect impacts to off-site agricultural resources and Williamson Act Contract lands in San Diego County:

a. The project proposes a non-agricultural land use within one-quarter mile of an agricultural operation 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.

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

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

3.2 Analysis of Project Effects

As described above in Section 1.4.3, the Project ZOI encompasses a number of active agricultural operations, as well as one active Williamson Act Contract. These areas are shown on Figures 5a and 9 (respectively), and are described below with respect to proximity to the Project site and related potential impacts.

3.2.1 Project Effects Related To Nearby Agricultural Resources

Implementation of the Proposed Project would result in the development of a residential property in an area with adjacent or nearby agricultural uses consisting primarily of avocado orchards and a commercial nursery. This scenario could potentially generate interface conflicts with nearby agricultural resources, as outlined below. For purposes of this analysis, "nearby" agricultural resources are defined to include existing (or recently active) and potential agricultural operations within the Project ZOI.

Properties with existing agricultural operations and agricultural zoning or designations (i.e., areas that could potentially accommodate various types of agricultural use) that are within the Project ZOI include the following (refer to Figure 5a): (1) active avocado orchards adjacent to the site on the south and southwest, as well as within the previously described 3.2-acre R7 Reservoir parcel; (2) a nursery operation with predominantly in-ground decorative plantings (e.g., dollar

eucalyptus) approximately 1,800 feet south of the site; (3) minor areas of citrus and mixed use (primarily citrus) orchards to the west and south in association with estate residential uses; (4) minor greenhouse and (apparent) row/field crop areas to the east; (5) two small vineyards associated with estate residential properties to the east; and (6) several currently undeveloped properties in surrounding areas. Potential interface conflicts with these properties are discussed below to determine whether interface conflicts could result in the conversion of agriculture to a non-agricultural use. As previously, discussed, a number of former agricultural facilities/ operations located just south of the Project site have been recently removed as part of the Harmony Grove Village project development approved in 2007 (e.g., egg ranch/poultry farm and dairy operations, refer to Sections 1.4.1 and 1.4.2). Because these facilities and uses were observed to be no longer present/active during the February 7 and 9, 2013 field surveys, they are not discussed further in the following analysis.

Orchard Operations

Relatively extensive avocado and citrus orchards are located in areas adjacent to, or near, the Project site on the south and southwest, as well as within the R7 Reservoir parcel (with portions of these orchards adjacent to the southern site boundary recently removed, ~~or~~ abandoned or destroyed, as previously described). Because orchard operations typically do not entail substantial noise, dust, vector or chemical generation as compared to more intensive agricultural operations, they are considered generally compatible with most urban uses, and would not result in substantial conflicts with (or associated impacts to) the Proposed Project. Specifically, the County Agricultural Guidelines (2007) note that "…orchard crops such as avocados and citrus are often compatible with residential uses…" The Project design also includes relatively large lots (with minimum lot sizes of approximately 12,000 SF) that are set back 150 feet or more in areas with existing nearby off-site orchards (refer to Figures 3a and 5a). The resulting generally low-density development would provide opportunities to further reduce potential conflicts through measures such as structure location/orientation and screening (e.g., with landscaping). It should also be noted that: (1) the Project design includes a ~~36.5~~35.4-acre agricultural easement in the northern portion of the site (refer to Figure 3a) that would be ~~used for continued operation of associated avocado orchards (and/or other agricultural uses)~~ maintained to ensure the availability and viability of this area for agricultural use (refer to the related discussion in Section 2.4); and (2) transitional uses such as small orchards and gardens would be allowable within applicable individual residential lots on the proposed development (including lots in Neighborhoods 1, 2, 4 and 5 that are near the off-site orchards), creating the potential for blending with and/or screening from larger off-site orchards. As a result of the described conditions, no significant effects related to interface conflicts with off-site orchards would result from Project implementation.

The Proposed Project would not be anticipated to result in potential conflicts with nearby orchards, such as trespassing, theft, and vandalism, with the site to include perimeter fencing to help prevent unauthorized ingress or egress. Implementation of the Proposed Project would also not result in conditions or effects (e.g., substantial air contaminant generation) that would adversely impact or be incompatible with nearby orchards, and Project implementation would include both short-term (construction) and long-term measures to avoid or minimize drainage and water quality effects to surrounding areas. Specifically, this would involve efforts such as

designing storm drain systems to accommodate 100-year flows and prevent on- or off-site flooding, and controlling contaminant discharge through conformance with applicable regulatory requirements (e.g., the National Pollutant Discharge Elimination System [NPDES]).

Nursery Operations

An existing nursery operation consisting of mainly in-ground decorative plantings is located approximately 1,800 feet south of the Project site. While the plantings at this site are predominantly viable, most access roads and irrigation systems appeared to be in disrepair and no evidence of wholesale or retail activities, such as office/parking facilities or vehicular traffic, was observed during field investigation. Accordingly, this operation may potentially be inactive or abandoned. Regardless of the status of this site, however, no associated substantial interface conflicts with (or impacts to/from) the Proposed Project are anticipated due to the intervening distance to the Project site and the nature of the primary crop (dollar eucalyptus), which is generally not subject to intensive nuisance generation.

Citrus and Mixed-use Orchards

Minor areas of citrus and mixed-use orchards (totaling 2.06 acres) are located west and south of the Project site in association with estate residential uses. The mixed-use orchards are primarily citrus, with associated crops including nut and other fruit trees (e.g., persimmons and pomegranates). As described above for avocado orchards, these types of uses generally do not result in substantial interface conflicts or impacts to/from residential uses, with no associated significant effects anticipated from implementation of the Proposed Project.

Greenhouses

A small (2.46-acre) greenhouse operation is located approximately 1,000 feet north and east of the closest Project site boundaries. While the nature of associated activities is unknown as previously described, no associated significant interface conflicts or impacts to/from residential uses are anticipated from implementation of the Proposed Project. Specifically, this conclusion is based on the small area involved and the intervening distance to the site, as well as the fact that all greenhouse activities are apparently confined within enclosed structures, with no evidence of exterior plantings or other operations.

Row/Field Crops

As previously described, two minor (1.61- and 1.21-acre) areas of apparent row/field crops are located approximately 200 and 900 feet east of the Project site (with the closest area of row crops located 300 feet from Proposed Project residential development). Due to the noted intervening distances, the small extent of these areas, and the fact they are associated with estate residential sites, any associated nuisance factors such as dust, noise or chemical applications are expected to be minimal. Accordingly, no associated significant interface conflicts or impacts to/from residential uses are anticipated from implementation of the Proposed Project.

Vineyards

Two small (0.18- and 0.24-acre) vineyards are located approximately 250 feet east and 1,000 feet east of the site (with the closest vineyard area located approximately 300 feet from proposed residential development), and are associated with estate residential properties (with an associated residence located between the closest vineyard and the Project site). No associated significant interface conflicts or impacts to/from residential uses are anticipated from implementation of the Proposed Project, for similar reasons as described above for row/field crops.

Agricultural Zoning and Williamson Act Contract Lands

Surrounding areas within the Project site ZOI include a number of zoning designations that would allow agricultural uses under the jurisdiction of the County (e.g., A-70, Limited Agriculture), City of San Marcos (e.g., A-1, Agriculture 1; and HR-1, Hillside Residential 1), and City of Escondido (e.g., R-A, Residential Agriculture). Accordingly, while currently undeveloped properties to the north, east, and west could potentially be subject to future agricultural use, no associated significant interface conflicts or impacts to/from Project residential uses would be anticipated. Specifically, this conclusion is based on the following considerations:

- Off-site land use and zoning designations in all the noted jurisdictions are not exclusive to agriculture, with agricultural uses in these areas typically associated with additional uses, such as estate residential development, which permits and anticipates the co-existence of single-family estate housing and high-value crop production, such as citrus and avocados (refer to pp. 3 and 41-43 of the referenced County Guidelines). Specifically, this includes: (1) areas to the west and north in the City of San Marcos zoned A-1 and HR-1, with allowable residential densities of between 1 and 8 DU per acre (and low-density estate residential development and related agricultural uses present); (2) the Harmony Grove Village Specific Plan to the south, which includes a number of areas identified for estate residential lots (minimum two-acres) and open space adjacent to the Proposed Project site; and (3) areas to the east in the County zoned A-70 and Single-family Residential (RS), with allowable densities of 1 to 2 DU per acre (and most of these areas supporting existing estate residential uses).

- Local topographic and soil conditions generally limit the type of agricultural uses in surrounding areas to the west and south, with uses more dependent upon such conditions (such as row crops) that would potentially result in interface conflicts with residential development considered unlikely to occur in these areas. A number of existing orchards are present in portions of these areas, however (including avocado and mixed-use orchards), with such uses less affected by soil quality and considered the most likely type of associated potential future agricultural development. As previously noted, orchards generally do not result in substantial interface conflicts with residential uses. Additionally, while minor areas of row crops, vineyards and greenhouses are present in areas to the east (refer to Figure 5a), the potential expansion of such uses is considered unlikely, based on soil quality limitations and/or the presence of existing residential sites

in most nearby areas (including residential sites in closer proximity than Proposed Project development).

- The Proposed Project includes a Design Consideration to ensure conformance with the County Agricultural Enterprises and Consumer Information Ordinance (County Code Section 63.401 et seq.). This Ordinance is intended primarily to identify and limit the circumstances, under which agricultural activities may constitute a nuisance. The ordinance notes that agricultural uses may be converted to other uses or zones, whether or not the parcels are zoned for agricultural uses. It prohibits land use changes in the vicinity of existing agricultural uses, however (when such uses have been established for a minimum of 3 years), that would result in the existing agricultural uses to be deemed a nuisance if they were not a nuisance prior to the proposed land use change. In addition, the Ordinance requires prospective property buyers (new or resale buyers) in unincorporated areas to be notified that agricultural activities may occur in the vicinity, and that associated inconveniences, irritations or discomforts could potentially result. Based on the noted ordinance criteria, the Proposed Project includes a Design Consideration to require written notification to all prospective buyers of property within the Project site, whether for new or resale dwellings, regarding the potential occurrence of agricultural activities (and associated nuisance factors) in adjacent areas.

As previously described, an active Williamson Act Contract parcel (Contract No. 77-45) is located approximately 700 feet southeast of the Project site and includes 12 acres (refer to Figure 9). No associated significant interface conflicts or impacts to/from residential or related on- and off-site uses are anticipated from implementation of the Proposed Project, however, based on the nature of, and intervening distance to, potential off-site uses, as well as the fact that this property is not currently in agricultural use (refer to Section 1.4.3).

3.2.2 Project Effects Related To More Distant Agricultural Resources

As depicted on Figure 5b, existing agricultural operations in more distant areas include a number of relatively large avocado orchard and nursery operations, as well as smaller areas of citrus and mixed-use orchards. None of these existing uses are anticipated to involve substantial interface conflicts with (or impacts to/from) the Proposed Project, based on the intervening distances to the Project site, and the nature of associated operations (i.e., for similar reasons as noted above for such uses within the Project site ZOI).

A number of the more distant agricultural uses described above, as well as currently vacant properties in these areas with suitable topography and/or soils, may be subject to development for different types of agriculture as previously discussed for nearby agricultural sites. Based on the conclusions provided above for existing uses in more distant areas, however, no associated substantial interface conflicts with (or impacts to/from) the Proposed Project would result from such conversions/development.

As previously described, two agricultural preserves are located approximately 0.3 mile south (No. 89, Ward Egg Ranch) and 3.9 miles southwest (No. 105, Revelle) of the Project site. No substantial interface conflicts with (or impacts to/from) the Proposed Project are anticipated in

relation to these preserves, based on the intervening distances from the Project site, the lack of current associated agricultural activities, and the fact that the area encompassing Preserve No. 89 is currently being developed as a mixed-use residential property.

3.2.3 Project Effects Associated With Agricultural Resources Related to Proposed School, Church, Day Care or Other Applicable Uses

Because the Project does not include any proposed schools, churches, day care facilities or other applicable uses, no associated impacts would result from Project implementation.

3.2.4 Summary of Impacts to Off-site Agricultural Resources

The Proposed Project is not expected to result in significant effects related to interface conflicts with existing or potential future off-site agricultural operations. This conclusion is based the following considerations: (1) large-scale agricultural operations in close proximity to the site are predominantly avocado and citrus orchards, which are generally compatible with residential uses; (2) the Project design includes relatively low density (large lot) development, appropriate setbacks from nearby orchards along applicable boundaries, retention of a ~~36.5~~35.4-acre agricultural easement ~~area~~ that would be maintained to ensure the availability and viability of this area for agricultural use (refer to the related discussion in Section 2.4~~encompassing existing avocado orchards (and/or other agricultural uses)~~, landscaping to screen off-site areas, and opportunities for on-site transitional uses (e.g., orchards and gardens) on residential lots; (3) other agricultural uses in relatively close proximity to the Project site (including citrus/mixed-use orchards, greenhouses, vineyards, and apparent row/field crop plots) are very minor in extent and/or associated with estate residential sites, with any associated nuisance factors expected to be minimal, and are also subject to appropriate setbacks, buffers and transitional uses, as described for off-site orchards; (4) based on soil, topography and existing land use conditions, orchards are considered the most likely type of potential future agricultural use in areas surrounding the Project site; (5) other existing agricultural uses and Williamson Act Contract lands/preserves within the Project ZOI are located at distances ranging from 700 to 1,800 feet from the Project site, are minor in extent, and/or generally do not encompass uses that would involve excessive nuisance factors such as noise, dust or chemical applications; (6) agricultural uses/designations in areas outside the ZOI are minor in nature/extent and/or include substantial intervening distances to the Project site; (7) other potential indirect impacts to off-site agricultural resources related to trespassing, theft, vandalism or air/water contamination are not anticipated, based on the incorporation of Project design measures such as fencing and setbacks, as well as required conformance with applicable regulatory standards; and (8) the Proposed Project includes a Design Consideration to ensure conformance with the County Agricultural Enterprises and Consumer Information Ordinance via written notification to all prospective property buyers.

3.3 Mitigation Measures and Design Considerations

Mitigation Measures

Because no significant impacts to off-site agricultural resources were identified, associated mitigation measures are not required.

Design Considerations

The Proposed Project includes a number of design features to address potential interface nuisance factors with off-site agricultural operations, such as theft/vandalism, air/water contamination, potential dust, odor and noise conflicts (i.e., from off-site areas). Specifically, this includes the use of fencing to restrict ingress/egress; the use of open space ~~(including agricultural)~~ preservation (including an agricultural easement), landscaping (including potential on-site orchards and gardens) and setbacks in appropriate areas; and conformance with pertinent standards regarding hydrology/water quality and air quality. In addition, the Proposed Project includes the following Design Consideration to ensure conformance with the County Agricultural Enterprises and Consumer Information Ordinance (San Diego County Code Section 64.401):

- The Project applicant and/or HOA will provide written notice to all prospective buyers of property within the Project site, whether for new or resale dwellings, regarding the potential occurrence of agricultural activities (and associated nuisance factors) in adjacent and nearby areas. Specifically, this notice will include the following information: (1) 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; (2) agricultural operations are located throughout the unincorporated area, including properties adjacent, or in close proximity, to the Valiano Project site, and are predominately family operations conducted on smaller parcels; (3) based on the described conditions, inconveniences, irritations and discomforts could potentially occur between on-site land uses and existing and/or future agricultural activities, including (but not necessarily limited to) issues associated with noise, odors, dust, insects, rodents, and chemicals; and (4) purchasers of property within the Valiano site, whether for new or resale dwellings, 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.

3.4 Conclusions

Pursuant to the discussions in Sections 3.2 and 3.3, the Proposed Project would result in less than significant impacts to off-site agricultural resources.

Implementation of the Proposed Project would not result in any significant impacts to existing or potential future off-site agricultural uses, including orchards, nurseries, greenhouses, row/field crops or vineyards, as well as Williamson Act contract lands. This conclusion is based on

considerations including: (1) the nature and location of these operations/designations; (2) the inclusion of and open space, landscaping and setbacks as transitional uses/buffers in the Project design; (3) required Project conformance with regulatory standards including NPDES hydrology and water quality criteria; and (4) the inclusion of a Project Design Consideration to ensure conformance with the County Agricultural Enterprises and Consumer Information Ordinance via written notification to all prospective property buyers, whether for new or resale dwellings.

The Proposed Project would also not generate significant interface impacts related to theft/vandalism and nuisance factors associated with off-site agricultural operations. This conclusion is based on the use of fencing, open space and landscaping as part of the Project design, with these facilities to maintain security and provide setbacks and screening from off-site agricultural areas.

4.0 CUMULATIVE IMPACTS

Cumulative impacts are those caused by the additive effects of impacts to agricultural resources from multiple projects over time. Individual impacts for a given project may be less than significant on an individual basis, although the additive (or cumulative) effect when viewed in connection with impacts from past, present and probable future projects may result in the significant loss or degradation of agricultural resources.

4.1 Guidelines for Determination of Significance

The guidelines for determining the significance of cumulative impacts are based on the same Guidelines used to determine project level impacts, except that the analysis considers the cumulative effects of impacts from the Proposed Project and applicable projects within the agricultural cumulative study area described below. Accordingly, the reader is referred to the discussions of significance Guidelines for project level impacts provided in Sections 2.2 and 3.1, as well as the following analysis of cumulative impacts.

4.2 Analysis of Project Effects

Pursuant to applicable CEQA requirements, the following analysis includes an assessment of potential cumulative impacts based on the "List of Projects Method," as defined in Section 15130(b)(1)(A) of the State CEQA Guidelines. Specifically, the List of Projects Method involves evaluating potential impacts from the Proposed Project in concert with other "past, present and probable future projects" within an established cumulative study area (as defined below).

A cumulative study area was developed as part of the Proposed Project CEQA analysis, with a modified version used for this evaluation. The agricultural cumulative study area is shown on Figure 10, and was generated on the basis of the following considerations: (1) applicable cumulative project locations relative to the Project site; (2) the presence of active agricultural activity or designations (e.g., Williamson Act contracts/preserves); (3) agricultural resource potential (e.g., the presence of high quality soils); (4) physical barriers such as steep or rocky terrain; and (5) cultural barriers such as major roadway corridors or substantial urban development. Based on these factors, the cumulative study area boundaries shown on Figure 10 reflect criteria including substantial high-density urban development to the north (City of San Marcos), east (City of Escondido) and west (cities of Carlsbad and Encinitas); and steep, rocky terrain and designated open space (the Elfin Forest Recreational Reserve) to the south and southwest.

Applicable projects (as identified by the County of San Diego and cities of San Marcos and Escondido) within the identified agricultural resource cumulative study area are also shown on Figure 10, with summary descriptions of project features and identified agricultural resource data provided in Appendix D. Pursuant to the County Agricultural Guidelines (2007), the analysis in Appendix D includes the following information: (1) a general description of agricultural resources within the cumulative project sites; (2) a determination of whether these sites include important agricultural resources based on specified LARA Model factors (i.e., soils, water and

climate), and the inclusion of site-specific LARA Model results, if available; (3) identification of specific LARA Model results if available, or generation of an estimate of direct impacts to agricultural resources for each cumulative project site based on project size, density and the extent of on-site agricultural resources; and (4) an estimate of potential indirect impacts to off-site agricultural uses.

Based on review of County of San Diego, City of San Marcos and City of Escondido project files (County 2013d, City of San Marcos 2013, City of Escondido 2013), analysis of applicable databases (e.g., CDC and NRCS websites), and field reconnaissance efforts, agricultural resources and associated potential impacts identified for the listed projects in Appendix D and on Figure 10 include numerous areas of CDC-designated Prime Farmland and Farmland of Statewide Importance candidate soils. As noted in Appendix D, for cumulative projects that are already developed and do not have site-specific LARA Model (or other agricultural analysis) results, associated impact footprints and CDC candidate soil mapping were used to calculate impacts to agricultural resources, while a number of assumptions were made regarding the extent of agricultural impacts to provide a more conservative analysis. Specifically, for larger estate residential lots (i.e., 2 acres or more), half of the total lot size was assumed to be impacted through construction of buildings and related improvements (e.g., landscaping and swimming pools). The assumption that half of the noted lot types would be impacted is considered conservative, as it is common in San Diego County for two-acre or larger lots to encompass agricultural uses on more than half of the total lot area (with corresponding impacts thus totaling less than half the lot area). Similarly, for smaller lots and non-residential development, the entire project site was generally (and conservatively) assumed to be impacted (unless specific information to the contrary was available). Based on these assumptions and additional information provided in this report and in Appendix D, cumulative impact totals and significance conclusions are provided below for CDC Prime/Statewide candidate soils, as well as for active agriculture and farm sites within the described cumulative study area (with the use of these criteria based on direction in the County Agricultural Guidelines, 2007, refer to Section 2.1.1).

CDC Prime Farmland and Farmland of Statewide Importance Candidate Soils

Cumulative impacts to CDC Prime and Statewide candidate soils within the associated study area, including the Proposed Project and the identified off-site cumulative projects (refer to Figure 9 and Appendix D), would encompass a total of approximately ~~340.83~~338.91 acres as outlined below.

- The Proposed Project would impact approximately ~~35.01~~33.09 acres of CDC candidate soils within the Project site. Additionally, as described in Section 2.4, if the eastern route segment of the VWD off-site sewer option is ultimately implemented, this figure would be increased by approximately 0.05 acre to ~~35.06~~33.14 acres (with this larger total used in the following analysis to provide a more conservative assessment).

- The Taylor Hill Valley project (No. 37 on Figure 10 and in Appendix D) would impact approximately 0.1 acre of CDC candidate soils.

- The Harmony Grove Village project (No. 41 on Figure 10 and in Appendix D) impacted approximately 150.8 acres of CDC candidate soils.

- The Anderson Tentative Map (TM 5278) project (No. 54 on Figure 10 and in Appendix D) would impact approximately 4.0 acres of CDC candidate soils. However, the LARA Model results showed that the project is not an Important Agricultural Resource.

- The Anderson Tentative Parcel Map (TPM 20350) project (No. 55 on Figure 10 and in Appendix D) was concluded to have no significant agricultural impacts in an environmental analysis conducted for the project site.

- The Baumgartner (TPM 20764) project (No. 56 on Figure 10 and in Appendix D) was concluded to have no significant agricultural impacts in agricultural and environmental analyses conducted for the project site.

- The University Commons/Old Creek Ranch Specific Plan project (No. 99 on Figure 10 and in Appendix D) impacted approximately 94.47 acres of CDC candidate soils.

- The San Elijo Hills Town Center project (No. 100 on Figure 10 and in Appendix D) impacted approximately 45.4 acres of CDC candidate soils.

- The Kenny Ray Harmony Grove project (no. 101 on Figure 10 and in Appendix D) would impact approximately 11 acres of CDC candidate soils.

The described cumulative impacts to CDC candidate soils would represent approximately 22.4~~5~~ percent of the total area of CDC candidate soils within the cumulative study area (i.e., ~~340.83~~338.91 out of 1,515.96 acres). Due to the relatively large percentage of CDC candidate soils that would be directly affected by the cumulative projects (including the Proposed Project), this is considered a cumulatively significant impact. The Project contribution to this impact would be less than considerable, however, based on the following considerations: (1) Project-related impacts would represent ~~only approximately~~less than 10 percent of the cumulative total (i.e.,~~ 35.06~~33.14 out of ~~340.83~~338.91 acres); (2) under the Proposed Project design, ~~nearly 38~~over 41 percent of the on-site CDC candidate soils would be preserved (i.e., ~~21.41~~23.33 out of 56.47 acres); and (3) impacts to CDC candidate soils from the Proposed Project would be partially offset by the required mitigation for direct on- and off-site impacts, which would total between~~12.98~~13.14 and 13.19~~03~~ acres, depending on whether or not the eastern off-site sewer option is implemented (with all Project mitigation to be implemented through acquiring off-site mitigation credits via the County PACE Program, or a combination of PACE mitigation credits and on- and/or off-site establishment of LBZ easements in appropriate areas, with County approval, refer to Section 2.4).

Cumulative Impacts to Active Agriculture

Based on the information and assumptions on agricultural resource impacts provided in Appendix D, the Proposed Project, in concert with other identified cumulative projects, would

result in the total loss of up to approximately 44305 acres of active (or recently active) agricultural uses within the 12,805.4-acre cumulative study area. Specifically, this includes approximately 170.8208.76 acres of primarily avocado orchards (including 80.4691.1 acres on the Harmony Grove Village site, 0.7 acre on the R7 Reservoir parcel, and 116.96 acres of avocados on the Project site, assuming none of the existing on-site orchards are retained, refer to Sections 1.2 and 2.4), 135 acres of egg ranches, 81 acres of dairy operations, and 18.1 acres of commercial nurseries (with no Project-related impacts to egg ranches, dairies or nurseries). The regional loss of 44305 acres of active agriculture would not be cumulatively significant, based on the following considerations:

- The total area of active agriculture in the County during 2013 was 305,573 acres (County of San Diego 2013e), with the noted impact of 44305 acres representing approximately 0.1 percent of this total, and thus not cumulatively considerable.

- Individually, the noted cumulative acreage losses for avocados and nurseries (with acreage figures not provided for dairies or egg ranches, and commodity analyses provided below) represent approximately 0.8one percent of the total harvested acreage in 2013 for avocados (i.e., 170.8208.76 out of 21,082 acres); and 0.2 percent of the total 2013 acreage in for nurseries (i.e., 18.1 out of 8,892 acres, not including cut flower crops, County 2013e).

- Based on an Agricultural Technical Study conducted for the Harmony Grove Village Project (HELIX 2006), 2004 operations at the site produced approximately 2.5 million dozen eggs, and an average of approximately 94,170 hundredweight (CWT) of milk. These totals represent approximately 3.5 percent of Countywide egg production in 2004 (and 4 percent in 2013), and 7.1 percent of Countywide milk production in 2004 (and 21.7 percent in 2013, County 2013e, 2004).

- Agricultural acreage in San Diego County has generally increased both recently and historically, with the noted 305,573 acres in 2013 representing an increase of 1,590 acres (1 percent) from 2012, and an increase of 78,908 acres (35 percent) during the period of 2002 to 2013 (County 2013e, 2002).

Cumulative Impacts to Farm Sites

The cumulative projects described above and in Appendix D would result (or have resulted) in a reduction of farms within the cumulative study area. Specifically, this includes the following projects, which resulted in the known loss of established farm operations: (1) Harmony Grove Village, which eliminated established orchard, dairy and egg ranch operations, as well as ; (2) The Anderson TM, which eliminated an established commercial nursery operation; and (3) the Anderson TPM, which eliminated an established commercial nursery operation. In addition, there are several other cumulative projects, which impacted important agricultural resources that may have supported farm operations prior to development (although no known specific data are available regarding farming operations on these sites). The 2013 County Crop Statistics and Annual Report lists 5,732 farms in the County, a decrease of 955 farms from the previous year, but an increase of nearly 10 percent from the 5,225 farms identified in 2002 by the USDA

(USDA 2007b, County 2013e and 2012c). While the described known and potential loss of farms associated with identified cumulative projects could potentially represent a significant cumulative impact, the Proposed Project contribution would not be cumulatively considerable. Specifically, this conclusion is based on the fact that the Project site includes a single (recently) active farming operation (i.e., avocado orchards), with a portion (35.4 acres) of this area to remain available and viable for agricultural use ~~to be retained in this area (albeit at a reduced level)~~ after implementation of the Proposed Project through issuance of the previously described agricultural easement. Even with the assumption that the on-site agricultural operation would be eliminated, however, the Proposed Project contribution to the loss of farm sites would not be cumulatively considerable. That is, the loss of a single farming operation at the Project site would represent less than 0.02 percent of the 5,732 farms present in San Diego County during 2013.

4.3 Mitigation Measures and Design Considerations

As described above in Section 4.2, implementation of the identified cumulative projects would result in significant cumulative impacts to CDC candidate soils within the agricultural cumulative study area. The Proposed Project contribution to this impact would not be cumulatively considerable, however, based on the fact that Project-related impacts would represent only approximately 10 percent of the cumulative total, ~~nearly 38~~over 41 percent of the on-site CDC candidate soils would be preserved under the Proposed Project design, and impacts to CDC candidate soils from the Proposed Project would be partially offset by the required mitigation for direct on-site and (if applicable) off-site impacts (i.e., between ~~12.98~~13.14 and 13.19~~03~~ acres, refer to Section 2.4). Accordingly, no additional mitigation related to cumulative impacts is required.

4.4 Conclusions

Pursuant to the above discussions in Sections 4.2 and 4.3, implementation of the identified cumulative projects (including the Proposed Project) would result in significant cumulative impacts to CDC candidate soils, although the Proposed Project contribution to this impact would not be cumulatively considerable. Accordingly, no mitigation is required.

5.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION

The Proposed Project would result in approximately ~~12.98~~ 13.14acres of significant impacts to on-site important agricultural resources, based on the results of the LARA Model analysis described in Section 2.0. Pursuant to the County Agricultural Guidelines criteria described in Section 2.4, these impacts would be mitigated through the acquisition of agricultural easements totaling ~~12.98~~13.14 acres, through either: (1) the County PACE Program; (2) by providing a combination of PACE mitigation credits and establishment of on-site LBZ easements in appropriate areas totaling ~~12.98~~13.14 acres (pursuant to County approval); or (3) applicant-purchase of off-site agricultural lands or LBZ easements totaling ~~12.98~~ 13.14 acres that meet the intent of the County Agricultural Guidelines. Additionally, if the eastern route segment of the VWD off-site sewer option is ultimately implemented, approximately 0.05 acre of impact to CDC candidate soils would result. Under this scenario, an additional 0.05 acre of mitigation would be required (i.e., in addition to the ~~12.98~~13.14 acres of described mitigation for the Proposed Project), for a total mitigation requirement of 13.19~~03~~ acres. This additional mitigation would be implemented either through the PACE Program or a combination of PACE mitigation credits and establishment of on- and/or off-site LBZ easements, as noted above for the Proposed Project.

The Proposed Project would not result in significant indirect impacts to existing agricultural operations/resources including avocado, citrus or mixed-use orchards; greenhouses; nurseries; row/field crops; vineyards; or Williamson Act contract lands (as described in Section 3.2).

Potential interface impacts with surrounding agricultural operations related to theft/vandalism and the generation of nuisance factors such as noise, odor and dust would also be less than significant as described in Section 3.2, with these potential issues to be further reduced through Proposed Project design features, including the use of on-site security fencing, setbacks and landscaping/orchards, and the inclusion of the buyer notice required by the Agricultural Enterprises and Consumer Information Ordinance, as described above, to protect surrounding agricultural uses from resident nuisance complaints.

Implementation of the identified cumulative projects (including the Proposed Project) would result in significant cumulative impacts to CDC candidate soils, although the Proposed Project contribution to this impact would not be cumulatively considerable. Accordingly, no related mitigation is required.

6.0 REFERENCES

Affinis Environmental Services. 2014. Cultural Resources Investigation for the Valiano Project.

California Department of Conservation (CDC). 2010. Farmland Mapping and Monitoring Program (FMMP), Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, San Diego County. Updated through June 30.

2007a. Division of Land Resource Protection, Farmland Mapping and Monitoring Program. http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx.

2007b. Farmland of Local Importance Definitions. http://www.conservation.ca.gov/dlrp/fmmp/Documents/Local_definitions_00.pdf.

2007c. Williamson Act Contract Lands and Agricultural Preserves in San Diego County, California. http://www.conservation.ca.gov/dlrp/LCA/Pages/Index.aspx.

2004. A Guide to the Farmland Mapping and Monitoring Program, Publication No. FM92-02. Division of Land Resource Protection.

City of Escondido. 2013. Review of Various City Project Files. August 6.

2012. City of Escondido 2012 Wastewater Master Plan. June.

City of San Marcos. 2013. Review of Various City Project Files. August 1.

County of San Diego. 2014. Personal communication between Mr. Dennis Campbell and Ms. Beth Ehsan of the County of San Diego, and Mr. Dennis Marcin of HELIX. January 8 and August 13.

2013a. Planning and Development Services. Valiano Specific Plan Scoping and EIR Request Letter. May 7.

2013b. Department of Agriculture, Weights & Measures. Personal Communication with Ms. Tina Thomas via email; Request for Public Information (pesticide use records). Tracking Number 13-RP0034. February 1, 19, and 26.

2013c. Personal Communication with Mr. Matthew Schneider, Land Use/Environmental Planner, County of San Diego Policy & Ordinance Development – Planning & Development Services. August 15.

2013d. Review of Various County Project Files. July 16 and August 6.

2013e. County of San Diego Department of Agriculture, Weights and Measures, 2013 Crop Statistics and Annual Report.

County of San Diego (cont.)

2012a. Pre-Application Summary Letter for the Valiano (Eden Hills) Project, Case Number 3992 12-004 (MPA).

2012b. San Dieguito Community Plan. Adopted on December 31, 1974, Updated Through September 26, 2012.

2012c County of San Diego Department of Agriculture, Weights and Measures, 2012 Crop Statistics and Annual Report.

2011. San Diego County General Plan. Adopted August 3.

2010. County of San Diego Sewer System Management Plan. June.

2007. County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements, Agricultural Resources. March 19.

2006. Plant Climate Map; http://www.sdcounty.ca.gov/pds/docs/zones.pdf.

2004. County of San Diego Department of Agriculture, Weights and Measures, 2004 Crop Statistics & Annual Report.

2002. County of San Diego Department of Agriculture, Weights and Measures, 2002 Crop Statistics & Annual Report.

Fuscoe Engineering, Inc. 2015~~4~~. Valiano Project Vesting Tentative Map.

GEOCON, Inc. (GEOCON). 2013. Phase I and Limited Phase II Environmental Site Assessment Eden Hills, Escondido California. July 2.

2012a. Phase I Environmental Site Assessment, Fines-Eden Hills Property, 1805 Country Club Drive, Escondido, California. December 7.

2012b. Geotechnical Investigation Eden Hills, San Diego County, California. September 12.

2012c. Preliminary Geotechnical Investigation Eden Hills – 48-Acre Fines, San Diego County, California. December 12.

Gilbert, Dewayne E. 1970. *California Plantclimates*, University of California Agricultural Extension Service. November.

Google Earth. 2013. Aerial Photo Image for Escondido, California, Image Date November 2, 2012. June.

HELIX Environmental Planning, Inc. (HELIX). 2015~~4a~~. Biological technical Report for the Valiano Project. ~~November~~October.

2014~~a~~b. Personal communication between Messrs. Steve Neudecker and Dennis Marcin of HELIX Environmental Planning, Inc. March 10.

2014b~~c~~. Personal communication between Messrs. Justin Fischbeck and Dennis Marcin of HELIX Environmental Planning, Inc. January 3.

2006. Harmony Grove Village Agricultural Technical Study. August.

Historic Aerials.com. 2013. On-line review of historic aerial photographs for the Valiano Project Site and Vicinity, photos dated 1989, 1980, 1964, 1953, and 1947. February and June.

Integral Communities. 2014. Personal communication between Ms. Melissa Krause of Integral Communities, and Ms. Julie McCall and Mr. Dennis Marcin of HELIX. April 29.

Local Agency Formation Commission (LAFCO). 2013. San Diego LAFCO. Available at: http://www.sdlafco.org/. Accessed August 20.

U.S. Department of Agriculture (USDA). 2007a. Available at: http://www.usna.usda.gov/Hardzone/hzm-sw1.html.

2007b 2007 Census of Agriculture, California State and County Data, Volume 1, Geographic Area Series, Part 5. AC-07-A-5. Updated Through December 2009. Available at: http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/California/cav1.pdf.

U.S. Natural Resources Conservation Service (NRCS). 2007. Soil Series Data for San Diego County, California. http://soildatamart.nrcs.usda.gov/.

U.S. Soil Conservation Service (SCS). 1973. *Soil Survey, San Diego Area, California*. December.

Vallecitos Water District (VWD). 2010. Water, Wastewater, and Recycled Water Master Plan. November.

Weather.com. 2013. http://www.weather.com/weather/wxclimatology/monthly/graph/92078. February 8.

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