

CHAPTER 3.0 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

This chapter of the EIR provides discussions of those effects that were identified as potentially significant during the Initial Study or NOP process but were concluded not to be significant after further analysis.

3.1 Effects Found Not Significant as Part of the EIR Process

3.1.1 Geology and Soils

Advanced Geotechnical Solutions Incorporated (AGS) conducted a geotechnical investigation for the project site and a subsequent investigation for proposed off-site improvement areas. The investigations included field mapping, subsurface exploration and laboratory testing, and additional engineering and geologic analysis. The purpose of the investigation was to evaluate the surface and subsurface soil and geologic conditions and to provide recommendations as to the feasibility of project site development, along with off-site improvements. AGS also reviewed prior geotechnical studies conducted by Pacific Soils Engineering in 2006 and 2007 and reported on May 23, 2007. The geotechnical investigation and supplement prepared by AGS (2012a and 2012b) for the project is summarized below and can be found in its entirety in this EIR as Appendices N-1 and N-2.

3.1.1.1 *Existing Conditions*

Regulatory Framework

Development of the project is subject to a number of regulatory requirements and industry standards related to potential geologic and soil hazards. Geologic and soil requirements and standards typically involve measures to evaluate risk and minimize potential hazards through design and construction techniques. Summary descriptions of these regulatory guidelines are provided below.

Alquist-Priolo Earthquake Fault Zoning Act

The California Legislature, as a result of the devastation caused by the 1971 Sylmar earthquake, passed the Alquist-Priolo Earthquake Fault Zoning Act in 1972 (Public Resources Code, Division 2, Chapter 7.5, § 2621-2630). This state law requires that proposed developments incorporating tracts of four or more dwelling units investigate the potential for ground rupture within designated Alquist-Priolo Zones. These zones serve as an official notification of the probability of ground rupture during future earthquakes. Where such zones are designated, no building may be constructed on the line of the fault, and before any construction is allowed, a geologic study must be conducted to determine the locations of all active fault lines in the zone. The act also provides that a city or county may establish more restrictive policies, if desired. The project site is not within a state-designated Alquist-Priolo Zone.

California Building Code

The California Building Code (CBC) is based largely on the International Building Code. The CBC includes the addition of more stringent seismic provisions for hospitals, schools, and essential facilities. The CBC contains specific provisions for structures

located in seismic zones. Buildings within San Diego County must conform to Seismic Design Category D and E requirements.

Local Regulations

The Alquist-Priolo Act provides that a city or county may establish more restrictive policies than those within the Alquist-Priolo Act, if desired. The County established Special Study Zones that include late-Quaternary faults mapped by the California Division of Mines and Geology in the County. Late-Quaternary faults (movement during the past 700,000 years) were mapped based on geomorphic evidence similar to that of Holocene faults except that tectonic features are less distinct. Traces of faults within “Special Study Zones” are treated by the County as active unless a fault investigation can prove otherwise.

County Zoning Ordinance Sections 5400-5406 implement the requirements of the Alquist-Priolo Act. The provisions of sections 5400–5406 outline the allowable development, the permitting requirements, and the construction limitations within Fault Rupture Zones, as designated by the Alquist-Priolo Act. The County prohibits any buildings or structures to be used for human occupancy to be constructed over or within 50 feet of the trace of known fault (§5406, Zoning Ordinance).

Chapter 4 of the County Grading Ordinance (which commences at §87.101 of the County Code) includes requirements for the maximum slope allowed for cut and fill slopes, the requirement for drainage terraces on cut or fill slopes exceeding 40 feet in height, expansive soil requirements for cuts and fills, minimum setback requirements for buildings from cut or fill slopes, and reporting requirements including a soil engineer’s report and a final engineering geology report by an engineering geologist, which includes specific approval of the grading as affected by geological factors.

County Building Code standards related to geotechnical concerns include applicable portions of the Uniform Building Code (UBC) and related CBC, along with specific County amendments. The County Building Code is implemented through issuance of building permits, which may encompass requirements related to preparation of soils reports and implementation of structural loading and drainage criteria.

Among other requirements, as outlined in subchapter 3.1.3, Hydrology and Water Quality, the County Stormwater Ordinance/Stormwater Standards Manual requires construction-related BMPs to address issues, including erosion and sedimentation.

The San Diego County General Plan Safety Element is intended to include safety considerations in the planning and decision-making process by establishing policies related to future development that will minimize the risk of personal injury, loss of life, property damage, and environmental damage associated with natural and man-made hazards. Of the geological hazards, seismic hazards pose the highest potential for causing widespread damage. All of San Diego County is located within Seismic Zone 4 (§1629.4.1 of the CBC), which is the highest Seismic Zone and, like most of southern California, is subject to ground shaking. Active faults in the region include segments of the San Jacinto, Elsinore, and Rose Canyon fault zones. Seismic hazard policies listed below reflect state law and adopted guidelines including the CBC, Alquist-Priolo Earthquake Fault Zoning Act, and the state’s Guidelines for Evaluating and Mitigating Seismic Hazards in California (Special Publication 117).

Applicable goals and policies in the Safety Element include the following:

GOAL S-7

Reduced Seismic Hazards. Minimized personal injury and property damage resulting from seismic hazards.

Policies

S-7.1 Development Location. Locate development in areas where the risk to people or resources is minimized. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.

S-7.2 Engineering Measures to Reduce Risk. Require all development to include engineering measures to reduce risk in accordance with the CBC, UBC, and other seismic and geologic hazard safety standards, including design and construction standards that regulate land use in areas known to have or potentially have significant seismic and/or other geologic hazards.

S-7.3 Land Use Location. Prohibit high-occupancy uses, essential public facilities, and uses that permit significant amounts of hazardous materials within Alquist-Priolo and County special studies zones.

Environmental Setting

Geological Setting

The project site is located within the Peninsular Ranges Geomorphic Province, a region characterized by northwest-trending structural blocks and intervening fault zones. Typical lithologies in the Peninsular Ranges include a variety of igneous intrusive (i.e., formed below the surface) rocks associated with the Cretaceous (between approximately 65 and 135 million years old) Southern California Batholith (a large igneous intrusive body), with such igneous bodies typically intruded into older metavolcanic or metasedimentary units in western San Diego County.

This portion of San Diego County is made up of foothills that span elevations from 600 to 2,000 feet above MSL. It is characterized by rolling and hilly uplands that contain frequent narrow and winding valleys. The project site is in the lower rolling hills area.

The rolling hills are predominantly composed of tonalite of the Couser Canyon geologic formation with a minor amount of the granodiorite of Indian Mountain exposed at the northern boundary of the project site (AGS 2012a). Tonalite is an igneous, plutonic (intrusive) rock, of felsic composition, with phaneritic texture. Granodiorite is an intrusive igneous rock similar to granite, but containing more plagioclase than orthoclase-type feldspar. These two bedrock types are referred to with the more common term “granite” throughout this EIR. These igneous rocks are deeply (5 to 40 feet) weathered within the project site. The geologic units underlying the project site are characterized by weathered and decomposed granitic rocks with a very minor amount of exposed

outcrops of hard granitic boulder corestones. A relatively thin veneer of surficial units including undocumented artificial fill, topsoil, alluvium, and alluvial terrace deposits cap the granitic rocks. Attachments to the geotechnical investigation (see Appendixes N-1 and N-2) show the presently mapped location of the units. A brief description of the units is described below.

Surficial units on-site and off-site include undocumented artificial fill (afu), topsoil (unmapped), Quaternary alluvium (map symbol Qal), and Quaternary older alluvium (map symbol Qoal). On-site soils are shown on Figure 2.4-2. Detailed descriptions of these units are presented below.

Artificial Fill, Undocumented (afu)

Undocumented artificial fills are located throughout the project site and off-site improvement areas, and are associated with past and present land use, including residential construction, farming operations, private roadway construction, local water retention embankments, utility construction, pad areas, and other associated land uses. The mapped locations of the most prominent fills are shown on the accompanying plates; however, due to the map scale numerous lesser fills are present but unmapped. Future studies may determine documentation regarding the engineering of fills and how present site development plans would impact the function of these fills. The vast majority of the fills is locally derived and consist of light reddish brown, clayey and silty sands that are commonly dry to slightly moist and loose to moderately dense.

Topsoil (no map symbol)

Surficial weathering over the majority of the project site and off-site areas has resulted in a thin veneer of topsoil. The topsoil is composed of medium brown to reddish brown clayey to silty sands that are dry to slightly moist and loose to moderately dense.

Quaternary Alluvium (Qal)

Alluvial deposits occupy the canyon areas and active drainage courses throughout the project site and off-site improvement areas. The Holocene-aged alluvium varies from a light orange brown to light to medium brown silty and clayey sand to sandy silt that is damp to locally wet, loose and soft to moderately dense and firm. The thickness of the alluvium logged in the on-site borings and trenches reached maximum depths of 13 to 14 feet and are likely deeper in unexplored areas such as portions of the dominant drainage on the southwest portion of the project site. Off-site improvement areas have alluvium from a few feet to greater than 15 feet below the surface, with the deeper deposits found in the Highway 395 and Circle R Road improvement area.

Quaternary Older Alluvium (Qoal)

Early Holocene to Pleistocene Older Alluvium has been mapped on-site and in off-site improvement areas, and, ~~in areas,~~ is evident in some areas as a distinct geomorphic surface. It has also been observed in some areas on- and off-site below the younger alluvial deposits where it was not removed by erosion by the two distinct depositional episodes. The Older Alluvium has distinctly well-developed reddish to orange-brown color due to its age and exposure to weathering elements since its deposition.

Composed of silty to clayey sands that are moderately hard to hard and slightly moist to moist, the moderately oxidized earth material is well consolidated.

“Granitic Rocks” (Kgr)

Identified and discussed as “granite,” the tonalite of Couser Canyon is a “granitic-type” rock that underlies the entire project site and off-site areas with a small exception of some granodiorite of Indian Mountain, along the northern boundary of the project and West Lilac Road. In most areas this unit is deeply weathered and hard boulder corestones were observed at ground surface in only a few areas (AGS 2012a).

Soils

Soil types within the project site and off-site improvement areas consist of a series of sandy loam, coarse sandy loam, sand, and steep gullied land (SANDAG 1995). Sandy loam and coarse sandy loam soils in the following soil series are present: Bonsall, Cieneba, Fallbrook, Greenfield, Placentia, and Visalia (see Figure 2.4-2). Soils on steeper slopes and in gully bottoms are characterized as steep gullied land. These soil types are derived from weathered and decomposed granite or granodiorite. Runoff is described as moderate to rapid and the erosion hazard is on average moderate for these soil types.

Unique Geological Features

Unique geologic features are not common in San Diego. The geologic processes are generally the same as those in other parts of the state, country, and even the world. However, some features stand out as being unique in one way or another within the boundaries of the County. Geologic formations, their structure, and the fossils in them provide information about past environments. Fossil localities and other significant geologic features were identified in the County’s Natural Resources Inventory prepared in the early 1970s, which covered the entire County including incorporated areas. For the Natural Resources Inventory, the locations of the features were obtained from published reports and interviews with geologists and paleontologists who did field work in San Diego County up to the early 1970s. In cataloging the unique geologic features, the focus was on fossil localities and less emphasis was given to unique landforms and geologic structures (County of San Diego 2007g). There are no unique geological features identified on the project site or within off-site improvement areas.

Geologic Structure and Seismicity

The San Andreas fault zone is the dominant and controlling tectonic stress regime of southern California. As the boundary between the Pacific and North American structural plates, this northwest trending right lateral, strike-slip, active fault has controlled the crustal structural regimes of southern California since Miocene time. Numerous related active fault zones with a regular spacing, including the Elsinore-Whittier-Chino, Newport-Inglewood-Rose Canyon, and San Jacinto fault zones characterize the stress regime and also trend to the northwest as do the Santa Ana Mountains and the Peninsular Ranges.

The Temecula section (Wildomar Fault) of the Elsinore fault zone is closest to the project site and is located 7.8 miles to the northeast. The next closest fault zone to the project

site is the Oceanside section of the Newport-Rose Canyon fault zone at approximately 20 miles to the southwest. The Anza section of the San Jacinto fault zone is approximately 32 miles to the northeast and the San Bernardino section of the San Andreas fault zone is about 55 miles to the northeast.

Seismic Hazards

Earthquake-related geologic hazards pose a significant threat and can impact extensive regions of land. Earthquakes can produce fault rupture and strong ground shaking, and can trigger landslides, soil liquefaction, tsunamis, and seiches. In turn, these geologic hazards can lead to other hazards such as fires, dam failures, and chemical releases.

Primary effects of earthquakes include violent ground shaking, and sometimes permanent displacement of land associated with surface rupture. Ground shaking is the earthquake effect that produces the vast majority of damage. The project site and off-site improvements areas are not within a County near-source shaking zone (AGS 2012a see Appendixes N-1 and N-2). The project site and off-site areas are within Seismic Design Category D of the CBC. Major earthquakes occurring on the Elsinore Fault System could subject the project site to moderate-to-severe ground shaking within the life span of the structures associated with the project.

Secondary effects of earthquakes include near-term phenomena such as liquefaction, landslides, fires, tsunamis, seiches, and floods. Long-term effects associated with earthquakes include phenomena such as regional subsidence or emergence of landmasses and regional changes in groundwater levels.

Liquefaction occurs primarily in saturated, loose, sandy soils in areas where the groundwater table is generally 50 feet or less below the surface. The project site and off-site improvement areas are not located within any identified Liquefaction Hazard Zones, as mapped by the County. However, there are potentially liquefiable soils on-site present, as alluvium underlies portions of the project site and off-site improvement areas.

Landslides are commonly defined as the movement of rock, detritus, or soils caused by the action of gravity. Landslides can be triggered by one or more specific events, or a combination of events, such as seismic activity, gravity, fires, and precipitation. The project site is not within or adjacent to a "Landslide Susceptibility Area", as designated by the County's Multi-jurisdictional Hazard Mitigation Plan (County of San Diego 2010d). No evidence of past landsliding or debris flows has been mapped within the project site or off-site improvement areas (see Appendixes N-1 and N-2 AGS 2012a).

Expansive Soils

Certain types of clay soils expand when they are saturated and shrink when dried. These are called "expansive soils" and can pose a threat to the integrity of structures built on them without proper engineering. Based upon the sampling and associated laboratory testing conducted by AGS and Pacific Soils Engineering, on-site near surface soils in on- and off-site project areas are considered to exhibit "very low" to "moderately" expansive potential, with the majority of the on-site soils being classified as having "very low" to "low" expansion potential. No specific areas were identified on- or off-site where soils with high expansion characteristics are present.

3.1.1.2 Analysis of Project Effects and Determination as to Significance

The project would result in a significant impact if it would:

1. *Exposure to Seismic-related Hazards:* Expose people or structures to substantial adverse impacts involving rupture of a known earthquake fault or other seismic-related hazards.
2. *Soil Erosion/Loss of Topsoil:* Result in substantial soil erosion or the loss of topsoil.
3. *Soil Stability:* Be located on unstable soils, or would become unstable due to the project, and would be exposed to seismic-related hazards.
4. *Expansive Soils:* Be located on expansive soil, creating substantial risks to life or property.
5. *Wastewater Disposal Systems:* Have soils incapable of adequately septic tanks or alternative waste water disposal systems.
6. *Unique Geologic Feature:* Directly or indirectly destroy a unique geologic feature.

Issue 1: Exposure to Seismic-Related Hazards

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would expose people or structures to potential substantial adverse impacts, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction or landslides.

Specifically, based on the County of San Diego Guidelines for Determining Significance – Geologic Hazards (County of San Diego 2007g), the project would result in a significant impact from fault rupture if:

- a. The project proposes any building or structure to be used for human occupancy over or within 50 feet of the trace of an Alquist-Priolo Fault or County Special Study Zone Fault.
- b. The project proposes the following uses within an Alquist-Priolo Zone which are prohibited by the County:
 - i. Uses containing structures with a capacity of 300 people or more. Any use having the capacity to serve, house, entertain, or otherwise accommodate 300 or more persons at any one time.
 - ii. Uses with the potential to severely damage the environment or cause major loss of life. Any use having the potential to severely damage the environment

or cause major loss of life if destroyed, such as dams, reservoirs, petroleum storage facilities, and electrical power plants powered by nuclear reactors.

- iii. Specific civic uses. Police and fire stations, schools, hospitals, rest homes, nursing homes, and emergency communication facilities.

The project would result in a significant impact from ground shaking if the project site is located within Seismic Design Category E and F of the CBC and the project does not conform to the CBC.

The project would have the potential to expose people or structures to substantial adverse effects from liquefaction if:

- a. The project site has potentially liquefiable soils; and
- b. The potentially liquefiable soils are saturated or have the potential to become saturated; and
- c. In-situ soil densities are not sufficiently high to preclude liquefaction.

The project would result in a significant impact from landslide risk if:

- a. The project site would expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving landslides.
- b. The project is located on a geologic unit or soil that is unstable, or would become unstable as a result of the project, potentially resulting in an on- or off-site landslide.
- c. The project site lies directly below or on a known area subject to rockfall which could result in collapse of structures.

Analysis

Fault Rupture

No Alquist-Priolo Earthquake fault zones or San Diego County fault zones are located on-site or within the off-site improvement areas. The most influential geologic faults potentially affecting the project site are the active and potentially active Williard, Wildomar, Wolf Valley, and Temecula segments of the Elsinore Fault System. No faults have been mapped on-site or within the off-site improvement areas on published geologic maps and none were observed during this and previous geologic studies. Since there are no known active faults on the project site or within the off-site improvement areas, the potential impact of rupture of a known earthquake fault is **less than significant**.

Ground Shaking

As discussed above, the project site and off-site improvement areas are not within a County near-source shaking zone (AGS 2012 see Appendixes N-1 and N-2). The project site and off-site improvement areas are within Seismic Design Category D of

the CBC. Major earthquakes occurring on the Elsinore Fault System could subject the project site and off-site improvement areas to moderate-to-severe ground shaking within the life span of the structures associated with the project. As part of the geotechnical investigation, earthquake shaking hazards were calculated. Residential and commercial structures would be constructed to withstand the peak ground motions identified in the geotechnical investigation. This would be verified prior to the issuance of a grading permit.

Critical structures, such as the school and WRF, would require a subsequent site-specific geotechnical investigation, prior to issuance of a building permit, which would detail ground motion parameters with respect to the particular structure. ~~The ground motion input for these critical structures would be identified, and mitigation measures if any would be required as a part of the issuance of a grading permit for both the school and WRF. The school site will be subject to CEQA review by the school district prior to construction of such facility.~~

The project site is considered to be comparable to the surrounding developed area with respect to seismic shaking. Construction of all ~~new~~ proposed structures ~~on-site~~ would be in conformance with the CBC, as well as all recommendations found in Section 7.0 of the geotechnical investigation, thereby reducing the potential impacts associated with strong seismic shaking to a level that is **less than significant**.

Liquefaction

The project site and off-site improvement areas ~~are~~ not located within any identified Liquefaction Hazard Zones, as mapped by the County. However, there are potentially liquefiable soils ~~on-site~~ present, as alluvium underlies portions of the project site and off-site improvement areas. The geotechnical investigations (see Appendixes N-1 and N-2) ~~identify~~ measures to reduce potential impacts associated with liquefaction. The geotechnical investigations states that, after remedial grading, saturated alluvium would be entirely removed within the project's development footprint areas. The remedial grading and removal of alluvium, as recommended by the geotechnical investigation, would reduce potential impacts associated with liquefaction, including lateral spreading and dynamic settlement, to **less than significant**.

Landslides

The project site and off-site improvement areas ~~are~~ not within or adjacent to a "Landslide Susceptibility Area," as designated by the County's Multi-jurisdictional Hazard Mitigation Plan (County of San Diego 2010d). The majority of the project site and off-site improvement areas ~~is~~ sloping to the southwest at shallow to moderate slope ratios and is capped by a relatively thin veneer of surficial earth material underlain by granitic rocks and is not considered susceptible to mass wasting. No evidence of past landsliding or debris flows has been mapped within the project site or off-site improvement areas. Since there is no steep terrain off-site or on-site, the potential for debris flows emanating from the mouths of the up-gradient drainages is considered to be low. The potential for rock fall is considered to be very low given the lack of rock outcrops within the proposed limits of the development and off-site improvement areas. The potential for seismically induced landslides on engineered fill slopes is considered to be very low. Likewise, the potential for seismically induced landslides on cut slopes excavated in the granitic rock,

or on the remaining shallow natural slopes, is considered to be very low. Overall, impacts associated with landslides would be **less than significant**.

Off-Site Improvements

~~No geologic/geotechnical conditions significantly different from those found within the project site were identified for the proposed off-site improvements areas. From a geotechnical/geologic perspective, the geotechnical recommendation outlined within the geotechnical investigation (AGS 2012a) would be similar for the proposed off-site improvements. Off-site impacts associated with seismic-related hazards would be **less than significant**.~~

Additional standard practices that would be implemented in order to reduce impacts associated with seismic hazards include review of project plans by a geotechnical engineer to ensure compatibility with geotechnical conclusions, review and appropriate modification of applicable field activities by the geotechnical engineer (e.g., grading and manufactured slope construction), and conformance with appropriate regulatory guidelines and industry standards for project design and construction elements. Specifically, such conformance would encompass design and construction elements such as seismic loading, excavation, and grading (e.g., removal of unsuitable materials and site preparation); fill parameters (e.g., composition, moisture content, and application methodology), foundations, and footings; manufactured slopes/retaining walls; pavement; drainage; and oversize materials.

The above recommendations and standards have been included in the project environmental design considerations (see Table 1-3), where applicable, and are part of project design. The potential for seismic hazards take these design and related considerations into account. Overall, impacts associated with seismic hazards would be **less than significant**.

Issue 2: Soil Erosion or Loss of Topsoil

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would result in substantial soil erosion or the loss of topsoil.

Analysis

Proposed grading, excavation, demolition, and construction activities associated with the project would increase the potential to expose topsoil to erosion. While graded or excavated areas and fill materials would be stabilized through efforts such as compaction and installation of hardscape and landscaping, erosion potential would be higher during construction of the project than under existing conditions. Erosion and sedimentation are not considered to be significant long-term concerns for the project, as all developed areas would be stabilized through the installation of hardscape, landscaping, or native revegetation. The project would also incorporate long-term water quality controls pursuant to the County Stormwater Ordinance, Stormwater Standards Manual, and related National Pollutant Discharge Elimination System (NPDES) Municipal Permit requirements, including measures to avoid or reduce erosion and sedimentation effects, as detailed in subchapter 3.1.3, Hydrology and Water Quality.

Short-term erosion and sedimentation impacts would be addressed through conformance with the NPDES Construction Permit and County Stormwater Ordinance/Stormwater Standards Manual which include developing and implementing an authorized SWPPP for proposed construction, including erosion and sedimentation BMPs. Overall, the project design includes erosion control measures and a landscaping plan that comply with current San Diego County regulations (including the County Grading Ordinance, the CBC, and the Watershed Protection Ordinance), to prevent soil erosion on- and off-site (see Table 1-3). Therefore, impacts associated with erosion, loss of topsoil, and siltation would be **less than significant**.

Issue 3: Soil Stability

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and the County of San Diego Guidelines for Determining Significance – Geologic Hazards (County of San Diego 2007g), the project would have a potentially significant impact if it would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Analysis

The project would result in a significant impact if future development would be located in geologically hazardous areas, as described above, under Guidelines for Determining Significance. The soil stability risks that can cause such geologic hazards are addressed individually below.

Landslide, Lateral Spreading, or Collapse

Landslides can be caused by ground shaking from an earthquake or water from rainfall or other origins that infiltrate slopes with unstable material. Lateral spreading is shallow, water-saturated landslide deformation often triggered from seismically induced liquefaction. Collapse refers to collapsible soils, which may appear to be strong and stable in their natural (dry) state, but then rapidly consolidate under wetting, generating large and often unexpected settlements.

As discussed above under Issue 1, potential impacts due to landslides would be less than significant. Potential impacts resulting from lateral spreading would be less than significant, due to the removal of alluvial deposits, as recommended in the geotechnical investigations (see Appendixes N-1 and N-2). There is a potential for differential settlement due to collapsible soils that may consolidate under wet conditions. Recommendations set forth in the geotechnical investigations have been incorporated into the project design in order to reduce impacts associated with collapsible soils, including removal/recompaction measures and foundation design measures. For example, the geotechnical investigations recommends that removal of unsuitable soils would be required prior to fill placement along the project grading limits. A 1:1 projection, from toe of slope or grading limit, outward to competent materials should be established, when possible. Additional standard design measures are also detailed in Table 1-3. Implementation of the recommended grading, structural design, and civil engineering design measures detailed in the geotechnical investigation would reduce potential

impacts associated with landslides, lateral spreading, and collapsible soils to **less than significant**.

Subsidence

Subsidence refers to elevation changes of the land whether slow or sudden. Subsidence can cause a variety of problems including broken utility lines, blocked drainage, or distorted property boundaries and survey lines. According to the geotechnical investigations (see Appendixes N-1 and N-2), the underlying geologic formations on the project site and off-site improvement areas are mostly granitic, which have a very low potential of subsidence. Impacts would be **less than significant**.

Liquefaction

As discussed in Issue 1, there are potentially liquefiable soils on-site and in off-site improvement areas. The remedial grading and removal of alluvium, as recommended by the geotechnical investigations (see Appendixes N-1 and N-2), would reduce potential impacts associated with liquefaction to **less than significant**.

Issue 4: Expansive Soils

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and the County of San Diego Guidelines for Determining Significance – Geologic Hazards (County of San Diego 2007g), the project would have a significant impact if it would be located on expansive soil, as defined in Section 1802A.3.2 of the CBC, creating substantial risks to life or property.

Analysis

On-Site Conditions

Based upon the sampling and associated laboratory testing conducted by AGS and Pacific Soils Engineering, on-site and off-site improvement areas have near surface soils that are considered to exhibit “very low” to “moderately” expansive potential, with the majority of the ~~on-site~~ soils being classified as having “very low” to “low” expansion potential. No specific areas were identified on- or off-site where soils with high expansion characteristics are present. It is possible that during grading operations, clay soils with high expansion characteristics may be found in filled fractures of rock. As detailed in Section 7 of the Geotechnical Investigation, upon the completion of rough grading, finish grade samples should be collected and tested to develop specific recommendations as they relate to final foundation design recommendations for individual lots. Structural project design measures f these soils are encountered, the geotechnical monitor are to be included in the project would recommend specific measures to reduce potential impacts from expansive soils, ~~including~~including the following: a revised foundation design; and additional grading measures, which may include pre-saturation and overexcavation, ~~as recommended by the geotechnical investigation~~. Compliance with the recommendations set forth in the geotechnical investigations (see Appendixes N-1 and N-2) prepared for this project would ensure impacts associated with expansive soils are **less than significant**.

Off-Site Improvements

~~No geologic/geotechnical conditions significantly different from those found within the project site were identified for the proposed off-site improvements areas. From a geotechnical/geologic perspective, the geotechnical recommendations outlined within the geotechnical investigation (AGS 2012a) would be similar for the proposed off-site improvements. Therefore, the project would comply with the improvement requirements identified in the CBC through adherence to the design recommendations set forth in the geotechnical investigation. Implementation of these design features assure that impacts relating to expansive soils would be **less than significant**.~~

Issue 5: Wastewater Disposal Systems

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Analysis

The project would not allow the use of septic tanks or alternative wastewater disposal systems. Commercial and residential structures would use sewers that would connect to the Lower Moosa Canyon WRF and/or the on-site WRF. The analysis of wastewater treatment options are detailed in subchapter 3.1.3. The removal of existing septic tanks is discussed in subchapter 2.7, Hazards and Hazardous Materials. Therefore, because the project does not propose septic or alternative disposal systems, impacts would be **less than significant**.

Issue 6: Unique Geologic Feature

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would directly or indirectly destroy a unique geologic feature.

Based on the County's Guidelines for Determining Significance – Unique Geology (San Diego County 2007h), a significant impact would occur if the project would materially impair a unique geologic feature by destroying or altering those physical characteristics that convey the uniqueness of the resource. A geologic feature is unique if it meets one of the following criteria:

- a. Is the best example of its kind locally or regionally;
- b. Embodies the distinctive characteristics of a geologic principle that is exclusive locally or regionally;
- c. Provides a key piece of geologic information important in geology or geologic history;

- d. Is a “type locality” of a formation;
- e. Is a geologic formation that is exclusive locally or regionally;
- f. Contains a mineral that is not known to occur elsewhere in the County; or
- g. Is used repeatedly as a teaching tool.

Analysis

According to the geotechnical investigations (see Appendixes N-1 and N-2), there are no unique geologic features on-site or in proximity to off-site improvement areas. Therefore, the project would not directly or indirectly destroy a geologic feature that meets the above criteria. There would be **no impact** associated with the destruction of a unique geologic feature.

3.1.1.3 Cumulative Impact Analysis

Issue 1: Exposure to Seismic-related Hazards

All potential geological hazard impacts would be avoided or reduced below identified significance guidelines through conformance with geotechnical recommendations and established regulatory requirements as part of the project design. Potential geology and soils impacts are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other planned or proposed development. As with the project, cumulative area projects with similar potential would be required to implement similar site-specific measures to address potential impacts to seismic hazards. Because of the site-specific nature of these potential hazards and the measures to address them, there would be no connection to similar potential issues or cumulative effects to or from other properties. The project, in combination with other cumulative projects, would result in a **less than significant** contribution to a cumulatively considerable impact.

Issue 2: Soil Erosion/Loss of Topsoil

Potential impacts related to erosion and siltation are less than significant due to erosion control measures, adherence to the recommendations of the geotechnical investigations (see Appendixes N-1 and N-2), landscaping plans, and conformance with current San Diego County regulations, as well as the CBC. Based on the strict requirements identified in the listed NPDES permits and the fact that other planned and proposed developments in the project vicinity would be required to implement similar controls, the project in combination with other cumulative projects, would result in a **less than significant** contribution to a cumulatively considerable impact.

Issue 3: Soil Stability

Potential soil stability impacts would be reduced or avoided altogether through implementation of recommendations of the geotechnical investigations (see Appendixes N-1 and N-2), which would ensure compliance with the CBC. Other development projects in the area would be similarly required to comply with the CBC, and would have to demonstrate compliance during environmental review. Cumulative

project compliance with existing regulations would ensure that a significant cumulative impact would not occur. The project, in combination with other cumulative projects, would result in a **less than significant** contribution to a cumulatively considerable impact.

Issue 4: Expansive Soils

No highly expansive soils were found on-site or in off-site improvement areas; if encountered, impacts would be avoided through implementation of recommendations of the geotechnical investigation, which would ensure compliance with the CBC. Other development projects in the area would be similarly required to comply with the CBC, and would have to demonstrate compliance during environmental review. Cumulative project compliance with existing regulations would ensure that a significant cumulative impact associated with expansive soils would not occur. The project, in combination with other cumulative projects, would result in a **less than significant** contribution to a cumulatively considerable impact.

Issue 5: Wastewater Disposal Systems

The project would not allow the use of septic tanks or alternative wastewater disposal systems. Other cumulative projects within the area that may require the use of wastewater disposal systems would be evaluated on a project-by-project basis, and would be required to comply with existing regulations regarding the placement of septic tanks. The project, in combination with other cumulative projects, would result in a **less than significant** contribution to a cumulatively considerable impact.

Issue 6: Unique Geologic Feature

The project would not directly or indirectly destroy a unique geologic feature. Cumulative projects would be subject to environmental review by the County, and thus would be evaluated on a project-by-project basis for potential impacts to unique geologic features that were identified in the Natural Resources Inventory. The project, in combination with other cumulative projects, would result in ~~noa less than significant~~ contribution to a cumulatively considerable impact.

3.1.1.4 Conclusion

No geologic or soil conditions were encountered that would significantly affect the development of the project provided the project site is graded grading is completed in accordance with the CBC, the County Grading Ordinance, and the geotechnical report's recommendations. These recommendations are listed as project design considerations in Table 1-3 and would preclude impacts associated with geologic hazards resulting from implementation of the project.

3.1.2 Greenhouse Gas Emissions

This subchapter includes a discussion of applicable plans, policies and regulations, existing conditions, identification and justification of significance thresholds, and a determination of whether greenhouse gas (GHG) emissions impacts are considered significant from a CEQA perspective or other applicable standard. The analysis is based on the County's ~~Draft Guidelines for Determining Significance – Climate Change and Draft Report Format and Content Requirements for Climate Change~~ (County Draft Guidelines) (County of San Diego 2013a2e). The complete GHG technical report is included in this EIR as Appendix O.

3.1.2.1 Existing Conditions

Causes of Global Climate Change

Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. The earth's climate is in a state of constant flux with periodic warming and cooling cycles. Extreme periods of cooling are termed "ice ages," which may then be followed by extended periods of warmth. For most of the earth's geologic history, these periods of warming and cooling have been the result of many complicated, interacting natural factors that include volcanic eruptions which spew gases and particles into the atmosphere, the amount of water, vegetation, and ice covering the earth's surface, subtle changes in the earth's orbit, and the amount of energy released by the sun (sun cycles). However, since the beginning of the Industrial Revolution around 1750, the average temperature of the earth has been increasing at a rate that is faster than can be explained by natural climate cycles alone.

GHGs influence the amount of heat that is trapped in the earth's atmosphere and thus play a critical role in determining the earth's surface temperature. Outgoing infrared radiation is absorbed by GHGs, resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on earth. With the Industrial Revolution came an increase in the combustion of carbon-based fuels such as wood, coal, oil, and biofuels, as well as the creation of GHG-emitting substances not found in nature. Such human activities have increased atmospheric GHG levels in excess of natural ambient concentrations. This has led to a trend of unnatural warming of the earth's atmosphere and oceans, with corresponding effects on global circulation patterns and climate.

Greenhouse Gases of Primary Concern

There are numerous GHGs, both naturally occurring (i.e., biogenic) and manmade (i.e., anthropogenic). Table 3.1-1 summarizes some of the most common. Each GHG has variable atmospheric lifetime and global warming potential (GWP).

**TABLE 3.1-1
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES (YEARS)
OF COMMON GHGs**

Gas	Atmospheric Lifetime	100-year GWP	20-year GWP	500-year GWP
Carbon dioxide (CO ₂)	50–200	1	1	1
Methane (CH ₄)*	12 ± 3	21	56	6.5
Nitrous oxide (N ₂ O)	120	310	280	170
HFC-23	264	11,700	9,100	9,800
HFC-32	5.6	650	2,100	200
HFC-125	32.6	2,800	4,600	920
HFC-134a	14.6	1,300	3,400	420
HFC-143a	48.3	3,800	5,000	1,400
HFC-152a	1.5	140	460	42
HFC-227ea	36.5	2,900	4,300	950
HFC-236fa	209	6,300	5,100	4,700
HFC-43-10mee	17.1	1,300	3,000	400
CF ₄	50,000	6,500	4,400	10,000
C ₂ F ₆	10,000	9,200	6,200	14,000
C ₃ F ₈	2,600	7,000	4,800	10,100
C ₄ F ₁₀	2,600	7,000	4,800	10,100
c-C ₄ F ₈	3,200	8,700	6,000	12,700
C ₅ F ₁₂	4,100	7,500	5,100	11,000
C ₆ F ₁₄	3,200	7,400	5,000	10,700
SF ₆	3,200	23,900	16,300	34,900

SOURCE: U.S. Environmental Protection Agency 2010, Annex 6.

GWP = global warming potential.

*The methane GWP includes the direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO₂ is not included.

The atmospheric lifetime of ~~the a~~ GHG is the average time the molecule stays stable in the atmosphere. Most GHGs have long atmospheric lifetimes, staying in the atmosphere hundreds or thousands of years. The potential of a gas to trap heat and warm the atmosphere is measured by its ~~global warming potential (GWP)~~. The reference gas for establishing GWP is carbon dioxide, which—as shown in Table 3.1-1—consequently has a GWP of 1. As an example, methane, while having a shorter atmospheric lifetime than carbon dioxide, has a 100-year GWP of 21, which means that it has a greater global warming effect than carbon dioxide on a molecule-by-molecule basis. For purposes of reporting GHG emissions, all GHGs are converted to a common factor and reported as CO₂ equivalent (CO₂E).~~After factoring in the GWP for other gases, they can be expressed in terms of CO₂ equivalent (CO₂e). The statewide GHG emissions inventories are calculated in terms of CO₂e, which is the method of quantification for the California Air Resources Board.~~

As stated in the County Draft Guidelines, although there are dozens of GHGs, state law defines GHGs as the following seven compounds: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). Of these gases, CO₂, CH₄, and N₂O are produced by both biogenic and anthropogenic sources, and are the GHGs of primary concern in this analysis. The remaining gases occur ~~solely~~ as the result of industrial

processes, such as refrigeration, aluminum production, semiconductor manufacture, and insulation in electric power transmission and distribution equipment, and are not of primary concern to the project this analysis.

Project Site GHG Emissions

Current sources of on-site GHG emissions are associated with the vehicle use, energy use, water use, area sources (landscaping and other equipment use, stoves and fireplaces) and waste disposal practices of existing land uses. The project site is presently occupied primarily by agricultural uses, with single-family homes scattered throughout the 608 acres at very low density.

Given the types of agricultural operations on-site (i.e., mostly orchard crops, some row crops, no livestock, or rice cultivation), current emissions of GHGs are mostly associated with off-road agricultural vehicles such as mowers, sprayers, tractors, balers, and tillers. Smaller amounts of GHGs are associated with fertilizer application and soil management. Conservatively, the agricultural emissions were not reported for on-site existing sources and uses due to the difficulty in securing reliable data.

Emissions due to the existing residential uses were quantified for year 2008 and 2020, as shown in Table 3.1-2.

**TABLE 3.1-2
ANNUAL ESTIMATED GHG EMISSIONS
FOR EXISTING USES**

<u>Project Emission Sources</u>	<u>2008 Existing Emissions (MTCO₂E)</u>	<u>2020 Projected Emissions (MTCO₂E)</u>
<u>Construction</u>	<u>--</u>	<u>--</u>
<u>Vehicles</u>	<u>392.54</u>	<u>292.83</u>
<u>Energy Use</u>	<u>95.26</u>	<u>86.59</u>
<u>Area Sources</u>	<u>52.70</u>	<u>58.54</u>
<u>Water Use</u>	<u>11.49</u>	<u>11.49</u>
<u>Solid Waste</u>	<u>11.75</u>	<u>11.75</u>
<u>TOTAL</u>	<u>563.74</u>	<u>461.20</u>

SOURCE: Appendix O.

The GHG emissions from 2008 include the GHG reductions from the Initial Renewables Portfolio Standard (RPS). The GHG emissions from 2020 reflect reductions from LCFS, Pavley I, the RPS reduction calculated for 2020, the tire pressure program and low emission vehicle (LEV) III. The projected emissions from existing sources and uses in 2020 are calculated to be lower than the emissions in 2008 and represent an 18.1 percent reduction from existing land uses by 2020, which is in line with the reduction anticipated by the state for existing land uses through regulatory action at the state and local level.

Regulatory Framework

The following is a summary of the applicable regulations concerning GHG. Additional details of the regulation related to climate change and GHG emissions are provided in the Greenhouse Gas Analysis included in Appendix O.

Federal

Executive Office Climate Change Action Plan

The Executive Office has produced the President's Climate Action Plan, which includes goals of cutting carbon pollution and preparing for the impacts of climate change (Executive Office of the President 2013). Cutting carbon pollution is part of the President's goal to double renewable electricity generation by 2020, through accelerating clean energy permitting and expanding and modernizing the electric grid. The plan also states that the federal government will consume 20 percent of its electricity from renewable sources by 2020. This document was produced by the executive branch and has not passed through congressional channels. Adopted in late 1993, the U.S. Climate Change Action Plan (CCAP) consists of voluntary actions to reduce all significant GHGs from all economic sectors. Backed by federal funding, the CCAP supports cooperative partnerships between the government and the private sector in establishing flexible and cost-effective ways to reduce GHG emissions. The CCAP encourages investments in new technologies, but also relies on previous actions and programs focused on saving energy, reducing transportation emissions, improving forestry management, and reducing waste.

GHG Emissions Intensity Reduction Programs

In February 2002, the U.S. set a goal to reduce its GHG emissions intensity, which is the ratio of GHG emissions to economic output. In 2002, the U.S. GHG Emissions Intensity was 183 metric tons per million dollars of gross domestic product (U.S. EPA 2007). The goal established in February 2002 was to reduce this GHG emissions intensity by 18 percent by 2012 through the various GHG reduction programs. One of these programs includes the Energy Star program that was first established in 1992 by the U.S. EPA and became a joint program with the U.S. Department of Energy in 1996. Energy Star is a program that labels energy efficient products with the Energy Star label. Energy Star enables consumers to choose energy-efficient and cost-saving products, with up to 30 percent energy savings over conventional appliances such as refrigerators, dishwashers, clothes washers, and fans. Another key federal GHG reduction program is the Green Power Partnership program that establishes partnerships between the U.S. EPA, and companies and organizations that have bought or are considering buying green power (i.e., power generated from renewable energy sources). The U.S. EPA offers recognition and promotion to organizations that replace electricity consumption with green power.

U.S. EPA Authority to Regulate GHGs

On April 2, 2007, the U.S. Supreme Court ruled that CO₂ is an air pollutant as defined under the Clean Air Act, and that the U.S. EPA has the authority to regulate GHG emissions.

Corporate Average Fuel Economy Standards

The federal Corporate Average Fuel Economy (CAFE) standards determine the fuel efficiency of certain vehicle classes in the U.S. While the standards had not changed since 1990, as part of the Energy and Security Act of 2007, the CAFE standards were increased in 2007 for new light-duty vehicles to achieve the equivalent of 35 miles per

gallon (mpg) by 2020. In May 2009, plans were announced to increase CAFE standards to require October 2012, the EPA and National Highway Traffic Safety Administration issued a final rule for new light-duty vehicles for model years 2017 to 2025 to achieve an equivalent of 54.5 mpg (Federal Register). to meet an average fuel economy of 35.5 mpg by 2016. With improved gas mileage, fewer gallons of transportation fuel would be combusted to travel the same distance, thereby reducing nationwide GHG emissions associated with vehicle travel.

State

Executive Order S-3-05 - Statewide GHG Emission Targets

This executive order (EO) of 2005 proclaims that California is vulnerable to the impacts of climate change, including increased temperatures that could reduce the Sierra Nevada's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, it established the following GHG emission reduction targets for the state of California:

- by 2010, reduce GHG emissions to 2000 levels;
- by 2020 reduce GHG emissions to 1990 levels;
- by 2050 reduce GHG emissions to 80 percent below 1990 levels.

This EO also directed the secretary of the Cal EPA to oversee the efforts made to reach these targets, and to prepare biannual reports on the progress made toward meeting the targets and on the impacts to California related to global warming. The first such Climate Action Team Assessment Report was produced in March 2006 and has been updated every two years thereafter.

Assembly Bill 32 - California Global Warming Solutions Act of 2006

In response to EO S-3-05, the California legislature passed Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006, and thereby enacted Sections 38500–38599 of the California Health and Safety Code. AB 32 required CARB to establish an emissions cap and adopt rules and regulations that would reduce GHG emissions to 1990 levels by 2020. AB 32 also required CARB to adopt a plan by January 1, 2009 indicating how emission reductions would be achieved from significant GHG sources via regulations, market mechanisms, and other actions.

Climate Change Scoping Plan

Baseline Emissions. As directed by AB 32, in 2008 CARB adopted the Climate Change Scoping Plan, which identifies the main strategies California will implement to achieve the GHG reductions necessary to reduce forecasted business as usual (BAU) emissions by 2020. In 2008, as part of its adoption of the Scoping Plan, CARB estimated that annual statewide GHG emissions were 427 MMTCO₂E in 1990 and would reach 596 MMTCO₂E by 2020 under a BAU scenario (CARB 2008a). To achieve the mandate of AB 32, 1990 emissions levels of 427 MMTCO₂E, a 169 MMTCO₂E (or approximate 28.3 percent) reduction in BAU emissions was thus determined to be needed by 2020. —The 2020 emissions baseline used in the 2008 Scoping Plan is the estimate of statewide 2020 emissions developed using prerecession data and reflects GHG emissions expected to occur in the absence of any reduction measures in 2010 (CARB 2011a).

CARB is mandated to update the Scoping Plan at least once every five years to allow evaluation of progress made and to correct the Scoping Plan's course where necessary. In 2010, CARB revised its 2020 BAU projections to account for the economic downturn and to account for laws other factors. CARB's revised forecast estimated that had taken affect but were not included in the 2008 calculations. Based on that effort, CARB updated the projected 2020 emissions would reach approximately to 545 MMTCO₂E under BAU (CARB 2011a). Because this projection assumed the absence of any Scoping Plan Two reduction measures, despite two of its key reduction measures already being enforced, CARB also estimated a new 2020 baseline emissions (accounting for these two reduction measures) of approximately 507 MMTCO₂E per year. The two Scoping Plan measures that have already begun to be enforced include the Pavley I (Light-duty Vehicle GHG Emissions Standards) and the initial Renewables Portfolio Standard (RPS) not previously included in the 2008 Scoping Plan baseline, were incorporated into the updated baseline, further reducing the 2020 statewide emissions projection to 507 MMTCO₂E. Effectively, the economic downturn reduced the 2020 BAU by 55 MMTCO₂E, while Pavley I and the Initial RPS accounted for reductions of 26 MMTCO₂E and 12 MMTCO₂E, respectively (CARB 2011a). Given the refined 2020 baseline of 507 MMTCO₂E per year (accounting for Pavley I and the initial RPS, an 80 MMTCO₂E (or 16 percent) reduction was determined to be needed by 2020 in order to reach the 1990 emissions level of 427 MMTCO₂E (CARB 2010a). These updates have been incorporated into a revised Scoping Plan that was approved in 2011 (CARB 2011a).

Given the refined 2020 forecast of 507 MMTCO₂E per year, CARB determined statewide GHG emissions would need to be reduced by 80 MMTCO₂E (or 15.8 percent of 507 MMTCO₂E) by 2020 in order to reach the 1990 emission levels per AB 32 (CARB 2010a). The updated emissions projects and targets were incorporated into the AB 32 Scoping Plan that was approved in 2011 (CARB 2011b).

The Scoping Plan states that land use planning and urban growth decisions will play an important role in reaching the state's GHG reduction targets because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions.

In February 2014, CARB released the Draft First Update to the Scoping Plan. According to the Scoping Plan Update, California is on track to meet the near-term 2020 greenhouse gas limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32 (CARB 2014). However, unlike the 2010 revision to the 2008 Scoping Plan, the Scoping Plan Update does not revise 2020 GHG emissions forecasts.

GHG Reduction Strategies. The majority of the Scoping Plan's GHG reduction strategies are directed at the two sectors with the largest GHG emissions contributions: transportation and electricity generation. The GHG reduction strategies for these sectors involve statutory mandates affecting vehicle or fuel manufacture, public transit, and public utilities. The most relevant are outlined below. The reduction strategies employed by CARB are designed to reduce emissions from existing sources as well as future sources. The most relevant are outlined in the following sections.

The Scoping Plan also states that land use planning and urban growth decisions will play an important role in the state's GHG reductions because local governments have

~~primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions.~~

AB 1493 - Light-duty Vehicle GHG Emissions Standards. AB 1493 enacted July 2002, directed CARB to adopt vehicle standards that lowered GHG emissions from passenger vehicles and light-duty trucks to the maximum extent technologically feasible, beginning with the 2009 model year. CARB adopted regulations in 2004 but was not granted the authority to enforce them until mid-2009 due to a lawsuit by the Alliance of Automobile Manufacturers (Marten Law Group 2008).

CARB adopted these regulations (termed "Pavley I") as a discrete early action measure pursuant to AB 32 and includes it as a reduction measure in the 2011 Scoping Plan. CARB estimates that full implementation of Pavley I will reduce GHG emissions from California passenger vehicles by about 269.9 MMTCO₂E or 37 percent of the total 80 MMTCO₂E reduction target for 2020, as established in the 2011 Scoping Plan based on the refined 2020 baseline forecast (CARB 2010_{ba} and 2011_{ba}). CARB has also adopted a second phase of the Pavley regulations, termed "Pavley II" or now called the Low Emission Vehicle III" (LEV III) Standards, that covers model years 2017 to 2025. CARB estimates that Pavley III/LEV III will reduce vehicle GHGs by an additional 4.0 MMTCO₂E for a 2.4 percent reduction over Pavley I (CARB 2010_{ba}). These reductions are to come from improved vehicle technologies such as smaller engines with superchargers, continuously variable transmissions, and hybrid electric drives. On August 7, 2012 the final regulation for the adoption of LEV III became effective. It is expected that Pavley I and LEV III regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, while improving fuel efficiency and reducing motorists' costs (CARB 2013a).

CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards, which includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California (CARB 2013a).

Low Carbon Fuel Standard. An This executive order (EO S-01-07) signed in 2007 directed that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through a Low Carbon Fuel Standard (LCFS).

CARB adopted the LCFS as a discrete early action measure pursuant to AB 32 in April 2009 and includes it as a reduction measure in its Scoping Plan that accounts for approximately 10 percent of the total statewide GHG reductions. The LCFS is a performance standard with flexible compliance mechanisms intended to incentivize the development of a diverse set of clean low-carbon transportation fuel options. Its aim is to accelerate the availability and diversity of low-carbon fuels such as biofuels, electricity, and hydrogen by taking into consideration the full life cycle of GHG emissions. ~~CARB adopted the LCFS as a discrete early action measure pursuant to AB 32 in April 2009 and includes it as a reduction measure in its Scoping Plan that accounts for approximately 10 percent of the total statewide GHG reductions.~~

~~*SB 375 – Regional Emissions Targets.* SB 375 was signed in September 2008 and requires CARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan measure described above (CARB 2010b). Its purpose~~

~~is to align regional transportation planning efforts, regional GHG reduction targets, and fair-share housing allocations under state housing law. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) to address GHG reduction targets from cars and light-duty trucks in the context of that MPO's Regional Transportation Plan (RTP).~~

~~SANDAG is the San Diego region's MPO. SANDAG completed and adopted its 2050 RTP in October 2011, the first such plan in the state that included a SCS. The CARB targets for SANDAG call for a 7 percent reduction in GHG emissions per capita from automobiles and light-duty trucks compared to 2005 levels by 2020, and a 13 percent reduction by 2035 (SANDAG 2010b). The reduction targets are to be updated every eight years, but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. SANDAG's 2050 RTP and SCS aim to reduce per capita vehicle GHG emissions by promoting high-density, mixed-use developments around mass transit hubs.~~

Renewables Portfolio Standard. The RPS promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "initial RPS"), the goal has been accelerated and increased by EOs S-14-08 and S-21-09 to a goal of 33 percent by 2020. In April 2011, the Governor signed SB 2 (1X) codifying California's 33 percent RPS goal; Section 399.19 requires the California Public Utilities Commission (CPUC), in consultation with the California Energy Commission (CEC), to report to the Legislature on the progress and status of RPS procurement and other benchmarks (CPUC 2014). The purpose of the RPS, ~~its purpose~~ upon full implementation is thus to provide 33 percent of the state's electricity needs through renewable energy sources (CARB 2008b). Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.

The RPS is included in CARB's Scoping Plan list of GHG reduction measures to reduce energy sector emissions. It is designed to accelerate the transformation of the electricity sector through such means as investment in the energy transmission infrastructure and systems to allow integration of large quantities of intermittent wind and solar generation. Increased use of renewables would decrease California's reliance on fossil fuels, thus reducing emissions of GHGs from the electricity sector. In 2008, as part of the Scoping Plan original estimates, CARB estimated that full achievement of the RPS would decrease statewide GHG emissions by 21.3 MMTCO₂E (CARB 2008b). In 2010, CARB revised this number upwards to 24.0 MMTCO₂E (CARB 2011b9a).

Tire Pressure Program. CARB's Tire Pressure Regulation took effect in September 2010. The purpose of this regulation is to reduce greenhouse gas emissions from vehicles operating with under inflated tires by inflating them to the recommended tire pressure rating. Automotive service providers must meet the regulation's following requirements:

- Check and inflate each vehicle's tires to the recommended tire pressure rating, with air or nitrogen, as appropriate, at the time of performing any automotive maintenance or repair service.

- Indicate on the vehicle service invoice that a tire inflation service was completed and the tire pressure measurements after the service were performed.
- Perform the tire pressure service using a tire pressure gauge with a total permissible error no greater than + two pounds per square inch.
- Have access to a tire inflation reference that is current within three years of publication.
- Keep a copy of the service invoice for a minimum of three years, and make the vehicle service invoice available to the CARB, or its authorized representative upon request.

Million Solar Roofs Program: The Million Solar Roofs Program is one of CARB's GHG-reduction measures identified in the Scoping Plan to reduce energy sector emissions. The Million Solar Roofs Program was created by SB 1 in 2006 and includes the California Public Utilities Commission's (CPUC's) California Solar Initiative and CEC's New Solar Homes Partnership. It requires publicly owned utilities to adopt, implement, and finance solar-incentive programs to lower the cost of solar systems and help achieve the goal of installing 3,000 megawatts of new solar capacity by 2020. Achievement of the program's goal is expected to equate to a reduction of 1.1 MMTCO₂E of the 2010 estimated statewide reduction of 80 MMTCO₂E (CARB 2010ba).

SB 375 – Regional Emissions Targets

SB 375 was signed into law in September 2008 and requires CARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan (CARB 2010b). The purpose of SB 375 is to align regional transportation planning efforts, regional GHG reduction targets, and fair-share housing allocations under state housing law. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a SCS or Alternative Planning Strategy to address GHG reduction targets from cars and light-duty trucks in the context of that MPO's Regional Transportation Plan (RTP).

The San Diego Association of Governments (SANDAG) is the San Diego region's MPO. SANDAG completed and adopted its 2050 RTP in October 2011, the first such plan in the state that included a SCS. The CARB targets for SANDAG call for a 7 percent reduction in GHG emissions per capita from automobiles and light duty trucks compared to 2005 levels by 2020, and a 13 percent reduction by 2035 (SANDAG 2010). The reduction targets are to be updated every eight years, but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. As stated by SANDAG, the strategy set forth in the 2050 RTP/SCS is to "focus housing and job growth in the urbanized areas where there is existing and planned infrastructure, protect sensitive habitat and open space, invest in a network that gives residents and workers transportation options that reduce GHG emissions, promote equity for all, and implement the plan through incentives and collaboration" (SANDAG 2011a).

After the plan was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and the Center for Biological Diversity (later joined by the state's Attorney

General's office). In December 2012, the San Diego Superior Court set aside the EIR for the RTP/SCS. The decision has been appealed by SANDAG and a decision from the court of appeal has yet to be rendered. The measures set forth within the 2050 RTP/SCS are currently being adhered to despite current litigation (State of California 2013). The project's consistency with the 2050 RTP/SCS, as currently drafted, is detailed in Appendix O.

Title 24 - California Building Code

The California Code of Regulations (CCR), Title 24, is referred to as the California Building Code, or CBC. It consists of a compilation of several distinct standards and codes related to building construction including, plumbing, electrical, interior acoustics, energy efficiency, handicap accessibility, and so on. Of particular relevance to GHG reductions are the CBC's energy efficiency and green building standards as outlined in the following sections below.

Title 24, Part 6—Energy Efficiency Standards. The CCR, Title 24, Part 6 is the Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy consumption. The Energy Code is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available. ~~The current amendments to the Energy Code, known as 2008 Title 24, or the 2008 Energy Code, became effective January 1, 2010. 2008 Title 24 requires energy savings of 15–35 percent above the former 2005 Title 24 Energy Code. At a minimum, residential buildings must achieve a 15 percent reduction in their combined space heating, cooling, and water heating energy compared to the 2005 Title 24 Energy Code standards, and incentives in the form of rebates and tax breaks are provided on a sliding scale for buildings achieving energy efficiency above the minimum standards. 15 percent reduction over 2005 Title 24. The reference to 2005 Title 24 Energy Code is relevant in that many of the State's long-term energy and GHG reduction goals identify energy-saving targets relative to 2005 Title 24. By reducing California's energy consumption, emissions of statewide GHGs may also be reduced.~~

The Title 24 Energy Code governs energy consumed by major building envelope systems such as space heating and cooling, ventilation, water heating, and some aspects of the fixed lighting system. Non-building energy use, "plug-in" energy use (such as appliances, equipment, electronics, and plugin lighting), are independent of building design and not subject to Title 24.

The current version of the Energy Code, known as 2008 Title 24, or the 2008 Energy Code, became effective January 1, 2010. The 2008 Title 24 requires energy savings of 15–35 percent above the former 2005 Title 24 Energy Code. In effect, compliance with the code means residential buildings would achieve a 15 percent reduction in their combined space heating, cooling, and water heating energy consumption compared to the 2005 Title 24 Energy Code standards. The reference to 2005 Title 24 Energy Code is relevant in that many of the state's long-term energy and GHG reduction goals identify energy-saving targets relative to 2005 Title 24.

The most recent version of Title 24 is the 2013 Energy Code (2013 Title 24), which will be effective on July 1, 2014 (CEC 2013a). According to the California Energy Commission, the minimum 2013 Title 24 standards will reduce energy consumption by

25 percent for lighting, heating, cooling, ventilation, and water heating over the 2008 Title 24 standards (CEC 2013b).

New construction and major renovations must demonstrate their compliance with the current Energy Code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC. The compliance reports must demonstrate a building's energy performance through use of CEC-approved energy performance software that shows iterative increases in energy efficiency given the selection of various heating, ventilation, and air conditioning (HVAC); sealing; glazing; insulation; and other components related to the building envelope. ~~The Title 24 Energy Code governs energy consumed by the major building envelope systems such as space heating, space cooling, water heating, some aspects of the fixed lighting system, and ventilation. Non-building energy use, or "plug-in" energy use (such as appliances, equipment, electronics, plug-in lighting), are independent of building design and are not currently subject to Title 24.~~

The ~~CARB~~ Scoping Plan includes an Energy Efficiency GHG reduction measure that, among other things, calls for increased building and appliance energy efficiency through new standards and programs. In the Scoping Plan, CARB projects that approximately 26.3 MMTCO₂E of GHGs could be reduced statewide through expanded energy efficiency programs, including updates to Title 24's energy efficiency standards.

Title 24, Part 11—California Green Building Standards. The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11 first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 CBC). CALGreen institutes mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory requirements and may also adopt the Green Building Standards with amendments for stricter requirements.

The mandatory standards require:

- 20 percent mandatory reduction in indoor water use relative to specified baseline levels;
- 50 percent construction/demolition waste diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency; and
- Requirements for low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards.

The voluntary standards require:

- Tier I—15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in

construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, cool/solar reflective roof; and

- Tier II—30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, cool/solar reflective roof.

Similar to the compliance reporting procedure described above for demonstrating energy code compliance in new buildings and major renovations, compliance with the CALGreen water reduction requirements must be demonstrated through completion of water use reporting forms for new low-rise residential and non-residential buildings. The water use compliance form must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

The Scoping Plan also includes a Green Building Strategy with the goal of expanding the use of green building practices to reduce the carbon footprint of new and existing buildings. Consistent with CALGreen, the Scoping Plan recognized that GHG reductions would be achieved through buildings that exceed minimum energy-efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Green building is thus a vehicle to achieve the Scoping Plan's statewide electricity and natural gas efficiency targets, and lower GHG emissions from waste and water transport sectors.

In the Scoping Plan, CARB projects that an additional 26 MMTCO₂E could be reduced through expanded green building (CARB 2008). However, this reduction is not counted toward the BAU 2020 reduction goal to avoid any double counting, as most of these reductions are accounted for in the electricity, waste, and water sectors. Because of this, CARB has assigned all emissions reductions that occur because of green building strategies to other sectors for meeting AB 32 requirements, but will continue to evaluate and refine the emissions from this sector.

The 2013 CALGreen went into effect on January 1, 2014; however, affected energy provisions of the 2013 CALGreen, Part 11, Title 24 will not be implemented until July 1, 2014.

Senate Bill 97 - CEQA GHG Amendments

Senate Bill 97 (SB 97; Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097) acknowledges that climate change is a prominent environmental issue that requires analysis under the California Environmental Quality Act (CEQA). The California Natural Resources Agency adopted amendments to the CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000-15387) to address GHG emissions, consistent with Legislature's directive in Public Resources Code section 21083.05 (enacted as part of SB 97 (Chapter 185, Statutes 2007)).

Local (County of San Diego)

General Plan

The County's General Plan incorporates smart growth and land planning principles intended to reduce VMT, and thus a reduction of GHGs. The General Plan aims to accomplish this by locating future development within and near existing infrastructure. The General Plan also directs preparation of a County Climate Action Plan (CAP) with reduction targets; development of regulations to encourage energy efficient building design and construction; and development of regulations that encourage energy recovery and renewable energy facilities, among other actions. These planning and regulatory efforts, in combination with application of the County's Climate Action Plan and Draft Guidelines, are intended to ensure that actions of the County of San Diego do not impede AB 32 and SB 375 mandates. For a complete discussion of the project's consistency with all General Plan policies, refer to Appendix W.

Conservation and Open Space Element

The General Plan includes a Conservation and Open Space Element which sets policies pertaining to greenhouse gas emissions, including:

COS-6.5: Best Management Practices. Encourage best management practices in agriculture and animal operations to protect watersheds, reduce GHG emissions, conserve energy and water, and utilize alternative energy sources, including wind and solar power.

Sustainable Land Development. Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment. [See also Goal LU-6]

COS-14.2: Villages and Rural Villages. Incorporate a mixture of uses within Villages and Rural Villages that encourage people to walk, bicycle, or use public transit to reduce air pollution and GHG emissions.

COS-14.9: Significant Producers of Air Pollutants. Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.

COS-14.10: Low-Emission Construction Vehicles and Equipment. Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.

COS-14.13: Incentives for Sustainable and Low GHG Development. Provide incentives such as expedited project review and entitlement processing for developers that maximize use of sustainable and low GHG land development practices in exceedance of State and local standards.

Sustainable Architecture and Buildings. Building design and construction techniques that reduce emissions of criteria pollutants and GHGs, while protecting public health and contributing to a more sustainable environment.

COS-15.1: Design and Construction of New Buildings. Require that new buildings be designed and constructed in accordance with “green building” programs that incorporate techniques and materials that maximize energy efficiency, incorporate the use of sustainable resources and recycled materials, and reduce emissions of GHGs and toxic air contaminants.

COS-16: Sustainable Mobility. Transportation and mobility systems that contribute to environmental and human sustainability and minimize GHG and other air pollutant emissions.

COS-16.3: Low-Emissions Vehicles and Equipment. Require County operations and encourage private development to provide incentives (such as priority parking) for the use of low- and zero-emission vehicles and equipment to improve air quality and reduce GHG emissions. [Refer also to Policy M-9.3 (Preferred Parking) in the Mobility Element.]

COS-17.1: Reduction of Solid Waste Materials. Reduce GHG emissions and future landfill capacity needs through reduction, reuse, or recycling of all types of solid waste that is generated. Divert solid waste from landfills in compliance with state law.

COS-17.4: Composting. Encourage composting throughout the County and minimize the amount of organic materials disposed at landfills.

COS-17.6: Recycling Containers. Require that all new land development projects include space for recycling containers.

Climate Action Plan

To comply with the 2011 adopted County General Plan EIR Mitigation Measure CC1.2, Preparation of a CAP, the County developed and approved the County CAP in June 2012 to address issues of growth and climate change. Specifically, the County CAP was designed to mitigate the impacts of climate change and by achieving meaningful GHG reductions by implementing goals and strategies within the County, consistent with AB 32, EO S-3-05, ~~and SB 97~~, and to provide a mechanism that subsequent projects within the County may use as a means to address GHG impacts under CEQA. The County CAP contains two emissions reduction targets: (1) a 15 percent reduction below 2005 levels by 2020; and (2) a 49 percent reduction below 2005 levels by 2035.

The County CAP provides a baseline GHG inventory and BAU projections (i.e., future anticipated conditions if no CAP was implemented), leading to GHG emissions reduction targets for 2020 and 2035; and GHG reduction measures and actions for both the community and local government. ~~The CAP includes GHG reduction measures that, if fully implemented, would achieve an emissions reduction target that is consistent with, and supports the state-mandated reduction target embodied in AB 32. For community-wide GHG reductions, measures are included in the County CAP pertaining to water use, buildings and energy, increasing renewable energy generation, integrating land use and transportation, agricultural practices, and landscaping and open space. Such GHG reduction measures are provided for both 2020 and 2035. The County CAP also~~

includes a compliance checklist for GHG analysis of projects in the County in its Appendix G. As stated in the CAP's Appendix G, projects that meet specified GHG screening criteria must also comply with at least one of the applicable CAP GHG reduction measures. Projects that exceed the GHG screening criteria must comply with all (or equivalent) CAP GHG reduction measures that are relevant to their project type and must also complete a technical analysis to demonstrate that the project's design features, along with CAP measures, are incorporated to reduce emissions below the applicable GHG threshold.

After the County CAP was adopted by the County, a lawsuit was filed by the Sierra Club. In April 2013, the San Diego County Superior Court set aside the approval of the County CAP. Therefore, this GHG analysis does not rely on the CAP.

State and Local GHG Inventories

Statewide GHG Emissions

The CARB performs statewide GHG inventories. The inventory is divided into nine broad sectors of economic activity: agriculture, commercial, electricity generation, forestry, high GWP emitters, industrial, recycling and waste, residential, and transportation. Emissions are quantified in million metric tons of CO₂ equivalent (MMTCo₂E). Table 3.1-32 shows the estimated statewide GHG emissions for the years 1990, 2000, 2004, and 2008, and 2011.

**TABLE 3.1-3
CALIFORNIA GHG EMISSIONS BY SECTOR IN 1990, 2008 AND 2011**

Sector	1990 ¹ Emissions in MMTCo ₂ E (% total) ²	2008 ³ Emissions in MMTCo ₂ E (% total) ²	2011 Emissions in MMTCo ₂ E (% total) ²
Sources			
Agriculture	23.4 (5%)	33.88 (7%)	32.24 (7%)
Commercial	14.4 (3%)	15.56 (3%)	15.62 (3%)
Electricity Generation	110.6 (26%)	120.14 (25%)	86.57 (19%)
High GWP	--	11.48 (2%)	15.17 (3%)
Industrial	103.0 (24%)	89.27 (18%)	93.24 (21%)
Recycling and Waste	--	6.69 (1%)	7.0 (2%)
Residential	29.7 (7%)	29.03 (6%)	29.85 (7%)
Transportation	150.7 (35%)	177.16 (37%)	168.42 (38%)
Forestry (Net CO ₂ flux) ⁴	-6.69	--	--
Not Specified	1.27	--	--
TOTAL⁴	426.6	483.22	448.11

SOURCE: CARB 2007, 2013b

¹1990 data was retrieved from the CARB 2007 source.

²Percentages may not total 100 due to rounding.

³2008 and 2011 data was retrieved from the CARB 2013 source.

⁴Reported emissions for key sectors. The inventory totals for 2008 and 2011 did not include Forestry or Not Specified sources.

**TABLE 3.1-2
CALIFORNIA GHG EMISSIONS BY SECTOR IN 1990, 2000, 2004, AND 2008**

Sector	1990 Emissions in MMT _{CO₂} E (% total) ¹	2000 Emissions in MMT _{CO₂} E (% total) ¹	2004 Emissions in MMT _{CO₂} E (% total) ¹	2008 Emissions in MMT _{CO₂} E (% total) ¹
Sources				
— Agriculture	23.4 (5%)	25.44 (6%)	28.82 (6%)	28.06 (6%)
— Commercial	14.4 (3%)	12.80 (3%)	13.20 (3%)	14.68 (3%)
— Electricity Generation	110.6 (26%)	103.92 (23%)	119.96 (25%)	116.35 (24%)
— Forestry (excluding sinks)	0.2 (<1%)	0.19 (<1%)	0.19 (<1%)	0.19 (<1%)
— High GWP	--	10.95 (2%)	13.57 (3%)	15.65 (3%)
— Industrial	103.0 (24%)	97.27 (21%)	90.87 (19%)	92.66 (19%)
— Recycling and Waste	--	6.20 (1%)	6.23 (1%)	6.71 (1%)
— Residential	29.7 (7%)	30.13 (7%)	29.34 (6%)	28.45 (6%)
— Transportation	150.7 (35%)	171.13 (37%)	181.71 (38%)	174.99 (37%)
— Unspecified Remaining ²	1.3 (<1%)	--	--	--
Subtotal	433.3	458.03	483.89	477.74
Sinks				
— Forestry Sinks	-6.7 (—)	-4.72 (—)	-4.32 (—)	-3.98 (—)
TOTAL	426.6	453.31	479.57	473.76

SOURCE: CARB 2010c.

¹Percentages may not total 100 due to rounding.

²Unspecified fuel combustion and ozone depleting substance (ODS) substitute use, which could not be attributed to an individual sector.

As shown in Table 3.1-32, statewide GHG source emissions totaled approximately 433 427 MMT_{CO₂}E in 1990, 458 MMT_{CO₂}E in 2000, 48384 MMT_{CO₂}E in 20084, and 44878 MMT_{CO₂}E in 201108. Many factors affect year-to-year changes in GHG emissions, including economic activity, demographic influences, environmental conditions such as drought, and the impact of regulatory efforts to control GHG emissions. While CARB has adopted multiple GHG emission reduction measures, the effect of those reductions will not be seen until around 2015. According to data from the CARB, it appears that statewide GHG emissions peaked in 2004 most of the reductions since 2008 have been driven by economic factors (recession), previous energy efficiency actions, and the renewable portfolio standard and are now beginning to decrease (CARB 2013b0a). Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

The forestry sector is unique because it not only includes emissions associated with harvest, fire, and land use conversion (sources), but also includes removals of atmospheric CO₂ (sinks) by photosynthesis, which is then bound (sequestered) in plant tissues. As seen in Table 3.1-2, the forestry sector consistently removes more CO₂ from the atmosphere statewide than it emits. As a result, although decreasing over time, this sector represents a net sink, removing a net 6.7 MMT_{CO₂}E from the atmosphere in 1990, a net 4.7 MMT_{CO₂}E in 2000, a net 4.3 MMT_{CO₂}E in 2004, and a net 3.9 MMT_{CO₂}E in 2008. However, Estimates of CO₂ uptake and GHG emissions by processes occurring on forest, range, and other land types, such as urban forests, are not included in the current inventories as new research and analyses methods are required to better understand forest sector carbon accounting and the fundamental processes associated with sequestration and emissions (CARB 2013b).

San Diego Countywide GHG Emissions

A San Diego regional emissions inventory was prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC) that took into account the unique characteristics of the region. Their 2006 emissions inventory for San Diego is shown in Table 3.1-43. The sectors included in this inventory are somewhat different from those in the statewide inventory.

**TABLE 3.1-43
SAN DIEGO COUNTY GHG EMISSIONS BY SECTOR IN 2006**

Sector	2006 Emissions in MMTCO ₂ E (% total) ¹	
Agriculture/Forestry/Land Use	0.7	(2%)
Waste	0.7	(2%)
Electricity	9.0	(25%)
Natural Gas Consumption	3.0	(8%)
Industrial Processes & Products	1.6	(5%)
On-Road Transportation	16.0	(45%)
Off-Road Equipment & Vehicles	1.3	(4%)
Civil Aviation	1.7	(5%)
Rail	0.3	(<1%)
Water-Borne Navigation	0.127	(<0.5%)
Other Fuels/Other	1.1	(3%)
TOTAL	35.5	

SOURCE: University of San Diego 2008.

¹Percentages may not total 100 due to rounding.

Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use. Transportation accounts for a higher proportion of GHG emissions in San Diego compared to the state, while electricity-related emissions represent the same proportion relative to the state as a whole. Industrial and agricultural emissions are substantially less represented in San Diego County compared to the state.

The June 2012 County Climate Action Plan also identifies baseline and forecast community-wide GHG emissions for the unincorporated areas (County of San Diego 2013b2e). This is shown in Table 3.1-5, which⁴ below. Table 3.1-4 includes forecast GHG emissions estimates for a 2005 baseline, and forecasted 2020, 2035, and 2050 emissions under a business-as-usual (BAU) scenario. Baseline inventories for 1990 were not possible to estimate, hence, a 2005 baseline was used, consistent with CARB guidance. A BAU scenario is the expected emissions that would occur if the County CAP and other GHG-reducing measures (such as statewide legislation) were not implemented.

**TABLE 3.1-54
SAN DIEGO COUNTY BASELINE AND PROJECTED GHG EMISSIONS**

Sector	2005 Baseline Emissions in MTCO ₂ E	2020 BAU Emissions in MTCO ₂ E	2035 BAU Emissions in MTCO ₂ E	2050 BAU Emissions in MTCO ₂ E
Transportation	2,636,702	3,098,307	4,004,966	4,785,555
Residential Energy	505,963	566,033	666,952	707,334
Commercial/Industrial energy	615,687	737,916	818,698	934,503
Agriculture	190,025	159,246	118,134	83,520
Solid Waste	144,865	162,064	190,959	202,521
Wastewater	50,412	56,397	66,452	70,475
Potable Water	236,435	264,506	311,665	330,535
Other	132,490	148,220	174,646	185,221
TOTAL	4,512,580	5,192,689	6,352,472	7,299,664

SOURCE: County of San Diego 2013b. Climate Action Plan, Appendix C, Table C.1, June 2012.

As indicated in Table 3.1-4, Transportation GHG emissions accounted for 58 percent of total County baseline emissions, and energy consumption associated with residential and commercial/industrial uses accounted for 11 and 14 percent of total baseline GHG emissions, respectively. BAU 2020 transportation GHG emissions are forecasted to account for 60 percent of total community-wide emissions, and energy consumption associated with residential and commercial/industrial uses to account for 11 and 14 percent of total 2020 BAU GHG emissions (the same percentages as baseline). While all other sectors are forecast to increase relative to the baseline, GHG emissions from the agriculture sector are projected to decline by 2020 and beyond.

Project Site GHG Emissions

Current sources of on-site GHG emissions are associated with the vehicle use, energy use, water use, area sources (landscaping and other equipment use, stoves and fireplaces) and waste disposal practices of existing land uses. The project site is presently occupied primarily by agricultural uses, with 22 single-family homes scattered throughout the 608 acres at very low density. Emissions due to these existing residential uses were estimated and are presented for informational purposes. Existing emissions were subtracted from project emissions for scenarios with and without project design features; however, these emissions do not change the results of the impact analysis and the project-only emissions meet the County's Performance Threshold.

Typically, GHG emissions from agriculture are due to energy/fuel use and off-gassing associated with agricultural vehicles, agricultural pumps (irrigation pumps), residue burning, soil management practices, enteric fermentation from livestock, and histosol and rice cultivation.

The CAP estimated that for the County as a whole, the agricultural sector emitted 190,025 MTCO₂E (4 percent of total countywide emissions) in 2005, and is projected to emit 159,246 MTCO₂E (3 percent of total emissions) by 2020 under BAU. As stated in Appendix C of the CAP, within the agriculture sector, energy emissions (from diesel-operated pumps and off-road vehicles) accounted for the majority (57 percent) of total agricultural emissions. Other agricultural emissions calculated include enteric

fermentation (22 percent), soil management (12 percent), manure management (9 percent), and residue burn (less than 1 percent).

Given the types of agricultural operations on-site (i.e., mostly orchard crops, some row crops, no livestock, no histosol or rice cultivation), current emissions of GHGs would mostly be associated with off-road agricultural vehicles such as mowers, sprayers, tractors, balers, and tillers. Smaller amounts of GHGs would be associated with fertilizer application and soil management.

3.1.2.2 Analysis of Project Impacts and Determination of Significance

The overall framework for assessing GHG emissions is provided through an analysis of the project's consistency with AB 32, is provided by the County CAP. The CAP includes GHG reduction measures that, if fully implemented, would achieve an emissions reduction target that is consistent with, and supports the state-mandated reduction target embodied in AB 32. To further ensure that the County's overall reduction target is achieved, considering the wide range of project types the County may approve during build-out of the General Plan, ~~the~~ County has prepared a companion set of quantified GHG emissions thresholds, as a supplement to the measures outlined in the County CAP. ~~These implementing thresholds which~~ are contained in the County Draft Guidelines. The County Draft Guidelines outline the County's approach to addressing GHG emissions impacts and provide guidance in determining the appropriate threshold for projects, assessing significance, and mitigating impacts. In addition, the *County's Draft Report Format and Content Requirements* document, under separate cover, provides instructions for analyzing and reporting GHG emissions for projects and plans. It should be noted that the County's Draft Guidelines and Draft Report Format and Content Requirements are still in draft form and have not yet been formally adopted.

The County Draft Guidelines establish a multi-step process to analyze GHG emissions, starting with exemptions and screening criteria. Projects not subject to CEQA analysis also do not require the use of the County Draft Guidelines to determine significance. The County Guidelines were developed in consultation with consultants approved to conduct air quality analyses by the County and other experts in the field. The County issued Interim Guidelines and Report Format and Content Requirement for Climate change in late 2008 and circulated them for public review from October to November. Afterward, the Draft Guidelines were prepared and circulated for public review. The current version of the County Guidelines and Report Format and Content Requirements, was finalized on November 7, 2013.

CEQA and GHG analysis exemptions also exist for transit priority projects that are consistent with the applicable SCS. If a project is determined to be subject to CEQA review, the next step is to compare the project to a list of screening criteria. The screening criteria list projects of select types and sizes that would produce GHG emissions of less than 2,500 MTCO₂E per year. For projects that do not merit exemption nor meet the screening criteria, the next step is to select an appropriate implementing threshold, out of the four available, given the proposed project type. Once the appropriate implementing threshold is selected, an analysis must demonstrate that the proposed project complies with the threshold, through incorporating CAP measures and/or other feasible mitigation.

For the purposes of this EIR, the basis for the determination of significance for climate change is the County Draft Guidelines. The project would result in a significant impact if:

1. The project generates greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (GHG Emissions): ~~The project generates greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.~~
2. Plans, Policies, and Regulations: ~~The project conflicts with an applicable plan, policy, or regulation that was adopted for the purpose of reducing the emissions of greenhouse gases. (Plans, Policies, and Regulations).~~

Issue 1: GHG Emissions

Guidelines for the Determination of Significance

CEQA Guidelines Section 15064.4 discusses the significance evaluation for GHG emissions. Section 15064.4(a) recognizes that the determination of the significance "calls for a careful judgment" by the lead agency that is coupled with lead agency discretion to determine whether to (1) use a model or methodology, and/or (2) rely on a qualitative analysis or performance based standards. Section 15064.4(b) further states a lead agency should consider the following non-exclusive list of factors when assessing the significance of GHG emissions.

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. The extent to which project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation for GHG emissions.

Similarly, Appendix G of the CEQA Guidelines contains two significance criteria for evaluating GHG emissions of a project:

- a) Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHGs?

Neither CARB nor the SDAPCD, however, has adopted significance criteria applicable to land use development projects for the evaluation of GHG emissions under CEQA.

Here, the County Guidelines are the basis for the determination of GHG emissions significance for the project under CEQA Guidelines Section 15064.4(b)(2)-(3). As stated above, the County Guidelines provide the overall framework for assessing significance

and demonstrate a range of feasible reduction measures that can be implemented to achieve an overall reduction target that supports of the state-mandated reduction target embodied in AB 32. Project-specific thresholds are included in the County Guidelines in order to evaluate a project's compliance with AB 32 (including its emission reduction targets) and identify the significance of cumulative contributions to GHG emissions effects (County of San Diego 2012, page 23).

The County Guidelines establish a multi-step process to analyze GHG emissions, starting with CEQA exemptions and screening criteria. CEQA and GHG analysis exemptions also exist for transit priority projects that are consistent with the applicable SCS.

If a project is not exempt, the next step is to compare the project to a list of screening criteria. The County developed screening criteria to identify those projects that would have less-than-cumulatively considerable GHG emissions impacts. The screening criteria include a specific set of land use developments and development sizes, such as a 61,000-square-foot commercial office building, 120 condominiums, 86 single-family dwelling units, etc. The screening criteria were developed using conservative assumptions so that the County could ensure projects in this category would produce GHG emissions less than the County's bright line threshold.

For projects that do not merit exemption nor meet the screening criteria, the next step is to select an appropriate threshold given the proposed project type. The thresholds include the Bright Line Threshold, the Efficiency Threshold, the Performance Threshold, and the Stationary Source Threshold. The Bright Line and Efficiency Thresholds determine the proportional or fair-share of emission reductions required to meet the legislative mandate established in AB 32 that would be required within San Diego County. The Performance Threshold permits the application of project-specific measures that demonstrate a fair share of emissions reductions necessary statewide to achieve AB 32 targets (County of San Diego 2013b). The Stationary Source Threshold is often associated with industrial processes. Each of these thresholds is summarized in following discussion.

Bright Line Threshold

The County has estimated the emissions reductions needed to get to 1990 levels for land use related emissions at the statewide level. According to the County, this "gap" for statewide emissions is approximately three percent. The County then calculated the mass emissions target of 2,500 MTCO₂E and set this as numeric quantity as the bright line threshold.

The bright line threshold is similar to the County's screening criteria in that it is set at a level that would capture enough projects so that, through compliance with applicable regulations, the project would contribute its fair share to meet the goals of AB 32 and GHG emissions would result in a less-than-cumulatively considerable contribution (County of San Diego 2013b).

Efficiency Threshold

The efficiency threshold focuses on a project's per-unit emissions rather than the mass emissions level. The guidance for the efficiency threshold states that the relative

emissions efficiency needed to achieve a fair share of the state's emissions mandate embodied in AB 32 for San Diego County would be approximately 4.32 MTCO₂E per service population. The "service population" in the context of GHG emissions analysis, is a term used to express the total population plus the persons employed in project uses. The use of "fair share" in this instance indicates the GHG efficiency level that, if applied statewide, would meet the AB 32 emissions target and support efforts to reduce emissions beyond 2020 (County of San Diego 2013b). With a reduced rate of emissions per resident and employee, California can accommodate expected population growth, while also abiding by AB 32's emissions target and supporting efforts to reduce emissions beyond 2020 and GHG emissions would result in a less-than-cumulatively considerable contribution (County of San Diego 2013b).

Performance Threshold

Under the Performance Threshold "unmitigated" GHG emissions attributable to a project at full build-out in 2020 are compared to GHG emissions after application of design features and mitigation. "Unmitigated" GHG emissions represent the proposed project, in compliance with any applicable standards and regulations. If, compared to the "unmitigated" project, proposed mitigation would reduce GHG emissions by at least 16 percent, this level of mitigation would represent a fair share of what is necessary statewide to achieve AB 32 targets. In other words, a project that provides mitigation which amounts to a reduction in GHG emissions of 16 percent would be consistent with AB 32 reduction targets and therefore adequate to avoid a cumulatively considerable contribution to the significant cumulative impact of climate change.

Stationary Source Threshold

A stationary source is one with an identified emission point or points, often associated with industrial processes. Stationary sources typically include cogeneration facilities, boilers, flares, heaters, refineries, and other types of facilities. Single facilities can have many individual emission points. Many of these types of facilities would require a permit from SDAPCD.

The County, like many air districts in California have identified 10,000 MTCO₂E per year for permitted, stationary source emissions (e.g., industrial projects) as a level below which the project would not be expected to substantially conflict with existing legislation adopted to reduce statewide GHG emissions and would, therefore, represent a less-than-cumulatively considerable contribution to the significant cumulative impact of global climate change (County of San Diego 2013b).

According to the County Draft Guidelines, a proposed project would have a cumulatively considerable contribution to climate change impacts if it would result in a net increase of construction and operational greenhouse gas emissions, either directly or indirectly, and the project would incorporate mitigation that achieves less than a 16 percent total reduction compared to unmitigated emissions. This metric is based on the Performance Threshold, the implementing threshold chosen for project analysis.

The Performance Threshold permits the application of project-specific "mitigation" measures that demonstrate a fair share of emissions reductions, which must reach 16 percent from the unmitigated baseline, to achieve statewide AB 32 targets. While the Performance Threshold and modeling calculations both refer to "mitigated" and

~~“unmitigated” emissions, for the purpose of this analysis all “mitigated” emissions are considered project design features and all “unmitigated” emissions are considered without project design features, under CEQA.~~

~~This analysis estimates GHG emissions associated with construction and operation of the project and determines whether the project would have a cumulatively considerable incremental contribution to the significant impact of global climate change. GHG emissions estimates include both direct and reasonably foreseeable indirect GHG emissions from operations. The GHG emissions estimates do not include life-cycle emissions embodied in manufactured materials. The GHG analysis and reporting were conducted in accordance with the County’s Draft Report Format and Content Requirements (County 2012c). Also, in accordance with the report requirements, the GHG emissions analysis focuses on a 2020 timeline, consistent with the legislative mandate embodied in AB 32; and focuses on net new emissions. Net increases in GHG emissions relative to the existing baseline include only those emissions attributable to the project and take into account existing emissions displaced by the project.~~

~~The methodology for calculating GHG emissions due to construction (both on- and off-site and blasting) and operation is discussed in detail in the Greenhouse Gas Analysis contained in Appendix O. Operational emissions sources include vehicles, energy, water, area sources (landscaping equipment and fireplaces) and waste disposal. The project would incorporate several project design features that would reduce GHG emissions. These include the following:~~

- ~~• Using Tier III or better construction equipment~~
- ~~• Increasing energy efficiency by 30 percent over 2008 Title 24~~
- ~~• Installing high efficiency lighting to achieve a 15 percent lighting energy reduction~~
- ~~• Using Smart Meters~~
- ~~• Installing energy efficient appliances in all residential units~~
- ~~• Using only natural gas fireplaces~~
- ~~• Reducing water consumption by 20 percent~~
- ~~• Implementing recycling program to achieve a 20 percent reduction in solid waste compared to baseline~~

~~These measures were taken into account in the calculation of project GHG emissions.~~

Impact Analysis

This analysis estimates GHG emissions associated with construction and operation of the project and determines whether the project would have a cumulatively considerable incremental contribution to the significant impact of global climate change. GHG emissions estimates include both direct and reasonably foreseeable indirect GHG emissions from operations. The GHG emissions estimates do not include life-cycle emissions embodied in manufactured materials. The GHG analysis and reporting were

conducted in accordance with the County's Report Format and Content Requirements, Greenhouse Gas Analysis and Reporting (County of San Diego 2013c).

Threshold Selection

According to the County Guidelines, for projects that do not merit exemption nor meet the screening criteria, the next step is to select an appropriate implementing threshold, out of the four available, given the proposed project type. Once the appropriate implementing threshold is selected, an analysis must demonstrate that the proposed project complies with the threshold, through incorporating design measures and/or other feasible mitigation.

Analysis showed that the proposed project would exceed the County's bright line threshold of 2,500 MTCO₂E. Therefore, the rationale for selecting the appropriate threshold is discussed below.

Stationary Threshold

The stationary threshold is only relevant to the proposed stationary sources, such as the project's WRF. As this stationary source is included in the larger project, the stationary source alone would not be appropriate for this analysis. Additionally, if it were to be included separately, the emissions would be double counted as the calculation of emissions for all uses proposed as part of the project included the calculation of the emissions associated with the treatment of wastewater.

Efficiency Threshold

The efficiency threshold requires the development of a service population to assess the significance of GHG emissions. For this project, the calculation of residences for typical multiple- and single-family units can be based on the average person per household from the last census. However, there is no known data to determine the population within the proposed age restricted or group facilities. The employment requirement for the group facility is not known and no specific employer/operator of the facility has been identified. Similar issues arise from the commercial uses, the school, church, and other on-site employers. Detailed calculations of the service population are provided in Appendix O.

Due to the level of speculation required to calculate the service population, the analysis under the efficiency threshold would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual impacts attributable the proposed project. Therefore, the efficiency threshold was determined to be inappropriate for assessing the project.

Performance Threshold

The performance threshold requires the calculation of "unmitigated" emissions and "mitigated" emissions based on the available information. Therefore, the performance threshold is most appropriate for this project to assess project impacts. The following analysis uses the performance threshold and compares the "unmitigated" emissions and "mitigated" emissions for the year 2020.

Construction Emissions

On-site construction and operational emissions were estimated using California Emissions Estimator Model (CalEEMod) Version 2011.1.1 (SCAQMD 2011). Emissions were modeled using climate zone 13 within the SDAPCD for operational year 2020. SDG&E was selected as the utility provider. The default residential population rate was adjusted to reflect the Valley Center residential population rate obtained from SANDAG (2010).

CalEEMod calculates construction emissions for land use development projects based on various project-specific inputs, including building type, acreage, soil hauling, construction phasing, equipment lists, and worker commutes and materials delivery. Thus, project-generated GHG emissions were modeled based on information provided in the project description, the Lilac Hills Ranch Specific Plan, and statewide datasets included in CalEEMod. CalEEMod does not calculate emissions from material movement and handling for balanced site conditions with no off-site hauling; thus, material movement and handling was calculated separately and added to the CalEEMod results to determine total construction emissions.

As all off-site construction would be associated with roadway improvements, off-site construction emission estimates were developed with the Road Construction Emissions Model, a model specifically designed for roadway improvement projects. Per the County guidelines, construction emissions are calculated and amortized over a 20-year period and included as part of the analysis.

On-site Construction Emissions

The project applicant has provided approximate timeframes for the five phases of construction activities. The phases would occur in the following order: Phase 1, Phase 4, Phase 2, Phase 5, and Phase 3. Each phase is estimated to be approximately 1.5 years in duration with the exception of Phase 3, which is estimated to last three to four years. The highest average cut-and-fill volume for any phase would be 12,353 yd³. However, to be conservative, construction emissions were modeled assuming a more intense 10-acre area with a daily movement volume of 50,000 yd³ ¹.

Assumptions used to model construction emissions for each of the phases were based on equipment lists and a cut-and-fill calculation provided by the project applicant. As identified in the Specific Plan, the majority of construction equipment would be composed of Tier III equipment, as outlined in the GHG technical report, and may be replaced with Tier IV equipment in the final phases. Statewide data sets for horsepower, emission factors, and load factors provided as part of CalEEMod were used.

Blasting operations would also be required for site preparation. For modeling purposes it was assumed that blasting operations would occur during the grading stage of ~~all phases each phase of construction~~; however, actual blasting operations would occur independently from grading activities. Assuming that blasting would occur during grading operations results in a worst-case analysis as this would also be the highest emissions

¹ Based on grading a 10-acre site with an average blade depth of 3 feet (10 acres = 435,600 ft² x 3 ft = 1,306,800 ft³ = 48,400 yd³).

during construction. The explosive material would consist of ammonium nitrate and fuel oil, known as ANFO. For modeling GHG impacts, it is estimated that each blast would require 10,000 pounds of explosive per blast and there would be a total of eight blasts for the project. This totals to 80,000 pounds of ANFO for the project.

Based on these inputs, it is estimated that on-site project construction would emit a total of 15,250.7 MTCO₂E. The CO₂E sources of emissions include off-road equipment as well as hauling, and vendor and worker on-road trips. CARB staff has advised CalEEMod users that the model over-estimates off-road construction emissions by 33.3 percent due to outdated exhaust emission load factors (CARB 2010b). Due to this acknowledged over estimation by CalEEMod, the construction emissions from off-road construction equipment calculated in CalEEMod were then reduced by 33.3 percent (i.e., multiplied by 0.666) to arrive at a more accurate estimate. The off-road emissions portion of the total emissions were originally calculated to be 11,811.9 MTCO₂E (Appendix O), and after the 33.3 percent reduction, totaled 7,874.6 MTCO₂E.

Therefore, the adjusted total is 11,342.4 MTCO₂E for on- and off-site construction emissions (see Appendix O). When this value is amortized over 20 years, in accordance with the County Guidelines, annual GHG emissions from on-site construction would total approximately 566 MTCO₂E each year. CalEEMod on-site construction emissions output is contained in Appendix O

~~Based on these inputs, it was estimated that on-site project construction would emit 567.15.67 MTCO₂E each year when amortized over 20 years, consistent with County Draft Guidelines.~~

Off-site Construction Emissions

Off-site emissions would occur during construction of Phase 1. The off-site impacts consist of road widening activities over a total area of approximately 2.7 acres and were calculated using the Road Construction Emissions Model (Sacramento Metropolitan Air Quality Management District 2012). The inputs to this model included a 2015 start date for construction, duration of two months, encompassing a total of three acres, with a maximum of three acres disturbed per day. Total volume of soil imported is assumed to be 260 cubic yards per day. Worker commute distance is assumed to be 20 miles per day each way.

~~Based on these inputs, off-site construction would emit approximately 29.0 MTCO₂E total. In accordance with the County guidelines, annual GHG emissions from off-site construction would total 1.45 MTCO₂E amortized over 20 years. Total construction emissions are shown in Table 3.1-6. It was calculated that off-site construction would emit 1.45 MTCO₂E each year when amortized over 20 years. Total annual construction emissions, combining on-site and off-site quantities, would be approximately 567.12 MTCO₂E per year. The construction emissions are shown in Table 3.1-5 below and the calculation details are presented in Appendix O.~~

Total Annual Construction Emissions

~~Total annual construction emissions, combining on-site and off-site quantities, would be approximately 567.1 MTCO₂E per year, as summarized in Table 3.1-6 below. Appendix O contains the complete construction emission calculations.~~

**TABLE 3.1-6
ANNUAL ON-SITE AND OFF-SITE CONSTRUCTION EMISSIONS**

Construction Emissions	MTCO ₂ E per Year
On-Site	565.67
Off-Site	1.45
TOTAL	567.12

SOURCE: Appendix O.

The construction emissions for 2035 were assumed to be the same as the 2020 emissions, as the 2020 emissions include all construction emissions; therefore, no new emissions would be added.

Operational Emissions

Operational emissions sources include vehicles, energy use, water consumption, area sources (landscaping equipment and fireplaces) and solid waste disposal. The following is a brief discussion of each emission source. While the Performance Threshold and modeling calculations both refer to “mitigated” and “unmitigated” emissions, for the purpose of this analysis all “mitigated” emissions are considered project design features and all “unmitigated” emissions are considered without project design features, under the California Environmental Quality Act; ~~therefore, no mitigation is required less than significant.~~ Operational emissions are shown in Table 3.1-5 below. Calculation details are presented in Appendix O.

a. Vehicles

Total annual VMT was estimated by using default rural trip lengths and trip generation rates contained in the traffic report (Chen Ryan 2014~~3~~). The vehicular trip lengths used in CalEEMod are calculated independent of the traffic analysis and are based on the type of land uses and the purpose of the trips, e.g., home to work, home to shopping, etc. Based on the total annual trips generated and the total VMT, CalEEMod estimated an average annual trip distance of 8.95 miles for the project. This trip distance is considered conservative as SANDAG projects the average trip length’s range depending on alternative to be 7.6 to 8.25 miles (Chen Ryan 2014). The SANDAG model is the more accurate prediction of trip length as SANDAG’s expertise is transportation planning and all SANDAG data are based on regional surveys and data collection, while CalEEMod was developed as a statewide model and has only limited data specific to each jurisdiction within the state.

To account for the project’s walkability and design, an improved on-site pedestrian network within the project site was modeled in CalEEMod. With the addition of these attributes, the proposed project would result in a reduction of 1,537,111 VMT and associated GHG emissions equating to a reduction of 584.66 MTCO₂E per year. This equates to an approximate 2.4 percent reduction in VMT and emissions over the “unmitigated” project which uses the CalEEMod defaults associated with the number of intersections per square mile. This estimate is consistent with published literature (CAPCOA 2010). Total annual VMT was estimated in CalEEMod to be 60,440,939.

b. Energy

~~∴ Emissions due to the project’s energy use without project design features were calculated assuming that buildings would be constructed in accordance with the energy~~

requirements contained in the 2008 Title 24 energy code. Additionally, the original RPS goal of achieving a 20 percent renewable energy mix by 2020 was assumed for electricity-related emissions. These energy emissions were estimated to be 6,976.23 MTCO₂E per year. Electricity-related project design feature emissions accounted for the difference between the revised RPS goal of achieving a 33 percent renewable energy mix and the original 20-percent goal, and project design features including increasing energy efficiency by 30 percent over 2008 Title 24, installing high efficiency lighting to achieve a 15 percent lighting energy reduction, using Smart Meters, and installing energy efficient appliances in all residential units. With these additional reductions, the associated project energy emissions were estimated to be 5,077.75 MTCO₂E per year. GHGs result from the generation of electricity from fossil fuels off-site in power plants. The project would be served by SDG&E. Therefore, SDG&E specific energy intensity factors were used in the calculations (see Appendix O). The energy intensity values are used in CalEEMod to determine the GHG emissions associated with electricity use and are based on CARB's Local Government Operations Protocol (for CO₂) and E-Grid (for CH₄ and N₂O) values (CAPCOA 2012). The "unmitigated" emissions due to the project's energy use were calculated based on the 2008 Title 24 energy code. Additionally, the original RPS goal of achieving a 14.2 percent renewable energy mix by 2020 (from the first version of the Scoping Plan) was assumed for electricity-related emissions (see Appendix O). Based on these inputs, "unmitigated" energy emissions were estimated to be 6,976.23 MTCO₂E per year.

"Mitigated" energy emissions accounted for the updated RPS goal of achieving a 33 percent renewable energy mix and project design features including increasing energy efficiency by 30 percent over 2008 Title 24 (this is equivalent to a five percent improvement over the new 2013 Title 24 requirements) (Imperial Valley Economic Development Corporation [IVEDC] 2013). Additional measures include installing high-efficiency lighting to achieve a 15 percent lighting energy reduction, using Smart Meters to reduce energy-related GHG emissions by 0.6 percent (County of San Diego 2013b), and installing energy-efficient appliances in all residential units including clothes washers (a 30 percent improvement); dishwashers (a 15 percent improvement); fans (a 50 percent improvement); and refrigerators (a 15 percent improvement). Because CalEEMod does not calculate energy-efficient appliances for non-residential land use subtypes, a conservative 10 percent reduction was made directly to non-Title 24 electricity intensity rates to reflect energy efficient appliance use in the assisted living facility. Additionally, to account for reductions due to RPS (see subchapter 3.2.3.2(d)), GHG emissions due to electricity use were reduced by a total of 27.2 percent. This consists of the 14.2 percent reduction, previously referenced, and an additional 13 percent reduction to account for the RPS gains achieved in meeting the 33 percent RPS goal by 2020. With these additional reductions, the associated project energy emissions for the year 2020, were estimated to be 5,244.09 MTCO₂E per year.

Considering only the same regulation and conditions as in the 2020 condition, the year 2035 "mitigated" emissions were calculated to be 5,222.52 MTCO₂E per year. The reduction in GHG emission from electricity consumption is due to the continuing effects of the RPS.

c. Area Sources

GHGs are emitted from area sources such as landscape maintenance equipment and fireplaces. The use of fireplaces and woodstoves directly emits CO₂ from the combustion of natural gas, wood, or biomass, some of which are thus classified as biogenic. Wood-

burning stoves and fireplaces emit substantially more GHGs than natural gas burning ones. CalEEMod estimates emissions from hearths and woodstoves only for residential uses based on the type and size features of the residential land use inputs. No hearths or woodstoves were attributed to any commercial uses. The Specific Plan requires only natural gas or equivalent non-wood burning fireplaces in all residential units. The conversion to wood-burning fireplaces is specifically prohibited by homeowner by-laws and included in the conditions of approval of the project and all subsequent phases.

The “unmitigated” area source emissions were calculated assuming the default mix of wood-burning fireplaces. This value is included in Appendix O. The area emissions for fireplaces are assumed to remain constant for the years 2020 and 2035, and the “unmitigated” area source emissions were estimated to be 4,229.82 MTCO₂E per year.

The “mitigated” source emissions do not include wood-burning fireplaces and include natural gas fireplaces in 90 percent of the residential units. No fireplaces were assumed in 10 percent of the units, which is a typical assumption in air quality and GHG modeling. The 2020 and 2035 “mitigated” area source emissions were estimated to be 2,758.35 MTCO₂E per year.

d. Water

The amount of water used and wastewater generated by a project has indirect GHG emissions associated with it, and if a WRF is constructed, could include some direct emissions. This analysis estimates emissions from the WRF by including 286 acre-feet per year (ac-ft/year) within the model to capture the associated energy for this land use.

Emissions associated with water/wastewater consumption/generation are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both methane and nitrous oxide.

In the “unmitigated” calculations, CalEEMod uses default electricity intensity values for various phases of supplying and treating water from CEC’s 2006 *Refining Estimates of Water-related Energy Use in California*. The model estimates water/wastewater emissions by multiplying the total projected water/wastewater demand by the applicable water electricity intensities and by the utility intensity GHG factors, which are estimated to change over time. The 2020 “unmitigated” water emissions were estimated to be 1,746.36 MTCO₂E per year and the 2035 “unmitigated” water emissions were estimated to be 1,239.08 MTCO₂E.

The “mitigated” emissions calculated in the water module include an overall 20 percent reduction in indoor and outdoor water use as required by CALGreen. Based on these inputs it is estimated that the total annual emissions associated with the 2020 project build-out water use would be 1,397.09 MTCO₂E of GHGs per year and the 2035 project build-out water use would be 991.26 MTCO₂E.

e. Solid Waste

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. Portions of these emissions are biogenic. To estimate the GHG emissions that would be generated by disposing of the solid waste associated with the project, the total volume of solid waste was first estimated in the model using waste disposal rates identified by the California

Department of Resources Recycling and Recovery (CalRecycle). This estimate is considered conservative as it does not account for the State's policy goal – as set forth in Public Resources Code Section 41780.01 – that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by year 2020, and annually thereafter.

CalEEMod calculations for quantifying GHG emissions from solid waste are based on the Intergovernmental Panel on Climate Change method using the degradable organic content of waste. The “unmitigated” and “mitigated” GHG emissions associated with waste disposal were both calculated using CalEEMod's default parameters and were assumed to remain constant between 2020 and 2035 as the population for the project is assumed to remain constant. The 2020 and 2035 “unmitigated” solid waste emissions were estimated to be 854.14 MTCO₂E per year.

The project would include a recycling facility and a greenwaste drop-off center. According to the Specific Plan, “the purpose of the recycling facility is to provide and encourage recycling by project residents in addition to the weekly collection of green waste.” As allowed by the Specific Plan, the facility would include office functions as well as storage for any equipment or materials. The facility would also include temporary roll-off bins or storage containers where recyclables and/or green waste generated from local residents can be consolidated for efficient off-site processing. The Specific Plan also considers a future buy-back center at this location for residents to redeem CRV containers. Anticipated processing equipment would include material conveyors and an aluminum can compactor while mobile equipment would typically be limited to natural gas- or propane-powered forklifts with occasional heavy trucks to haul material to larger facilities.

The proposed collection of recycling and green waste is initially seen as a simple storage operation with little on-site operation other than the delivery of empty containers and the pickup of full containers by large trucks, with occasional resident vehicles accessing the site. Emissions associated with these activities are anticipated to be similar to typical activities and assumptions defined as CalEEMod estimates the volume of solid waste, and waste categorization percentages (e.g., paper products, food waste, and plant debris) based on rates identified by CalRecycle. The GHG emissions associated with disposal of solid waste into landfills is based on the U.S. EPA's WARM software that quantifies GHG emissions from solid waste based on the Intergovernmental Panel on Climate Change method using the degradable organic content of waste. The reductions in emissions associated with these measures are expected to be approximately 20 percent, which were directly inputted into CalEEMod. This reduction would result from the preparation of waste management plans (WMPs) for individual developments per the County guidelines. The WMPs would contain educational materials for individual developers during the operational and construction phases of each proposed development. The total annual 2020 and 2035 “mitigated” emissions associated with the waste disposal practices of the project would be 683.31 MTCO₂E of GHGs per year.

Table 3.1-5 provides a summary of the project's total 2020 emissions including construction and direct and indirect operational emissions. As indicated, annual construction emissions would total 567.12 MTCO₂E; gross annual operational emissions would total 33,368.54 MTCO₂E. After subtracting the existing use emissions of 484.2,

the resulting emissions total 32,884.34 MTCO₂E per year as shown in Table 3.1-5 below.

**TABLE 3.1-5
TOTAL ANNUAL ESTIMATED GHG EMISSIONS
FOR PROJECT WITHOUT DESIGN FEATURES AND WITH DESIGN FEATURES IN 2020**

Project Emission Sources	2020 Project Emissions Without Design Features (in MTCO ₂ E)	2020 Project Emissions With Design Features (in MTCO ₂ E)	Percent Reduction
Construction	567.12	567.12	0%
Vehicles	26,863.73	22,884.921	14.8%
Energy Use	6,976.23	5,077.75	27.2%
Area Sources	4,229.82	2,758.35	34.8%
Water Use	1,746.36	1,397.09	20%
Solid Waste	854.14	683.31	20%
SUBTOTAL	41,237.41	33,368.54	19.1%
Existing Uses	-484.2	-484.2	
TOTAL	40,753.21	32,884.34	19.3%
Performance Threshold — percent reduction	--	19.3%	

Impact Summary

The significance analysis is multi-faceted and evaluates the significance of the project's GHG emissions by reference to: (a) the existing environmental conditions on the project site; (b) the County's Guidelines, and particularly the Performance Threshold for 2020 emissions levels; and (c) AB 32, and (d) the EO-S3-05 goal for 2050 and SE 375 and the 2050 RTP/SCS.

Existing Emissions

In accordance with CEQA Guidance Section 15064.4(b)(1), this analysis considers the "extent to which the project may increase or reduce [GHG] emissions as compared to the existing environmental setting."

As shown in Table 3.1-7, the existing land uses emissions are calculated at 563.74 MTCO₂E in 2008, and the project emissions are quantified at 33,534.88 MTCO₂E in 2020. Therefore, the GHG emissions from the project would be greater than the existing emissions; increasing emissions on the project site over and above existing conditions by 32,971.14 MTCO₂E.

The existing science on climate change is inadequate to quantify the specific amount of GHG emissions that would impact the global climate. Therefore, it is not possible to determine what particular quantity of GHG emissions would be significant to the global climate and no agency with regulatory expertise in California has identified a specific mass emission limit applicable to land use development. As a result this numeric change is an obvious increase in emissions, but does not itself provide a meaningful or informative indicator of project impacts.

**TABLE 3.1-7
ANNUAL ESTIMATED GHG EMISSIONS
FOR EXISTING USES AND 2020 MITIGATED PROJECT EMISSIONS**

<u>Project Emission Sources</u>	<u>2008 Existing Emissions (MTCO₂E)</u>	<u>2020 Project "Mitigated" Emissions (MTCO₂E)</u>	<u>Increase</u>
<u>Construction</u>		<u>567.12</u>	<u>567.12</u>
<u>Vehicles</u>	<u>392.54</u>	<u>22,884.92</u>	<u>22492.38</u>
<u>Energy Use</u>	<u>95.26</u>	<u>5,244.09</u>	<u>5148.83</u>
<u>Area Sources</u>	<u>52.70</u>	<u>2,758.35</u>	<u>2705.65</u>
<u>Water Use</u>	<u>11.49</u>	<u>1,397.09</u>	<u>1385.6</u>
<u>Solid Waste</u>	<u>11.75</u>	<u>683.31</u>	<u>671.56</u>
<u>TOTAL</u>	<u>563.74</u>	<u>33,534.88</u>	<u>32,971.14</u>

SOURCE: Appendix O.

2020 Emissions

In accordance with CEQA Guidelines Section 15064.4(b)(2)-(3), this report considers (i) whether the project's emissions "exceed a threshold of significance that the lead agency determines applies" and (ii) "the extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of GHG emissions." In assessing the project's significance under these two criteria, reference is made to the County Guidelines, particularly its Performance Threshold.

a. Efficiency Threshold

The efficiency threshold requires the development of a service population to assess the significance of GHG emissions. For this project, the calculation of residences for typical multiple- and single-family units can be based on the average person per household from the last census. However, there is no known data to determine the population within the proposed age restricted or group facilities. The employment requirement for the group facility is not known and no specific employer/operator of the facility has been identified. Similar issues arise from the commercial uses, the school, church, and other on-site employers.

Due to the level of speculation required to calculate the service population, the analysis under the efficiency threshold would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual impacts attributable the proposed project. Therefore, the efficiency threshold was determined to be inappropriate for assessing the project.

b. Performance Threshold

The performance threshold requires the calculation of "unmitigated" emissions and "mitigated" emissions based on the available information. Therefore, the performance threshold is most appropriate for this project to assess project impacts. The following analysis uses the performance threshold comparing the "unmitigated" emissions and "mitigated" emissions for the year 2020.

Table 3.1-8 provides a summary of the project's total 2020 emissions including construction and direct and indirect operational emissions for the "unmitigated" and the

“mitigated” scenarios, as calculated using the performance threshold. As indicated, annual construction emissions would total 567.1 MTCO₂E and gross annual operational emissions would total 40,670.3 MTCO₂E for an approximate total of 40,776. The emissions associated with existing land uses have been subtracted from both the “unmitigated” and “mitigated” scenarios as either scenario would remove the existing land uses. The resulting emissions for the “mitigated” project would be 33,073.68 MTCO₂E per year as shown in Table 3.1-8.

**TABLE 3.1-8
TOTAL ANNUAL ESTIMATED GHG EMISSIONS
FOR THE UNMITIGATED PROJECT AND THE MITIGATED PROJECT IN 2020 –
PERFORMANCE THRESHOLD**

<u>Project Emission Sources</u>	<u>2020 Project Emissions Unmitigated (in MTCO₂E)</u>	<u>2020 Project Emissions Mitigated (in MTCO₂E)</u>	<u>Percent Reduction</u>
Construction	567.12	567.12	0%
Vehicles	26,863.73	22,884.92	14.8%
Energy Use	6,976.23	5,244.09	24.8%
Area Sources	4,229.82	2,758.35	34.8%
Water Use	1,746.36	1,397.09	20%
Solid Waste	854.14	683.31	20%
SUBTOTAL	41,237.41	33,534.88	18.7%
Existing Uses	-461.2	-461.2	
TOTAL	40,776.21	33,073.68	18.9%
Performance Threshold percent reduction	=	18.9%	

SOURCE: Appendix O.

As indicated in Table 3.1-8, area sources account for the largest percent reduction of emissions of 34.8 percent. This accounts for the increase of natural gas fire places and the elimination of wood fireplaces. The reductions from energy use are the second greatest at 24.8 percent, and reflect electricity reductions from implementation of the RPS standard. The incorporation of these measures into the project design result in a 18.9 percent decrease in emissions from the “unmitigated” to the “mitigated” scenario, surpassing the 16 percent requirement established by the performance threshold.

When any phase under the Specific Plan comes forward, it will be subject to the requirements that outline the project design features modeled in this analysis through conditions of approval of the project and all phases. All phases, with the implementation of the design features, would exceed the County’s performance threshold of 16 percent. Impacts associated with the project’s contribution to cumulative GHG emissions would thus be considered **less than significant**, given project design features. No mitigation is necessary.

2050 Emissions

EO S-3-05 cites 2050 as a long-term timeframe and sets forth executive policy requiring the state to achieve an 80 percent reduction in GHG emission below 1990 levels by that date (California Council on Science and Technology [CCST] 2011). The EO 2050 goal is not a binding mandate. As CARB has not released guidance or developed methods to achieve even that goal, the 2050 goal is even more speculative and does not provide meaningful information for decision making.

The CCST has prepared a combination of potential pathways that may be required to arrive at 80 percent below 1990 GHG emission levels by 2050 (CCST 2011) which include the following.

- 1) Develop the technology to make Carbon, Capture and Sequestration (CCS) 100% effective and economical.
- 2) Eliminate fossil fuels with CCS from the electricity mix.
- 3) Increase the amount of load balancing that is achieved without emissions from 50 percent to 100 percent resulting in Zero Emission Load Balancing.
- 4) Produce biomass with net zero carbon emissions.
- 5) Burn all domestic biomass supplies with natural gas and use CCS to make electricity with net negative GHG emissions, creating an offset for the required fossil fuel use.
- 6) Reform hydrogen fuel from natural gas with CCS and use it to reduce fuel and electricity use.
- 7) Increase the supply of sustainable biomass twofold, and use it to make low-carbon biofuels, using feedstocks that best fit efficient conversion to the needed energy mix.

While these are possible strategies, they are not considered comprehensive and their relative efficiencies and costs have not been evaluated. Additionally, many of the strategies depend on further development and innovation of technologies for successful implementation, such as the zero emission load balancing and using biomass with CCS to produce electricity rather than biofuels (CCST 2011).

According to the 2011 Scoping Plan, achieving an 80 percent reduction by 2050 will require aggressive development and deployment of the cleanest technologies, but that rapid market penetration will be required to significantly accelerate emission reductions through the following,

- 1) Energy-demand reduction via efficiency and activity changes;
- 2) Large-scale electrification of on-road vehicles and building and industrial appliances; and
- 3) Decarbonization of electricity and fuel supplies through renewable or other near-zero carbon technologies.

The measures identified by the CCST and CARB are beyond the scope and ability of a single project or jurisdiction to implement. Additionally, neither the state nor federal government has developed a plan to implement the measures. Therefore, as information is incomplete or unavailable to credibly predict the specific GHG emission reductions in the future, the outcome of an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual impacts attributable the proposed project.

~~As indicated in Table 3.1-5, area sources account for the largest percent reduction of emissions of 34.8 percent. These account for the increase of natural gas fireplaces and the elimination of wood fireplaces. The reductions from energy use are the second greatest at 27.2 percent, and reflect reductions from project design features and from implementation of the RPS standard.~~

~~In addition to the 19.3 percent reduction, the project includes a design feature that would include planting of 35,000 net new trees. This measure would further reduce GHG emissions by sequestering carbon from the atmosphere; however, the measure is not required to reduce GHG emissions in compliance with the Performance Threshold and is not used to determine significance of GHG impacts.~~

~~The design features incorporated into the project to achieve this efficiency rate are described below and in subchapter 1.2.3. When subsequent projects come forward, they would be required to comply with the project design considerations modeled in this analysis. The subsequent projects, with the implementation of the design features, would exceed the County's Performance Threshold of 16 percent.~~

~~Impacts associated with the project's contribution to cumulative GHG emissions would thus be considered **less than significant**, given project design considerations.~~

Project Design Considerations

Project design features have been incorporated into the project to reduce GHG emissions to acceptable levels. Therefore, mitigation measures would not be necessary to reduce or avoid impacts. Project design considerations that would have the effect of reducing potential GHG emissions. Project design measures include: Specific Plan policies and performance measures for subsequent projects phases, as well as a compact, a walkable, mixed-use project design design, consistent with LU 1.2 of the Land Use Element of the General Plan, that is oriented to increase walkability. The Specific Plan also includes requires new buildings to include the infrastructure necessary to accommodate the future use of solar panels and/or systems, including wiring for roof-mounted solar systems and an electrical connection for vehicles in the garage of all buildings. . reflect the updates to the building code that would further promote green-building technologies and energy efficiency, which is currently being researched by the County through the efforts of the Chief Administration Officer (County of San Diego 2014).

a. Specific Plan Policies and Performance Measures

The project includes a number of design features with which subsequent all projects phases must comply that would have the effect of reducing potential GHG emissions associated with construction, energy use, area sources, water demand, and waste disposal. These project design features are consistent with all applicable General Plan Policies for reducing GHG emissions. For a complete discussion of the project's consistency will all General Plan policies, refer to Appendix W. The benefits of these design features in reducing GHG emissions has been quantified and demonstrated in Chapter 5.0 of Appendix O.

1. Construction

All construction projects shall use a minimum of Tier III CARB-certified construction equipment for the majority of construction equipment used, during the entire construction period.

2. Energy Conservation

The project includes the following performance measures related to energy use.

A.a. Exceed 2008 Title 24 energy efficiency standards by 30 percent

All ~~phases future implementing projects~~ subject to Title 24 shall exceed the 2008 Title 24, Part 6, energy efficiency standards by a minimum of 30 percent. ~~This policy is consistent with the County's 2012 CAP Measure E1.~~

B.b. Install high-efficiency lighting

All ~~future implementing phases projects~~ shall install high-efficiency lighting to achieve an overall minimum 15 percent lighting energy reduction relative to baseline lighting energy demand.

C.e. Install high-efficiency appliances in residential uses

All ~~future implementing residential phases projects~~, including single-family residential, mixed-use residential, and senior community residential, shall install Energy Star or equivalent high-efficiency appliances (including clothes washers, dish washers, fans, and refrigerators).

~~This performance measure is consistent with the County's 2012 CAP Measure E3.~~

D.d. Use of Smart Meters

The Project design shall include the installation and use of Smart Meters. These meters provide utility customers with access to detailed energy use and cost information, pricing programs based on peak energy demand, and the ability to program home appliances and devices to respond to energy use preferences based on cost, comfort, and convenience. Smart meters increase awareness thus reducing energy cost and consumption.

3. Area Sources

The project includes the following performance measure related to area sources that limits the type of residential fireplaces.

Install only natural gas (no wood) fireplaces in residential uses

All ~~future implementing residential phases projects~~ intending to install fireplaces, including single-family residential, mixed-use residential, and senior community residential, shall install only natural gas or equivalent non-wood burning fireplaces.

4. Water Conservation

The project includes the following performance measure related to water conservation that will additionally conserve energy use.

A. Reduce potable water consumption

B. All ~~phases future implementing projects~~ subject to Title 24 shall be designed to achieve a minimum 20 percent reduction in indoor/potable water demand and a 20 percent reduction in outdoor water use relative to baseline (2008 Title 24 Plumbing Code) indoor/outdoor water use.

5. Waste Diversion/Recycling

The project includes the following performance measure related to reducing solid waste disposal.

Reduce waste disposal/institute recycling and composting services

All ~~future implementing projects~~ shall implement recycling and composting services in order to achieve a 20 percent reduction in baseline waste disposal.

~~Additional Category – Plant Trees~~

~~The proposed project includes the planting of 35,000 trees. This measure would further reduce GHG emissions through carbon sequestration by the trees.~~

b. Specific Plan Siting and Design Measures

In addition to the above performance measures, required for ~~subsequent all projects~~phases, the design, density, mix of uses, and mobility network of the ~~project~~phase have the effect of reducing potential GHG emissions associated with vehicle use. The benefits of these project design ~~considerations aspects~~ in reducing VMT and GHG emissions have been quantified and demonstrated in the vehicle emissions discussion in ~~Chapter 5.0 of Appendix O.~~

1. Vehicle Miles Traveled

The project ~~S~~specific Plan includes the following locational design features related to VMT reduction.

A. Mixed-use Development

The project proposes to provide residential and resident-serving commercial and civic uses in a pedestrian-oriented mixed-use community where one does not currently exist. The non-residential uses include neighborhood-serving retail and restaurant uses, an elementary/middle school, church site, recreation center, neighborhood park, and a recycling buyback center~~RF~~. All of these uses are to be provided within one-half mile of residential uses.

~~This land use design feature is consistent with the County's 2012 CAP Measure LU1.~~

B. Walking and Biking Opportunities

The project proposes to provide a network of pedestrian and bicycle paths, in a complete and interconnected network, where currently there are very limited bicycling and pedestrian facilities. ~~This mobility network design feature is consistent with the County's 2012 CAP Measure T2.~~

C. Affordable Housing Density

The project includes 40 dwellings at a density of 20 du/ac that would provide opportunity for affordable housing as identified in the Regional Housing Needs Assessment. Affordable housing is associated with potentially decreased per-unit GHG emissions compared to average, due to lower rates of vehicle ownership and VMT.

c. Existing Regulations

In addition to the Specific Plan policies, performance measures, and project design features, the project's GHG emissions would also be reduced as a result of several existing statewide regulations: Pavley I and II, the LCFS, the RPS, and the Tire Pressure Program. These regulations mandate improved vehicle engine design and low-carbon vehicle fuels that will reduce GHG emissions associated with newer model vehicles, while the RPS promotes diversification of the state's electricity supply and decrease reliance on fossil fuel energy sources. As previously stated, certain regulations apply to the "unmitigated" and "mitigated" scenarios. The benefits of these regulations in reducing the project's vehicle and energy GHG emissions have been quantified and demonstrated in the vehicle and energy emissions discussion in Appendix O.

d. County Green-Building and Energy Efficiency Research

The County is currently conducting research on the financial implications of pre-wiring buildings for technologies such as roof-top solar and electrical vehicle charging stations during initial construction versus retrofitting for these technologies at a later date (County of San Diego 2014). The research will also consider technologies such as solar water heating and water recirculation systems. The project design features will reflect the updates made to the building code as a result of the County's ongoing research on green-building and energy efficiency.

e. Enforcement1. Subsequent Phase Conformance Review

~~With the exception of Phase I, the project is a larger discretionary project that will include permits for subsequent development phases/proposals, such as site plans, demolition and grading permits, building permits, and final occupancy permits. Future development phases/proposals within the project Specific Plan area will be reviewed by the County for conformance with the Specific Plan and Final EIR. This subsequent project phase-level review process will include review of individual phase/project submittal materials for compliance with all relevant phase/project Specific Plan policies and design guidelines, including the performance measures outlined in Appendix O the GHG technical study (RECON 2013f), that serve to~~

reduce GHG emissions. ~~All subsequent phases~~ projects would have future GHG emissions reduction enforced through the conditions of approval ~~the project permits~~.

For example, the condition to use minimum Tier III construction equipment would be recorded on the demolition/grading permits and construction drawings, and incorporated into the construction contract. The construction contractor shall be responsible for implementing this requirement during construction. The County Building Official shall verify that the construction drawings have incorporated the minimum Tier III recommendations and would not issue a grading or building permit prior to this determination.

Energy efficiency and water conservation measures would also be conditioned on the building permits and construction drawings and compliance would be demonstrated through the standard Title 24 compliance reporting process.

For example, as a condition of building permit approval, the ~~project's~~ construction plans and specifications shall indicate in the general notes or individual detail drawings the design features, product specifications and methods of construction and installation that are required to surpass the 2008 Title 24 Energy Efficiency Standards by a minimum of 30 percent. Verification of increased energy efficiencies shall be demonstrated based on a performance approach, using a CEC-approved energy compliance software program, in the Title 24 Compliance Reports provided by the ~~project~~ applicant to the County prior to issuance of the building permit.

Prior to issuance of a final certificate of occupancy, the energy features shall undergo independent third party inspection and diagnostics as part of the verification and commissioning process; with compliance verified by the County's Building Official. Additional inspections may be conducted as needed to ensure compliance, and during the course of construction and following completion of the phase ~~project~~, the County may require the applicant to provide information and documents showing use of products, equipment and materials specified on the permitted plans and documents.

Typically, improved Title 24 energy efficiency is accomplished through improved HVAC systems and duct seals; enhanced ceiling, attic and wall insulation; energy-efficient three-coat stucco exteriors; energy-efficient lighting systems; and high-efficiency window glazing. Similarly, water conservation in building design is typically accomplished through advanced plumbing systems such as parallel hot water piping or hot water recirculation systems, and fixtures such as ultra-low flow toilets, water-saving showerheads and kitchen faucets, ~~and buyer-optional high-efficiency clothes washers~~. These can also ~~can also~~ be conditioned on the permits and evaluated through the standard Title 24 compliance reporting process. For example, to comply with the current Title 24 performance measure, ~~the overall use of potable water within each structure must be reduced by 20 percent. In accordance with Title 24 criteria, this percent reduction in potable water use must be demonstrated by verifying each plumbing fixture and fitting meets the 20 percent-reduced flow rate or by calculating a 20 percent reduction in the building water use baseline through standardized compliance reporting forms and worksheets.~~

2. Alternate Compliance Mechanism

Due to technological advancements related to environmental engineering and design, the changing regulatory environment, and more precise GHG modeling of specific project-level detail, as well as improvements in GHG modeling software/methodology, the menu and intensity of the required GHG-reducing design features modeled in this analysis may not be needed at the individual project level to meet the County's efficiency threshold or other applicable GHG reduction goal. Specifically, because of the continued advancement of technology in regard to building energy efficiencies, water reduction methods, and other GHG-reducing measures and state requirements, the GHG reductions outlined in Appendix O could potentially be met by alternative methods not known at this time. Therefore, as an alternative to the identified GHG-reducing Specific Plan policies and design standards, the following study may be conducted to verify the adequacy of GHG reductions:

Prior to the issuance of building permits, the project shall demonstrate that by incorporating other GHG reducing measures (see Table 1-3) it would meet the County's GHG reduction goals at that time.

Issue 2: Conformance to Applicable Plan, Policy, or Regulation

Guidelines for the Determination of Significance

According to the County ~~Draft~~ Guidelines, a project would have a significant impact if it would conflict with an applicable plan, policy, or regulation that was adopted for the purpose of reducing the emissions of greenhouse gases.

Analysis

~~The County's CAP, approved in June 2012, addresses issues of growth and climate change relevant to the County. Specifically, the CAP is designed to mitigate impacts of climate change by achieving meaningful GHG reductions within the County, consistent with AB 32, EO S-3-05, and SB 97. The CAP provides the overall framework for assessing significance and demonstrates a range of feasible reduction measures that can be implemented to achieve an overall reduction target that is supportive of the state-mandated reduction targets embodied in AB 32, EO S-3-05 and SB 97. Project type-specific implementing thresholds are included in the County Draft Guidelines in order to allow projects to clearly demonstrate compliance with the CAP and the County's GHG emission reduction target (County 2012b, page 23).~~

The project with its project design features, demonstrates compliance with the relevant County Performance Threshold, as identified in the County ~~Draft~~ Guidelines. The project is also consistent with the County's CAP and the CAP compliance checklist (see GHG technical study attachments, Appendix O) and General Plan Policies and, by extension, AB 32 and the Climate Change Scoping Plan (including the Scoping Plan's GHG reduction measures). Specifically, by achieving the Performance Threshold and exceeding the 16 percent reduction in emissions (19.3 percent), the project not only complies with the County's GHG significance threshold per CEQA, but complies with the County CAP reduction target General Plan Policies. The project achieves this by incorporating design features, listed above, that are consistent with applicable CAP

measures General Plan Policies and with the GHG reduction strategies of the AB 32/Scoping Plan and other relevant plans and regulations adopted for the purpose of reducing GHG emissions. For a complete discussion of the project's consistency with all General Plan policies, refer to Appendix W.

The County's General Plan incorporates smart growth and land planning principles intended to reduce VMT, and thus a reduction of GHGs. The General Plan aims to accomplish this by locating future development within and near existing infrastructure. Although the project would require a rezone to comply with the County General Plan, the project would be consistent with these smart growth principles by including a wide variety of land uses (e.g., mixed residential, commercial, civic services, recreational facilities, schools, and various other land uses), thus locating many amenities in close proximity to residents and commercial land uses which in turn promotes walkability and shorter vehicle trips for conducting daily activities, thus reducing operational vehicular GHG emissions.

The project includes several GHG-reducing design features that comply with CAP measures and AB 32/Scoping Plan strategies. These include land use mix/density measures per CAP measure LU1, neighborhood walkability per CAP measure T2, energy efficiency measures per CAP measures E1 and E3, the use of Smart Meters per CAP measure E4, and an additional category of planting trees per CAP measure LS1. As previously mentioned, the tree planting emission reductions are not included in the 19.3 percent reduction and are anticipated to achieve additional reductions. The project also additionally includes several water conservation, waste reduction, area source, and other design measures that result in reducing GHG emissions. For example, by increasing density and diversity (mixed-use), improving walkability design, and integrating below market-rate housing opportunities, the project reduces its GHG emissions associated with vehicle use and VMT. By establishing minimum building energy efficiency and water and waste conservation standards, the project reduces its GHG emissions associated with the production of energy needed to supply building occupancy, water use and waste disposal energy needs. Through the incorporation of the design measures described above, potential impacts associated with a plan or policy would thus be **less than significant**.

Through the incorporation of these project features, GHG emissions would be reduced to below threshold levels. Impacts would be consistent with applicable plans and policies. Impacts would thus be **less than significant**.

SB 375 and 2050 RTP / SCS

In accordance with CEQA Guidelines Section 15064.4(b)(3), this analysis considers "the extent to which the project complies with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of [GHG] emissions." In assessing the project's significance, reference is made to SB 375 and the 2050 RTP/SCS adopted by SANDAG.

As previously discussed, SB 375 requires the regional transportation plan for regions of the state with a MPO to adopt an SCS, as part of its regional transportation plan, to achieve certain goals for the reduction of greenhouse gas emissions from automobiles and light trucks in a region (State of California 2008). CARB's adopted targets for the region's MPO, SANDAG, include a 7 percent per capita reduction in emissions by 2020

and a 13 percent per capita reduction by 2035. The SANDAG 2050 RTP/SCS Plan is expected to result in regional per capita GHG emission reductions of 14 percent by 2020 and 13 percent by 2035, thereby reaching the goals established by CARB (SANDAG 2013). The elements of the 2050 RTP/SCS plan that contribute to the GHG reductions are large investments in transit, new light rail and bus rapid transit services and transportation system management. CARB issued EO G-11-114, stating its acceptance of the GHG quantification determination in the final 2050 RTP/SCS plan, thereby acknowledging that the RTP/SCS Plan, if implemented, would meet the targets that CARB established for the region for 2020 and 2035 (CARB 2011c).

SANDAG identified performance metrics and trends to explain and confirm the GHG reduction benefits of the SCS (SANDAG 2013). These include 80 percent of new housing located within a half-mile of transit stations by 2035, 64 percent of all housing will be within a half-mile of transit stations, along with decreasing per capita vehicle miles (SANDAG 2013). The project would be in-line with the SCS GHG benefits as the project would support and/or provide a range of housing types, services and jobs in a compact pattern of development located within a half-mile (10-minute walk) from at least seven diverse neighborhood assets such as retail, services, civic facilities and jobs. This in turn, would reduce the size of required infrastructure improvements and the number and length of automobile trips. Additionally, the project trip lengths would be shorter from the project site than from within the Valley Center Community as identified in the County General Plan and SCS (Chen Ryan 2014).

The project requires less roadway infrastructure because of its compact design, which locates housing in close vicinity to commercial and public services, and its location one quarter mile from a regional transportation corridor, the I-15. The 2050 RTP lists the I-15 as a Regional Transit Corridor in 2020 and 2035. The 2050 RTP increases the transit role of the I-15, and lists the I-15 as a High Quality Transit Corridor in 2050, which is defined to have major transit stops with 15-minute peak period services (SANDAG 2011a).

Based on the project emissions analysis, the “mitigated” project would achieve a 14.8 percent reduction of vehicle emissions in 2020 and a 14.6 percent reduction in 2035, when compared to the “unmitigated” project. These vehicle emissions were modeled in CalEEMod for the proposed projects land uses and includes the same vehicles classes as those used in the SCS and to derive the SB 375 targets (CARB 2011d). Therefore, the GHG emissions percentage reductions associated with the project would exceed the CARB adopted targets for the SANDAG region for vehicle emissions reductions. These percentage reductions equate to a per capita reduction specifically for vehicle emissions. As referenced within the RTP/SCS environmental impact report (SANDAG 2011b), CARB had not developed a target for 2050, and no emissions percentage reduction was included for the year 2050 in the RTP.

In summary, the proposed project would not conflict with the objectives of SB 375 and the 2050 RTP/SCS. Potential impacts associated with plans or policies would thus be **less than significant.**

3.1.2.3 Conclusion

Project design features would reduce project emissions by 18.9 percent from the 2020 “unmitigated” scenario, which is above the 16 percent Performance Threshold

established for the year 2020 and in-line with the established methodology in AB 32 for reducing GHG emissions. There are likely to be advances in technology that cannot be accounted for now, as well as additional regulations that will enhance the reductions achieved at the state and federal levels in the post-2020 timeframe. The project would also exceed adopted targets for vehicle emissions reductions established for 2020 and 2035 in the 2050 RTP/SCS, when comparing the “unmitigated” project to the “mitigated” project. Based on current regulation, impacts associated with the project’s contribution to cumulative GHG emissions would thus be considered **less than significant**.

The project, complies with the Performance Threshold, and, is consistent with the General Plan Policies for reducing GHG emissions, the state’s AB 32 Global Warming Solutions Act, the 2050 RTP/SCS, and the 2008 Climate Change Scoping Plan. Potential impacts associated with plan or policy conflict would thus be **less than significant**.

~~Project design features would reduce project emissions by 19.3 percent, which is above and beyond the 16 percent Performance Threshold established by the County. Impacts associated with the project’s contribution to cumulative GHG emissions would thus be less than significant.~~

~~The project with its project design features, demonstrates compliance with the relevant County Performance Threshold, as identified in the County Draft Guidelines. The project is also consistent with the County’s CAP and the CAP compliance checklist and, by extension, the state’s AB 32 Global Warming Solutions Act and the Climate Change Scoping Plan. Impacts associated with plan or policy conflict would thus be less than significant.~~

3.1.3 Hydrology and Water Quality

This subchapter describes existing groundwater, surface water, water quality, storm water, and flooding conditions within the project area and evaluates potential impacts to hydrology and water quality that could result from implementation of the project. A Storm Water Management Plan (Major SWMP) for the Master TM (Landmark Consulting 2013a) and Implementing TM (Landmark Consulting 2013b), a Preliminary Drainage Study for the Master TM (Landmark Consulting 2013c) and Implementing TM (Landmark Consulting 2013d), and a Hydromodification Management Plan (HMP) (Landmark Consulting 2013e) were prepared for the project to evaluate hydrological and water quality issues. The studies are attached to the EIR as Appendices U-1, U-2, and U-3, respectively. Additionally, a Preliminary Hydrogeologic Assessment was prepared to evaluate groundwater production at on-site wells (Wiedlin & Associates 2012 Appendix P). This study is attached to the EIR as Appendix P. These studies, along with other applicable information, are summarized below.

3.1.3.1 Existing Conditions

Regulatory Setting

Federal Water Pollution Control Act (also known as Clean Water Act)

The Clean Water Act (CWA), enacted in 1972, is intended to restore and maintain the integrity of the nation's water through a system of water quality standards, discharge limitations, and permits. The fundamental purpose of the CWA is the protection of designated beneficial uses of water resources. The amendment of the CWA in 1987 includes a provision prohibiting discharges of pollutants contained in storm water runoff and requires many cities to obtain a NPDES permit to control urban and storm water runoff.

Section 303(d) of the CWA defines water quality standards as consisting of both the uses of surface waters (beneficial uses) and the water quality criteria applied to protect those uses (water quality objectives). State and regional water quality control boards have been charged with ensuring that beneficial uses and water quality objectives are established for all waters of the state.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) is the primary agency in charge of administering programs and coordinating with communities to establish effective flood plain management standards. FEMA is responsible for delineating areas of flood hazards. It is then the responsibility of state and local agencies to implement the means of carrying out FEMA requirements. The project site is not located within a mapped flood hazard area.

Porter-Cologne Water Quality Control Act

This act, which is a portion of the State Water Code, establishes responsibilities and authorities of the state's RWQCB. Each RWQCB is directed to adopt water quality control plans for the waters of an area to include identification of beneficial uses,

objectives to protect those uses, and an implementation plan to accomplish the objectives.

San Diego Basin Plan

The Basin Plan for the San Diego Basin, most recently amended in 2007, sets forth water quality objectives. Specifically, the Basin Plan is designed to accomplish the following: (1) designate beneficial uses for surface and ground waters; (2) set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's anti-degradation policy; (3) describe mitigation measures to protect the beneficial uses of all waters within the region; and (4) describe surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan. The Basin Plan incorporates by reference all applicable State Water Resource Control Board (SWRCB) and RWQCB plans and policies.

Colorado River Basin Plan

Similar to the San Diego Region Basin Plan, the Colorado River Basin Plan (adopted in 2006) sets forth water quality objectives for constituents that could potentially cause an adverse effect or impact on the beneficial uses of water. Specifically, the Colorado River Basin Plan lists and defines the various beneficial water uses of water bodies within its boundaries, describes the water quality which must be maintained to support such uses, describes programs, projects and other actions which are necessary to achieve the standards established in the plan and summarizes the various plans and policies which protect water quality.

County of San Diego Watershed Protection, Storm Water Management, and Discharge Control Ordinance

The County of San Diego Watershed Protection, Storm Water Management, and Discharge Control Ordinance (WPO) contains discharge prohibitions and requirements that vary depending on type of land use activity proposed and location within the County. The intent of the WPO is to protect water resources and improve water quality through the uses of management practices aimed at reducing polluted runoff.

San Diego Groundwater Ordinance

The County currently manages anticipated future groundwater demand through the County Groundwater Ordinance. This Ordinance does not limit the number of wells or the amount of groundwater extraction from existing landowners. However, the ordinance does identify specific measures to mitigate potential groundwater impacts of projects requiring specified discretionary permits.

San Diego General Plan - Land Use Element

The Land Use Element provides a framework to accommodate future development in an efficient and sustainable manner that is compatible with the character of unincorporated communities and the protection of valuable and sensitive natural resources. The Land Use Element includes goals and implementing policies listed below that are generally relevant to hydrology and water quality.

GOAL LU-6

Developmental Balance. Balance of development with the natural environment, scarce resources, natural hazards, and the unique local character of individual communities.

Policies

LU-6.5 Sustainable Storm Water Management. Ensure sustainable storm water management through the minimization and the use of impervious surfaces. Require the incorporation of LID techniques, as well as a combination of site design, source control, and storm water BMPs where applicable, as additional means to manage storm water runoff.

San Diego General Plan - Conservation and Open Space Element

A primary focus of the Conservation and Open Space Element is to provide direction to future growth and development in the County with respect to the conservation, management, and utilization of natural resources.

GOAL COS-4

Long-Term Viability of Water Supply. Achievement of long-term viability of the County's water quality and supply through balanced and regionally integrated water management.

Policies

COS-4.3 Storm Water Filtration. Require maximizing storm water filtration through the use of natural drainage patterns.

GOAL COS-5

Maintaining of High Quality Water Resources. Protection of local reservoirs, watersheds, aquifer-recharge areas, and natural drainage system in order to maintain high-quality water resources.

Policies

COS-5.2 Minimizing Impervious Surfaces. Require development to minimize the use of impervious surfaces.

San Diego General Plan - Safety Element

The purpose of the Safety Element is to include safety considerations in the planning and decision-making process by establishing policies related to future development that will minimize the risk of personal injury, loss of life, property damage, and environmental damage associated with natural and man-made hazards.

GOAL S-9

Reduced Flood Hazards. Minimized personal injury and property damage from flood events.

Policies

S-9.1 Managing Development via Floodplain Maps. Manage development based on federal floodplain maps.

S-9.2 Minimizing Floodplain Development. Minimize new development in floodplains.

S-9.3 Siting Development to Minimize Flood Hazards. Require new development within mapped flood hazard areas to be sited and designed to minimize on-site and off-site flooding hazards.

GOAL S-10

Accommodation of Flood Events. Ensure that floodways and floodplains have acceptable capacity to accommodate flood events.

Policies

S-10.1 Limiting Land Uses Within Floodways. Limit new or expanded land uses within floodways. Supports this goal by limiting new or expanded land uses within floodways.

S-10.2 Using Natural Channels. Require the use of natural channels for County flood control facilities.

S-10.3 Effectively Operating Flood Control Facilities. Require flood control facilities to be adequately sized, constructed, and maintained to operate effectively.

S-10.4 Minimizing Storm Water Impacts. Require new development to minimize storm water impacts.

S-10.5 Improving Drainage Facilities. Require new development to provide necessary on-site and off-site improvements to storm water runoff and drainage facilities.

S-10.6 Maintaining Existing Hydrology. Require new development to maintain existing area hydrology.

Project Site Conditions

The project site is located within the San Luis Rey River Hydrologic Area (903) and the San Luis Rey River Hydrologic Subarea (903.11). ~~Most of t~~The site is located within an single watershed of approximately 15,350,373 acres watershed. The local watershed elevations range from approximately 1,200 feet MSL east of the site to approximately 300 feet MSL downstream of the site. Surface water generally flows southward to Moosa Canyon. From Moosa Canyon, water generally flows northwestward approximately four miles to the San Luis Rey River.

Groundwater Geology

Pursuant to the County's 30-Year Annual Rainfall Map, average annual rainfall for the local watershed is between 15 and 18 inches per year (~~Wiedlin & Associates 2012~~see Appendix P). Evapotranspiration is the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant

tissues). It is an indicator of how much water is needed for healthy plant growth and productivity. Estimates of evapotranspiration can be computed as part of assessments of groundwater resources.

According to the Preliminary Hydrogeologic Assessment, the project site falls within two evapotranspiration zones: Zone 6 and Zone 16. Annual reference evapotranspiration for Zone 6 and Zone 16 are 49.7 inches and 62.5 inches, respectively (~~Wiedlin & Associates 2012~~ see Appendix P).

The County overlies a complex groundwater resource that varies greatly throughout the region. The County has three general categories of aquifers that include fractured rock aquifers, alluvial and sedimentary aquifers, and desert basin aquifers. The project site is underlain by Mesozoic Era granitic rocks. Therefore, groundwater flow and storage is principally via the first of these categories, fractured rock aquifer.

Fractured rock aquifers typically have much less storage capacity than alluvial or sedimentary aquifers. As a result, pumping from wells completed in fractured rock typically produces a greater decline in water levels than a similar pumping rate for wells located in alluvium or sediments. Likewise, because less water is typically stored in fractured rock, seasonal variations in precipitation and drought conditions result in greater variations in water levels than in similar conditions in alluvial or sedimentary aquifers. However, overlying the fractured granitic rock is weathered granitic rock, also referred to as decomposed granite or residuum, which has some secondary porosity and therefore additional groundwater storage. Rock permeability within decomposed granite is typically relatively low. Overlying the granitic rocks, shallow alluvial sediment occurs within the drainages. The thickness and extent of the alluvial deposits have not been evaluated.

An on-site well inventory was developed by the Preliminary Hydrogeologic Assessment (~~Wiedlin & Associates 2012~~ Appendix P). Ten groundwater production wells currently exist on-site; nine are operational, with six main wells (described below) that serve four main agricultural areas identified as Zosa (Wells 1 and 2), Rahimi (Well 1), Flower Farm (Wells 1 and 2), and Dove Trail (Well 1).

The locations of the 10 groundwater production wells are identified on Figure 3.1-1. Six of the nine active wells have at least a five-year operational history, and the remaining active wells have a 16-month to two-year history of operation. Available flow meter data recorded over the past two to eight months, if extrapolated to an annual rate, suggests that the wells may produce on the order of 200 ac-ft of groundwater per year. This extrapolation should be relied upon only as an initial indication of the production capacity at the site and provides a point of comparison for the groundwater production estimate based on irrigation demand and VCMWD deliveries.

Groundwater production estimates were developed on-site at four areas that have been served for at least five years by water wells ~~by comparing the difference between the estimated annual irrigation demand at the properties to the volume of VCMWD water delivered to the properties annually~~. This analysis suggests that the water wells with at least a five-year history of activity may have produced, on average, approximately 191 ac-ft per year.

Limited groundwater quality testing was included as part of the Hydrogeologic Assessment prepared for the project (~~Wiedlin & Associates 2012~~ see Appendix P). Groundwater samples were tested specifically for ionization, pH, electrical conductivity (to determine total dissolved solids [TDS]), and chloride levels. Results showed that TDS concentrations ranged from 1,408 to 1,857 milligrams per liter and chloride ranged from 312 to 511 milligrams per liter; a range considered high for irrigation, but not considered prohibitive for irrigation, especially if blended with potable water from VCMWD. Sodium was detected at 300 milligrams per liter.

Surface Water Hydrology/Water Quality

~~The project site is situated within the San Luis Rey River Watershed (903). The San Diego Basin Plan lists the Lower San Luis Rey Hydrologic Unit beneficial surface uses as: municipal and domestic supply, agricultural supply, industrial service supply, hydropower generation, freshwater replacement, contact water recreation, warm freshwater habitat, cold freshwater habitat, and rare, threatened, or endangered habitat.~~

In the existing conditions, there are three sub-basins on the project site—the northerly, central, and southerly sub-basins. The northerly sub-basin (Basin 100) drains southwesterly along a web of natural drainage channels and into a major natural channel along the westerly project boundary. The central sub-basin (Basin 200) also drains southwesterly and into the same westerly natural channel along the westerly project boundary, approximately 1,000 feet southerly of the discharge point from the northerly sub-basin. The southerly sub-basin (Basin 300) drains westerly across the project site and into a tributary of the westerly natural channel (~~Landmark Consulting 2013c~~ see Appendix U-2).

Runoff from the project site drains into the San Luis Rey River, which ultimately outfalls into the Pacific Ocean. According to the 2006 CWA 303(d) List, the lower 19 miles of the San Luis Rey River is impaired for chloride and TDS. Chloride and TDS levels usually occur from urban runoff/storm sewers being introduced into water systems. The Pacific Ocean shoreline at the San Luis Rey River is impaired for bacteria, which usually occurs from animal wastes.

Storm Water Drainage Systems

The local storm water conveyance system is designed to prevent flooding by transporting water away from developed areas. Unfiltered and untreated storm water can contain a number of pollutants that may eventually flow to surface waters. The chief cause of urban storm water pollution is the discharge of inadequately treated waste or pollutants into the natural water system.

Pollutants discharged to surface water from an easily defined and identified single point are known as point source pollution. Point sources generally discharge predictable concentrations and volumes of pollutants. Non-point source pollution refers to diffuse, widespread cumulative sources of pollution that cannot be traced back to a single point or source and is the primary source of surface water and groundwater contamination. This kind of pollution is often a by-product of poor land use practices, which do not incorporate adequate BMPs, and could include runoff from urban, agricultural, or industrial areas; landscaping; roads; or improperly managed construction sites.

The project site is currently undeveloped. No storm drain systems, except for culverts currently in place to allow runoff to follow existing drainage channels, presently exist within the project site.

Flooding and Dam Inundation

Flooding is a general or temporary condition of partial or complete inundation of normally dry land areas. Flooding is commonly associated with the overflow of natural rivers or streams, but can also occur near storm water facilities, dams, or in low-lying areas not designed to carry water. Flooding can be induced by precipitation or as a result of increased rates and amounts of runoff and altered drainage patterns. Additionally, flooding could result from dam failure, seiches, or tsunamis. Dam inundation is flooding caused by the release of impounded water from structural failure or overtopping of a dam. Seiches or tsunamis can result from abrupt movements of large volumes of water due earthquakes, landslides, volcanic eruptions, meteoric impacts, or onshore slope failure. The project site is not located within a mapped floodplain or within a County Dam Inundation Zone.

3.1.3.2 Analysis of Project Effects and Determination of Significance

The project would result in a significant impact if it would:

1. *Water Quality Standards and Requirements*: Violate any water quality or wastewater discharge standards or requirements.
2. *Groundwater Supply and Recharge*: Deplete groundwater supplies or interfere with groundwater recharge.
3. *Erosion or Siltation/Flooding*: Alter drainage resulting in erosion or siltation.
4. *Exceed Capacity of Storm Water System*: Create or contribute runoff exceeding the capacity of storm water drainage systems
5. *Housing within 100-year Flood Hazard Area*: Place housing within a 100-year flood hazard area, or place structures within a 100-year flood hazard area impeding or redirecting flood flows.
6. *Dam Inundation*: Create a risk due to flooding as a result of the failure of a dam.
7. *Seiche, Tsunami and Mudflow*: Create a risk due to Seiche, Tsunami and/or Mudflow.

Issue 1: Water Quality Standards and Requirements

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant adverse environmental effect if the project would violate any water quality standards or waste discharge requirements.

Analysis

The following discussion of impacts is organized into two subsections: (1) short-term construction activities; and (2) long-term post-construction use.

Short-Term Construction Activities

Proposed grading, excavation, and construction activities associated with the project could create a substantial additional source of polluted runoff which could have short-term impacts on surface water quality. These activities could include demolition; clearing and grading; excavation; stockpiling of soils and materials; and other typical construction activities. Pollutants associated with construction would degrade water quality if they are washed into surface waters. Sediment is often the most common pollutant associated with construction sites because of the associated earth-moving activities and areas of exposed soil. Hydrocarbons such as fuels, asphalt materials, oils, and hazardous materials such as paints and concrete discharged from construction sites could also result in impacts downstream. Debris and trash could be washed into existing storm drainage channels to downstream surface waters. These activities could impact aquatic habitat, upland wildlife and aesthetic land values.

Under the NPDES permit program, BMPs are identified for construction sites greater than one acre, in order to reduce the occurrence of pollutants in surface water. In compliance with applicable construction permits and the County WPO, a Major SWMP has been developed for the project to identify a preliminary list of BMPs, which would be implemented as project design features, to minimize disturbance, protect slopes, reduce erosion, and limit or prevent various pollutants from entering surface water runoff. As detailed in the Major SWMP, the project's temporary construction BMPs could include the following: street sweeping, waste disposal, vehicle and equipment maintenance, concrete washout area, materials storage, minimization of hazardous materials and proper handling and storage of hazardous materials. Typical erosion and sediment control measures include: silt fences; fiber rolls; gravel bags; temporary desilting basins; velocity check dams; temporary ditches or swales; storm water inlet protection; and soil stabilization measures. Implementation of these measures, as project design features, would assure that short-term impacts from construction related activities would not violate any water quality standards or waste discharge requirements. Impacts would be **less than significant**.

Long-term Post Construction Uses

The potential to degrade surface water quality remains after the project is constructed, especially from non-point source pollutants. For example, sediment discharge due to post-construction areas left bare; nutrients from fertilizers; household hazardous waste that is improperly disposed of, including heavy metals and organic compounds; trash and debris deposited in drain inlets by new residents; oil and grease; by products resulting from vehicle use, including heavy metals; bacteria and viruses; and pesticides from landscaping, agriculture or home use. The NPDES permit program, as authorized by the CWA, controls water pollution by regulating point sources that discharge pollutants into waters of the U.S. Point sources which require a NPDES permit are discrete conveyances such as pipes or man-made ditches. The project's residential component would be connected to a municipal system, and would not need an NPDES permit; however, other project component parts such as WRF would be required to

obtain permits if their discharges go directly to surface waters and would be subject to BMPs and other requirements as conditions of approval to such permits.

Implementation of the project could also have the potential to contribute non-point source pollutants to surface water bodies in quantities that could violate water quality standards. The project's residential component could increase urban runoff containing oil, grease, metals, TDS, sediments, fertilizers, and pesticides. The project would comply with General Plan policies, including LU-6.5, requiring LID and BMPs to be included in the project's design. LID is an approach to land development that works with nature to manage storm water as close to its source as possible. Source Control BMPs are intended to avoid or minimize the introduction of pollutants into the storm drain and natural drainage systems by reducing the potential generation of the pollutant at the point of origin. Treatment Control BMPs infiltrate, treat, or filter runoff from developed areas.

Potential LID strategies, along with permanent source control BMPs and treatment BMPs that would reduce the potential adverse environmental impacts associated with non-point source pollution are detailed in the project's Major SWMP. A few examples are as follows:

- LID strategies include conservation of natural areas and preservation of significant trees.
- Source control BMPs include storm drain inlets identified and marked, "No Dumping"; landscaping design minimizes irrigation runoff and use of drought tolerant plants and trees.
- Treatment control BMPs include use of irrigation and bioretention in landscaped areas and detention basins designed to allow for maintenance of runoff increases due to the proposed development, throughout the project site.

In order to assure on-going operation of the storm water treatment BMPs, the Major SWMP provides a discussion of funding sources for long-term maintenance. Prior to the establishment of the assessment district, a Maintenance Agreement, consistent with County's Standard Urban Stormwater Mitigation Plan (SUSMP), would be executed for those BMPs for which it is required under the SUSMP. In addition, a developer fee would be paid to cover the initial maintenance period. Thereafter, the HOA would be responsible for the long-term maintenance of BMPs.

~~The project also proposes the use of permeable pavers as a design element for street construction in both commercial and residential development areas. The structural sections of the permeable pavers provide capacity to store runoff volume within the void spaces of the base material. Furthermore, during low intensity rain events where the runoff has the highest potential to carry pollutants, the permeable pavers offer additional storm water seepage to allow pollutants to have time to settle and be filtered through the base material. Pavers add an additional component to the storm water runoff treatment and would further enhance the runoff water quality leaving the project site. Details of the permeable pavers are discussed Addendum 1 to Appendices U-1, U-2 and U-3 of the EIR.~~

The project could contribute pollutants such as sediments, hydrocarbons and paints in quantities that have the potential to degrade surface water quality. While County policies and regulations are intended to protect water quality, specific measures that implement these policies and regulations are ~~proposed with~~included in the project's Major SWMP to ensure that the intended protections are achieved. As defined by the County's WPO, A Storm Water Pollution Prevention Plan (SWPPP) is a site-specific plan that identifies sources of pollutants and Storm Water Pollution Prevention Plan (SWPPP) would be required to be developed prior to construction pursuant to the NPDES General Permit and applicable County requirements. The SWPPP will identify~~provides~~ detailed measures~~site-specific BMPs~~ to prevent and control the off-site discharge of contaminants in storm water runoff. Through these design features, ~~including the use of permeable pavers,~~ the project would not result in the violation of any water quality standards or waste discharge requirements. Impacts associated with this issue would be **less than significant**.

Issue 2: Groundwater Supplies and Recharge

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant adverse environmental effect if the project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

In addition to the CEQA Appendix G guideline, above, the County identifies conditions that, if met, would be considered a significant impact to groundwater resources (San Diego County 2007i). These additional guidelines focus on groundwater quantity and the project's affect on groundwater storage, overdraft, and well interference. A significant impact would result if a soil moisture balance, or equivalent analysis, conducted using a minimum of 30 years of precipitation data, including drought periods, concludes that ~~at~~ any time groundwater in storage is reduced ~~to a level of~~by 50 percent or ~~less~~more as a result of groundwater extraction.

Analysis

Groundwater Depletion

As discussed above, it is extrapolated that the water wells produce, on average, approximately 191 ac-ft per year. The project's anticipated use of groundwater would not exceed the current use of 191 ac-ft. Any additional water demands would be fulfilled through the use of recycled water and imported potable water sources. As detailed in the WSA, Appendix Q of the EIR, water supplies necessary to serve the proposed project's needs have been accounted for in the VCMWD 2010 Urban Water Management Plan (UWMP) and it has been demonstrated that there would be sufficient potable water supplies to meet the project's demands. Subchapter 3.1.7 provides an additional discussion of redundancy and storage associated with the proposed project. Additionally, the PFAF from VCMWD, included in Appendix R of the EIR, indicates that facilities to serve the project would be available. Therefore, the project would not substantially deplete groundwater table levels. Impacts would be **less than significant**.

Groundwater Quality

A significant impact would result if groundwater resources proposed to be used as a potable water source exceeded state or federal maximum contaminant levels (MCLs).

The project proposes the use of groundwater, not to exceed 191 ac-ft per year, to supplement recycled water for irrigation during warm weather seasons. No use of groundwater to supplement potable water supplies is proposed. Therefore, **no impacts** associated with groundwater would occur.

Summary

The project would not result in significant impacts to groundwater levels or quality. The proposed use of groundwater for non-potable water use would not exceed that amount currently produced from on-site wells.

Issue 3: Erosion or Siltation/Flooding

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant adverse environmental effect if the project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

Analysis

The following discussion of impacts is organized into two subsections: (1) short-term construction activities and (2) long-term post construction use. Hydromodification refers to the changes in stream flows as a result of development such as increases in impervious areas, decreases in natural vegetation, and grading and compacting of soil, which could lead to impacts on the receiving waters in terms of erosion, sedimentation, and degradation of habitat.

Short-term Construction Activities

Project grading, excavation, and construction activities could increase the potential for erosion and sedimentation. Additionally, on-site use and storage of construction related hazardous materials could result in significant impacts to surface water quality if such materials reach downstream receiving waters.

As discussed above, a Major SWMP was prepared for the project providing a preliminary list of LIDs and BMPs as project design features to be employed during temporary construction activities. The implementation of these features would avoid erosion and water quality impacts by minimizing site disturbance during construction. Impacts would be **less than significant**.

Long-term Post Construction Uses

The project includes the construction of roadways, single-family residences, mixed-use residences, commercial uses, parks, a school, a WRF, and an on-site RF. These new uses could result in permanent alterations to existing drainage patterns by converting areas to impervious surfaces. Allowing the permanent development of impervious surfaces could increase runoff and potentially result in new or the worsening of existing erosion problems. State and local regulations including the NPDES which requires the development of a hydromodification management plan and a storm water management plan and the County WPO, assure that the project would account for such alterations in drainage. The project would be required to show conformance to the County's General Plan. Specifically, Policies LU-6.5 and COS 5.3 requires new development to use LID techniques, and BMPs into project designs. Table 1-3, Hydrology and Water Quality, identifies all potential Site Design BMPs, LID requirements, Source Control BMPs, and Treatment Control BMPs as detailed in the Major SWMP prepared for the project. Additionally, Policy S-10.6 requires new development to maintain existing area hydrology. As detailed in the project's hydrology studies, the project has developed a comprehensive drainage plan (see below) as a means to reduce and slow increased project runoff and maintain on-site hydrology. On-site riparian areas are further protected from long-term runoff on-site through dedicated buffers and open space easements intended to preserve the integrity of wetland vegetation (see subchapter 2.5, Biological Resources).

The project's HMP drainage study provides calculations of anticipated increases of flow volumes and the HMP identifies the hydromodification measures to be employed by the project to reduce and eliminate potential impacts to receiving waters. Adding all grading limits and fire management buffer areas, the total disturbed area would be approximately 505.3 acres.

The proposed impervious areas are estimates based on the lot size, where the areas within each type's building envelop are assumed to be impervious. The roadway areas are calculated based on the measure length and width of the roads along with the length of proposed sidewalks. The impervious areas of mixed-use residences, Town Centers, and school is based on the lot size and projected impervious percentage – 70 percent impervious for mixed-use, 80 percent for Town Centers, and 90 percent for commercial and institutional areas. Pursuant to the Appendix U-2 (Drainage Study), runoff volumes within each on-site sub-basin would be affected at the point of discharge as shown in Table 3.1-96.

**TABLE 3.1-96
RUNOFF VOLUMES**

	Basin 100	Basin 200	Basin 300
Pre-development	320.2 ac-ft	267.3 ac-ft	123 ac-ft
Post Development	345.3 ac-ft	249.4 ac-ft	132.9 ac-ft

ac-ft = acre-feet.

Under post-development conditions, the project design includes hydromodification mitigation ponds (also known as detention ponds) within each of the three sub-basins to alleviate mitigate the anticipated excess runoff volume increases as a result of the

increase in impervious areas. The proposed ponds are designed for placement within each sub-basin and are adequately sized to store all the excessive runoff. Their The pond outlet structures, which would include an emergency outflow component and riprap at the discharge point, would be sized to restrict the peak runoff rate exiting these ponds at or below that of under the pre-development conditions for both the ultimate 100-year storm event and the hydromodification compliant runoff from the 2-year to the 10-year events. Specifically, detention ponds with in the volumes of 26.0 ac-ft, 2.77 ac-ft (for hydromodification only), and 10.0 ac-ft would be provided for sub-basins 100, 200, and 300, respectively, (a total of 38.77 ac-ft) are included in the project design. The location and required sizes of the detention basins are identified on the project's Land Use Plan, Figure 1-4. Through implementation of these design features, the proposed development would have a **less than significant impact** on downstream drainage facilities.

As discussed in Attachment 1 of Appendices U-1, U-2, and U-3 of the EIR, advancements in technology have created new choices in the enhancement of storm water treatment capabilities and facilities. Specifically, both rainwater capturing and the use of permeable pavers could result in the further reduction of a project's hydrologic footprint. Capturing rainwater before it becomes storm water not only decreases the amount of storm water that needs to be treated, it also decreases the amount of water that would otherwise run off the land into local streams. Permeable pavers are a concrete pavement alternative that is comprised of bricks separated by joints filled with small stones. Water enters joints between solid concrete pavers and flows through an "open-graded" base allowing storm water capture and a reduction of runoff.

The project's Specific Plan would allow the use of rainwater capturing and permeable pavers as design elements for construction in both commercial and residential development areas. These design elements would be implemented in addition to those already considered in the analysis discussed above as an option to reduce the sizes of the proposed detention basins. As proposed, the three detention basins would provide adequate storm water storage. According to the Conceptual Rain Water Retention and Permeable Paver Analysis dated March 28, 2013 (Attachment 1 of Appendices U-1, U-2 and U-3 of the EIR), the use of rain barrels bioretention areas around each home could offer approximately 23.1 ac-ft of storage volume for runoff. The placement of 23 acres of permeable pavers would offer an additional 23.0 ac-ft of storage volume. If all three methods were used, a total potential storage volume could be up to 46.1 ac-ft. This could allow a reduction or removal of the detention basins for storm water retention purposes.

Summary

The project could result in the alteration of drainage patterns in a manner which could result in substantial erosion or siltation, or flooding due to excess runoff, on or off-site. County policies and regulations are intended to reduce adverse effects associated with excessive erosion or siltation. Specific project features that implement these policies and regulations are included in the project design to ensure that the intended environmental protections are achieved. These include the features identified in the Major SWMP, Drainage Study, and HMP discussed above and detailed in Appendices U-1, U-2 and U-3, respectively. The Drainage Study, Major SWMP and HMP concluded that the incorporation of the requisite LIDs, BMPs and hydromodification design features, including detention basins and sediment traps, would reduce impacts associated with excessive erosion or siltation, and flooding, on- or off-site flooding to less than

significant. The future use of rainwater capturing and permeable pavers as design elements could provide additional or alternative measures to the use of the proposed detention basins.

Issue 4: Exceed Capacity of Storm Water System

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant impact if it would create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

Analysis

Drainage facilities including storm drains, culverts, inlets, channels, curbs, roads, or other such structures are designed to prevent flooding by collecting storm water runoff and directing flows to either the natural drainage course and/or away from urban development. If drainage facilities are not adequately designed, built, or properly maintained, the capacity of the existing facilities can be exceeded and result in flooding and increased sources of polluted runoff. As discussed above, implementation of the project could have the potential to substantially alter drainages and hydrology, during construction and post-construction activities, which would potentially increase runoff in volumes that could exceed the existing storm water drainage systems. Additionally, build-out of the project would increase the amount of impermeable surfaces throughout and potentially result in an excess of polluted runoff that would exceed the capacity of existing drainage facilities.

Compliance with General Plan policies assures that new developments reduce their potential to exceed storm water drainage systems. Specifically, Policies S-10.4 and S-10.5 require new development to minimize storm water impacts and provide necessary on-site and off-site improvements to storm water runoff and drainage facilities. Table 1-3, Hydrology and Water Quality, identifies all potential Site Design BMPs, LID requirements, Source Control BMPs and Treatment Control BMPs as detailed in the Major SWMP prepared for the project.

In conformance with these policies the project has developed a comprehensive drainage plan. As shown in Figure 1-13, runoff is directed from natural channels ~~to~~ through development areas, collected at specified points, and released into existing drainage courses as it exits the development footprint. As discussed above, the placement of detention basins as a means to reduce and slow increased runoff would ensure that impacts associated with the exceedance of storm water drainage system capacity would be **less than significant**.

Issue 5: Housing within 100-year Flood Hazard Area

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant adverse environmental effect if the a-project would place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate

Map or other flood hazard delineation map, or place within a 100-year flood hazard area structures which would impede or redirect flood flows.

Analysis

Flooding can inundate and cause water damage to structures, bury structures, knock them off their foundations, or completely destroy them by the impact of high velocity water and debris, which can include sizable boulders. Additionally, development along stream channels and floodplains can alter the capacity of a channel to convey water resulting in the inundation of a larger area upstream. Impacts resulting from flooding include the loss of life and/or property; health and safety hazards; disruption of commerce, water, power, and telecommunications services; loss of agricultural lands; and infrastructure damage.

The project site is not within a mapped flood hazard area. Therefore, development of the project would not result in the placement of housing within flood hazard area. Project impacts associated with housing in flood hazard areas would be **less than significant**.

Issue 6: Dam Inundation

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

Analysis

There are approximately 31 dams throughout the County that pose potential inundation risk in the event of a breach or failure. The project site is located near Keyes Creek; however, it is outside the mapped inundation zone. Therefore, project impacts associated with housing in flood hazard areas would be **less than significant**.

Issue 7: Seiche, Tsunami, and Mudflow

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant adverse environmental effect if the project would expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow.

Analysis

A tsunami is a very large ocean wave caused by an underwater earthquake or volcanic eruption. Tsunamis can cause flooding to coastlines and inland areas less than 50 feet above sea level and within one mile of the shoreline. The project site is not located within an area subject to tsunami, and **no** impacts associated with this type of event would occur.

A seiche is a standing wave in a completely or partially enclosed body of water. Areas located along the shoreline of a lake or reservoir are susceptible to inundation by a seiche. The project site is not located within an area subject to ~~tsunamis~~seiche, and no impacts associated with this type of event would occur.

Debris flows, also known as mudflows, are shallow water-saturated landslides that travel rapidly down slopes carrying rocks, brush, and other debris. A mudflow occurs naturally as a result of heavy rainfall on a slope that contains loose soil or debris. Compliance with County General Plan Policies S-8.1 and S-8.2 prohibits development from contributing or causing slope instability. The project includes design measures, detailed in Table 1-3, Geology and Soils, that would reduce soil erosion. The application of these measures especially during construction and landscaping would assure the project's adherence to the General Plan policies. Therefore, land uses and development would not occur in areas considered susceptible to mudflows. Impacts would be **less than significant**.

3.1.3.3 Cumulative Impact Analysis

The geographic scope of the cumulative impact analysis for hydrology and water quality generally includes drainage basins, watersheds, water bodies or groundwater basins, depending on the location of the potential impact and its tributary area. The project's cumulative study area is the sub-basin of the San Luis Rey River Hydrologic Area within which the project is located.

Water Quality Standards and Requirements

Construction and development associated with cumulative projects, such as those identified in subchapter 1.8 could contribute both point and non-point source pollutants to downstream receiving waters resulting in violations of water quality standards. However, development and construction proposed under most cumulative projects would be subject to regulations that require the inclusion of project design features ensuring compliance with water quality standards, including the CWA, Porter-Cologne Water Quality Control Act, NPDES, applicable basin plans, and local regulations and policies.

As discussed above, the project would have a less than significant impact to water quality standards or waste discharge requirement violations due to its inclusion of project design features such as LID strategies and storm water BMPs. Therefore, the project, in combination with the identified cumulative projects, would have a **less than significant cumulative impact** associated with water quality standards and requirements.

Groundwater Supplies and Recharge

Groundwater extraction, proposed by the project to supplement potable and recycled water use for irrigation, ~~would not~~is not anticipated to exceed the current amount of withdrawal from active on-site wells (191 ac-ft/year). The project would not result in any impact to either groundwater depletion or withdrawal, and therefore, **would not contribute to a cumulatively considerable impact**.

Erosion or Siltation/Flooding

Cumulative projects identified in this analysis would result in multiple developments that could potentially alter existing drainage patterns in a manner that could result in substantial erosion, siltation or on or off-site flooding. It is reasonably foreseeable that some cumulative projects would occur simultaneously, which would compound the impacts. Cumulative projects could be expected to increase impervious surfaces within the area; however, like the project, each project within the cumulative project area would be required to conform to the same regulations and policies including the County's General Plan and WPO, resulting in each project's reduction of potentially polluted runoff during and after construction. Additionally, each project would be required to prepare a SWMP, hydrology report, and HMP report to show how each would maintain pre-development discharge rates and volumes of runoff.

The project includes design features, including construction BMPs, storm water LID and BMPs, and hydromodification/detention basins that would ~~avoid~~ eliminate potential erosion, siltation and flooding impacts or reduce such impacts to less than significant levels. Therefore, the project, in combination with the identified cumulative projects, would have a **less than significant cumulative impact** associated with erosion, siltation, and flooding on- and off-site.

Exceed Capacity of Storm Water System

Impermeable surfaces, constructed with cumulative projects, could contribute substantial quantities of runoff which could exceed the capacity of existing storm water drainage systems, while contributing to substantial additional sources of polluted runoff. However, the majority of cumulative projects would be subject to CEQA review, and local regulations, including the County's General Plan and WPO, -that require development to construct storm water drainage systems so that they would not cause flooding. Therefore, the project, in combination with the identified cumulative projects, **would not contribute to a significant cumulative impact** associated with the capacity of storm water systems.

Housing within 100-year Flood Hazard Area

It is expected that cumulative projects would be required to comply with applicable regulations that would prevent the construction of structures in floodways and floodplains. Therefore, through regulation, a cumulative impact would not occur. The project would not place any structures within a 100-year floodplain; therefore, in combination with the identified cumulative projects, **would not result in a cumulatively considerable impact** associated with impeding or redirecting flood flows.

Dam Inundation

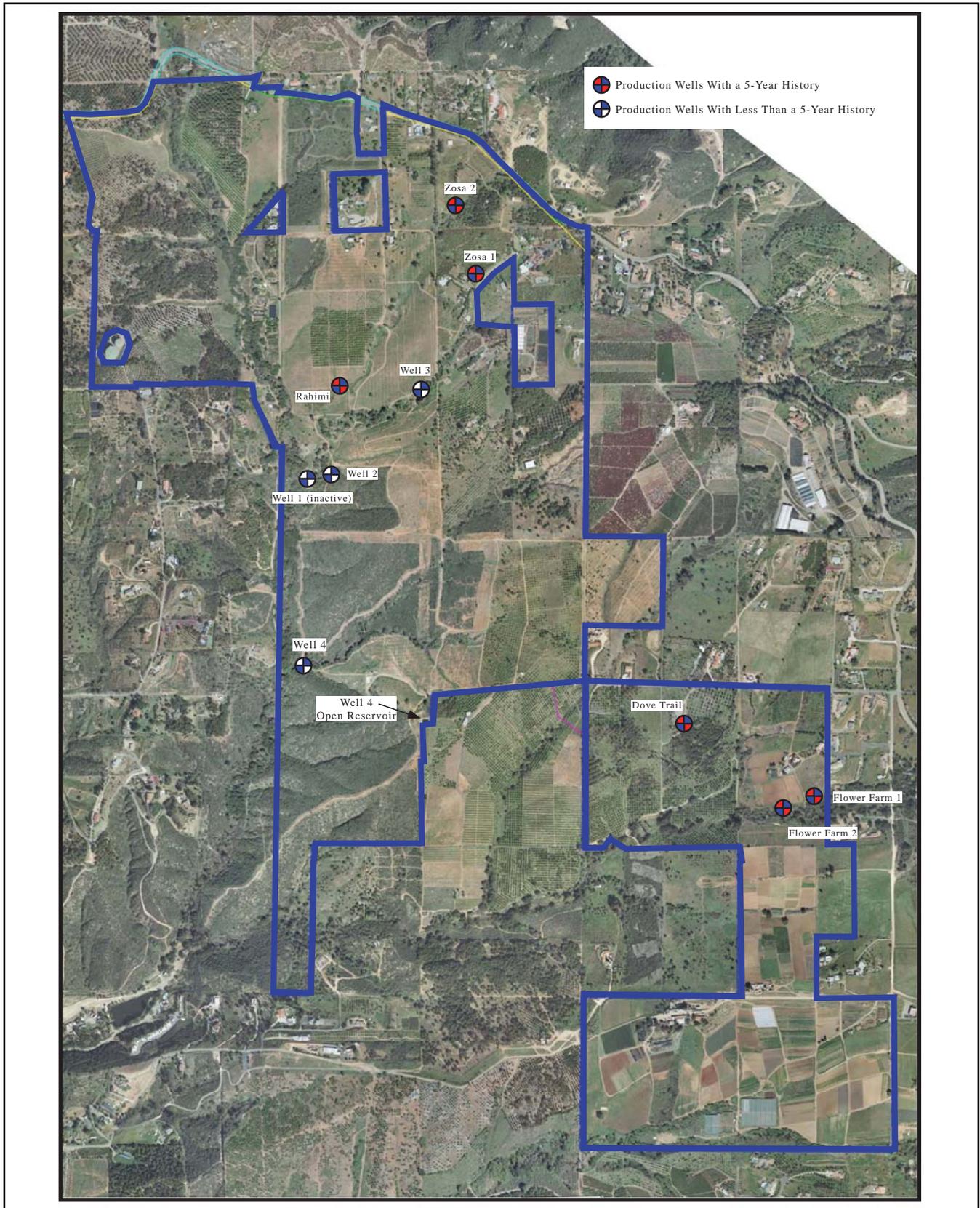
Multiple regulations exist, including local regulatory policies that would be expected to avoid any potential impacts. A cumulative impact would not occur. Therefore, the project, in combination with the identified cumulative projects, **would not contribute to a significant cumulative impact** associated with dam inundation.

Seiche, Tsunami and Mudflow

Cumulative projects would be subject to CEQA review, in addition to compliance with applicable regulations and impacts would be avoided or reduced to a level below significant. A cumulative impact would not occur. Therefore, the project, in combination with the identified cumulative projects, **would not contribute to a significant cumulative impact** associated with mudflow hazards.

3.1.3.4 Conclusion

The SWMP, Drainage Study, and HMP have all been prepared in accordance with the WPO and other relevant regulations. These studies conclude that the project would not significantly alter overall drainage patterns associated with the surrounding area. Sediment discharge would be reduced or eliminated through storm water BMPs and the long-term incorporation of on-site detention facilities. Construction and post-construction LIDs and BMPs would be implemented as part of the project design to protect water quality and to ensure the use of water for beneficial uses to the maximum extent possible. The project would not exceed current groundwater usage and would increase groundwater recharge due to its proposed use of imported potable water to supplement irrigation. With design measures, BMPs, and conformance with regulations and General Plan policies, direct and cumulative impacts to hydrology and water quality would be less than significant.



0 Feet 700 

FIGURE 3.1-1
Location of Existing Wells on Project Site

3.1.4 Land Use Planning

This ~~section~~subchapter describes the relevant policy and regulatory framework for the project and the existing community character of the project site and vicinity; evaluates associated potential impacts from implementation of the project and applicable cumulative projects; and identifies related design considerations. ~~The analysis is based on the Specific Plan.~~

3.1.4.1 Existing Conditions

Project Site and Surrounding Land Uses

As designated in the San Diego County General Plan, a portion of the project site lies within the VCCP area and a portion of the project site lies within the BCP area. Subchapter 1.3, Project Location, provides a description of the project site and surrounding land uses.

Existing Land Use Regulations

The County regulations applicable to the use and development of the project are briefly described below. An analysis of the project's compliance with these regulatory plans and polices follows.

San Diego County General Plan

The San Diego County General Plan is a broad-based planning document that contains text, maps, and diagrams explaining the County's long-range growth and development goals and policies. The adopted General Plan consists of six countywide elements: Land Use, ~~Circulation (Mobility)~~₂, Conservation and Open Space, Housing, Safety, and Noise.

Land Use Element/Community Development Model

The Land Use Element includes three regional categories: Village, Semi-Rural, and Rural Lands. Regional categories are intended to provide a framework for the regional distribution of uses that serves as the foundation for the land use map designations, goals, policies, and regulations that guide future development. The regional category applicable to the project site is "Semi-Rural," as shown in Figure 3.1-2. The General Plan designates "Semi-Rural" lands as "appropriate for lower-density residential neighborhoods, recreation areas, agricultural operations, and related commercial uses that support rural communities."

The County's land use designations are defined by the land use type—residential, commercial or industrial—and the maximum allowable residential density or nonresidential building intensity. The designations are applied throughout the County and are illustrated on the community-specific land use maps within the General Plan. More specific standards may be established for each land use designation to implement the goals and policies of the General Plan, through such tools as the Zoning Ordinance, to address impacts related to specific land uses or the needs of an individual community. Within the VCCP area, the project site is designated "Semi-Rural (SR-4)", which permits one housing unit per 4, 8, or 16 gross acres, depending on slope; and Semi-Rural 10

(SR-10), which permits one unit per 10 or 20 gross acres, ~~dependent~~depending on slope within the BCP area (Figure 3.1-3).

A major component guiding the physical planning of the County is the Community Development Model. The Community Development Model is implemented by three regional categories – Village, Semi-Rural, and Rural Lands – that broadly reflect the different character and land use development goals for the County’s developed areas, its lower-density residential and agricultural areas, and its very low-density or undeveloped rural lands. The Community Development Model directs the highest intensities and greatest mix of uses to Village areas, while directing lower-intensity uses, such as estate-style residential lots and agricultural operations, to Semi-Rural areas. The Semi-Rural category may effectively serve as an edge to the Village, as well as a transition to the lowest-density category, Rural Lands, which represents large open space areas where only limited development may occur. The intent of the Community Development Model is to guide new development into more compact development as a means to reduce associated impacts. Generally, locating housing closer to retail, services, schools, and jobs and on smaller lots within communities can reduce the size of required infrastructure improvements and number and length of automobile trips, while increasing the efficiency of delivering police, fire, and other public services and enhancing community livability. This model of development likewise allows an increase in the amount of open space, natural habitat, and agriculture that can be preserved.

The Community Development Model is specifically implemented through General Plan Policies LU-1.1 and LU-1.2:

- LU-1.1 Assigning Land Use Designations. Assign land use designations on the Land Use Map in accordance with the Community Development Model and boundaries established by the Regional Categories Map.
- LU-1.2 Leapfrog Development. Prohibit leapfrog development which is inconsistent with the Community Development Model. Leapfrog development restrictions do not apply to new villages that are designed to be consistent with the Community Development Model, that provide necessary services and facilities, and that are designed to meet the LEED-Neighborhood Development Certification or an equivalent. For purposes of this policy, leapfrog development is defined as Village densities located away from established Villages or outside established water and sewer service boundaries.

Goals and Policies

The General Plan also contains goals and policies within each element as summarized below.

Land Use Element presents a policy framework for shaping the type and location of new development and strategies to maintain and enhance existing development and community character.

Circulation (Mobility) Element provides a framework for providing a balanced, multi-modal transportation system for the movement of people and goods within the County.

Conservation and Open Space Element provides policies relating to the conservation, protection, and management of natural resources and the preservation of open space, along with provision of park and recreation resources.

Housing Element presents goals, policies, and programs designed to assist the development of housing for the County's current and future residents at all income levels.

Safety Element establishes policies that minimize the risk of personal injury, loss of life, and property and environmental damage associated with natural and man-made hazards.

Noise Element provides a process to control and abate environmental noise and to protect citizens from excessive exposure.

Valley Center Community Plan

The VCCP provides policies and recommendations applicable to development within the community of Valley Center. The VCCP was adopted by the County Board of Supervisors in 1979 and amended in 2002, and the land use map was updated in 2011, in conjunction with the General Plan Update. Specific policies relevant to the proposed project are analyzed below, in Community Plan Goals and Policies.

Bonsall Community Plan

Like the VCCP, the BCP also provides policies and recommendations relevant to the community. The Bonsall Community Plan land use map was updated in conjunction with the County's General Plan Update in 2011. Specific policies relevant to the proposed project are analyzed below, in Community Plan Goals and Policies.

County Zoning Ordinance

The San Diego County Zoning Ordinance provides detailed regulatory provisions for development of all unincorporated lands within the County. County zoning is used to implement the goals and objectives of the adopted General Plan in accordance with state law which requires the General Plan and corresponding zoning to be consistent with the General Plan. The existing zoning for the project site is A70 (Limited Agricultural), which is intended for crop or animal agriculture, for the portion of the site within the VCCP and Rural Residential (RR) for the portion of the site within BCP. Figure 3.1-4 shows the existing zoning for the project site.

County Subdivision Ordinance

Pursuant to the state of California's Subdivision Map Act, the County's Subdivision Ordinance (Section 81.401 et seq. of the County Code of Regulatory Ordinances) regulates the division of property in the County. The ordinance addresses design, standards, and required improvements for approval of proposed subdivisions and tentative maps, and requires minimum lot sizes, setback designators, and lot configurations appropriate for supporting specific land uses. Pursuant to the Ordinance, every lot shall contain the minimum lot area specified in the Zoning Ordinance for the

zone in which the lot is located at the time the final map is submitted to the Board of Supervisors for approval.

Resource Protection Ordinance

The RPO establishes special controls on certain discretionary projects for the protection of environmentally sensitive resources, including wetlands, steep slopes, sensitive biological habitats, floodplains, and prehistoric and historic sites. The RPO allows development on sensitive lands “only when all feasible mitigation measures to protect the habitat are required as a condition of approval and mitigation provides an equal or greater benefit to the affected species. Where the project has been modified to the greatest extent possible to preserve sensitive habitat, on-site or off-site mitigation may be allowed.” The project site contains steep slopes, sensitive habitat lands, wetlands, and prehistoric resources. Figure 2.1-1 shows the RPO steep slopes on the project site, and Figures 2.5-2a and 2.5-2b show the location of vegetative communities and sensitive species on-site.

Steep Slopes

The RPO defines steep slope lands as “all lands having a slope with natural gradient of 25 percent or greater and a minimum rise of 50 feet, unless said land has been substantially disturbed by previous legal grading. The minimum rise shall be measured vertically from the toe of slope to the top of slope within the project site boundary.” A total of 20.0 acres of the project site contains steep slopes as defined by the RPO. As shown in Figure 2.1-1, the project has been designed such that development encroachment into these slopes would be confined to a 1.6-acre area (or 8.0 percent), which is consistent with the RPO 10 percent encroachment allowance.

Sensitive Habitat Lands

Sensitive habitat lands are defined in the RPO as, “land which supports unique vegetation communities, or the habitats of rare or endangered species or subspecies of animal or plants as defined in Section 15380 of the State CEQA Guidelines.” Sensitive RPO habitat lands on-site consist of 0.6 acre of disturbed coastal/valley freshwater marsh, 24.4 acres of southern coast live oak riparian woodland (including disturbed), 4.7 acres of southern willow riparian woodland, 6.4 acres of southern willow scrub (including disturbed), 0.1 acre of mule fat scrub, 0.5 acre of open water, and 0.4 acre of disturbed wetlands (see Figure 2.5-2a-c). Subchapter 2.5, Biological Resources, of this EIR provides a description of the locations, extent, and characteristic species of these on- and off-site habitat types.

Wetlands

Wetlands are defined in the RPO as lands having one or more of the following attributes: (1) at least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places); (2) the substratum is predominantly undrained hydric soil; or (3) an ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system. Wetlands are sensitive biological resources because they have been dramatically reduced in San Diego County and across the nation. Due to the regional and national loss of wetland habitats, resource agencies have implemented a “no net loss” policy. Wetland habitats are important

because they support high levels of food, nutrients, and wildlife diversity, and are a valuable water source for wildlife in the arid climate of southern California.

The project area contains a number of drainages that flow from the north and east towards the southwestern portion of the site, as discussed in subchapter 2.5, Biological Resources and shown on Figure 2.5-3a-c. County RPO wetlands on-site total 37.64 acres, and include coastal/valley freshwater marsh, southern coast live oak riparian woodland, southern willow riparian woodland, southern willow scrub, mule fat scrub, open water, and disturbed wetlands. Some streambeds on-site were not considered County RPO wetlands due to the low wetland values of degraded portions of these drainage courses that lie within heavily used agricultural areas.

Significant Prehistoric or Historic Sites

Significant prehistoric or historic sites are defined by the RPO as the “sites that can provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, ~~State~~state, or federal importance.” The project site contains two CEQA-significant archaeological sites, one of which also is RPO-significant. ~~One~~The RPO-significant archaeological site is located within the proposed off-site roadway and utility alignments. Subchapter 2.6, Cultural Resources, of this EIR provides a detailed description of these sites.

San Diego County Community Trails Master Plan

The CTMP implements the County Trails Program, which involves trail development and management on public, semi-public, and private lands. A system of interconnected regional and community trails and pathways is planned to be developed to address an established need for recreation and transportation, as well as health and quality of life benefits associated with hiking, biking, and horseback riding throughout the County. Goals and policies described in the CTMP encourage communities to maximize trail opportunities. The CTMP contains a trails map for ~~the~~ both the Valley Center and Bonsall communities. The project site contains two planned east-west County public trail segments; one along the northern boundary of the project site, along West Lilac Road; and the other is located above a VCMWD pipeline right-of way traversing the extreme southern portion of the community. Both of these planned on-site public trail segments would assist the County to achieve implementation of the County Master Trails Plan.

County Light Pollution Code

The Light Pollution Code (LPC) is a County Regulatory Ordinance (County Code Sections 51.201-51.209) that restricts the use of any outdoor lighting that emits undesirable light rays into the night sky. Although the primary intent of the code is to curb lighting that may affect astronomical research at the Mount Palomar and Mount Laguna observatories, it also contains language to minimize light spill into adjacent neighborhoods. The LPC defines two zones in the unincorporated portion of San Diego County. Zone A consists of areas within a 15-mile radius of Mount Laguna and Mount Palomar. Zone B pertains to all areas that are not defined as Zone A. The project site is located approximately in Zone B (3,700 feet beyond the Zone A boundary).

County of San Diego Board of Supervisors Policy I-17

This policy is in place to ensure that all projects involving a zoning reclassification provide public improvements and facilities with the associated lands, easements, and right-of-way, necessary to ensure adequate public services and utilities will be provided to serve the project.

County of San Diego Board of Supervisors Policy I-18

Policy I-18 requires all projects pursuing a Major or Minor Use Permit that require any road improvements, drainage, sewage, fire protection or other public facilities and improvements (including the land, easements and rights-of-way therefore) to provide adequate infrastructure and services to the project to ensure that the establishment or maintenance of the requested use will not be materially detrimental to the public health, safety or welfare or to the property or improvements in the vicinity.

County of San Diego Board of Supervisors Policy I-73

The purpose of this policy is to minimize the effects of disturbing natural terrain and provide for creative design for hillside developments. The policy provides guidelines to assist the decision makers in the evaluation of hillside development in San Diego County. This policy is intended to serve as a guideline and supplement to any other applicable regulations, including the RPO. This policy also provides advance notice of what may be required when reviewing development proposals in hillside areas.

County of San Diego Board of Supervisors Policy I-78

County Board of Supervisors Policy I-78 deals with the location of future small wastewater treatment facilities. The policy requires that prior to approving a small wastewater treatment facility, one of the following findings shall be made in addition to the findings required in the Public Facility Element:

1. All projects should be located within the Urban Limit Line or within one mile of the Urban Limit Line; except that where a Specific Plan has been approved prior to August 12, 1987, and said Specific Plan specifies such facilities, subsequent applications to implement or amend the Specific Plan shall not be subject to this finding; or
2. In the Semi-Rural and Rural Development Areas where a facility is approved, annexation and hookup to a traditional sewer system shall be prohibited until the Urban Limit Line is extended.

The Board of Supervisors delegates to the San Diego County Planning Commission the authority to waive the locational criteria in paragraph 1 above, if the Planning Commission determines that in the particular case it would not be in the public interest to follow the policy and the following conditions are met:

1. The proposed facility is located within the geographic boundaries of the two Country Town Areas as shown on the Valley Center Community Plan Map (adopted by the Board of Supervisors in August 2011);

3.0 Environmental Effects Found Not to be Significant

2. The proposed facility is a community-based, multi-user facility that will make sewer service available on a voluntary basis to commercial, industrial, residential, and civic/public uses. Capital costs of the proposed facility will be shared by those designated to receive sewer service; and
3. The proposed facility will be operated by a public agency authorized to provide sewer service.

County Board of Supervisors Policy I-84

The project is subject to Board of Supervisors Policy I-84, which requires that adequate facilities are available concurrent with need before giving final approval to subdivisions and certain other projects requiring discretionary approval by the County. Since 1980, the County has been using standardized letters for the following reasons:

1. To obtain information from special districts and other facility providers concerning facility availability;
2. To ensure that this information is provided to the appropriate decision-making body; and
3. To provide data to the facility provider so that it can determine what capital improvements are required to serve the project. In order to use standard forms effectively, it is necessary to specify what these form letters should contain and to clarify how they will be used.

County Board of Supervisors Policy I-132

The project is subject to Board of Supervisors Policy I-132, which is intended to ensure that the feasible mitigation measures identified in the Environmental Impact Report for the Valley Center Septic Moratorium/Board of Supervisors Policy I-78 Amendment project are enforceable.

County of San Diego Board of Supervisors Policy I-136

This policy requires the County to consider applications requesting the formation of community facilities districts and the issuance of bonds to finance eligible public facilities pursuant to the Mello-Roos Community Facilities Act of 1982 (Mello-Roos Act), as amended. Public facilities and services eligible to be financed by a District include the following:

- Streets, highways, and bridges
- Traffic signals, street lighting, and safety lighting
- Road maintenance
- Parks, pathways, and recreation facilities, including golf courses
- Sanitary sewer, storm drain, potable and reclaimed water facilities, and other public utilities
- Flood control facilities
- Governmental facilities
- Fire and police stations, and paramedic facilities
- Libraries

- Operation and maintenance of recreation facilities including golf courses
- Biological mitigation measures involving land acquisition, dedication and revegetation
- Public rights-of-way landscaping

County of San Diego Board of Supervisors Policy J-34

This policy is intended to ensure Mobility Element road improvements required for major subdivisions, large-scale projects, and major use permits will be completed. Pursuant to this policy, projects are required to complete a traffic study in accordance with the County guidelines to identify project impacts to Mobility Element roads and identify required improvements and, if necessary due to public health, safety and welfare concerns, alternative improvements.

Natural Community Conservation Plan

The County participates in the NCCP planning process and is committed to the development of MSCPs. The first MSCP was adopted in 1997 and covers the southwestern portion of the county. The second is underway and will cover the northern portion of the county, including the area of the project site. The third will cover the eastern portion of the county. Until an MSCP is adopted, sensitive species and habitat resource documentation, impact assessment, and mitigation fall under the guidelines set forth by San Diego County's RPO, the NCCP guidelines, and CEQA.

Multiple Species Conservation Program

The County adopted the MSCP on March 18, 1997, to meet the requirements of the NCCP Act of 1991 and the federal and California Endangered Species Act (ESAs). The MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve. The total MSCP study area encompasses 582,243 acres, of which 43 percent (252,132 acres) is in the southwestern and western unincorporated areas of San Diego County. If the project is approved after the adoption of the North County MSCP Subarea Plan, the project would be required to make findings of conformance to the Subarea Plan and associated Biological Mitigation Ordinance (BMO).

Community Character

Community character can be defined as those features of a neighborhood, which give it an individual identity and the unique or significant resources that comprise the larger community. Community character also is a function of the existing land uses and natural environmental features based on a sense of space and boundaries, physical characteristics (such as geographic setting, presence of unique natural and man-made features, ambient noise, and air quality). Each community planning area in San Diego County identifies its community character attributes and outlines goals and policies intended to preserve those attributes.

Valley Center Community

The VCCP area is characterized by its unique topographic features, its agricultural activities, and its predominance of estate residential development. The rural character of the community results from the low population density and the prevalence of large areas of open space provided by agriculture. The Community Character Element of the VCCP identifies Valley Center as a “rural community,” and the intent of the VCCP is to “maintain the rural character of the Planning Area.” The VCCP area is characterized by its rural residential pattern of development and scattered agricultural uses located on the periphery of an urbanizing San Diego County. According to the VCCP, “although urbanization has greatly diminished agricultural uses in other areas of the County, Valley Center has managed to maintain its rural identity.”

Bonsall Community

The community of Bonsall is characterized by a series of hills, valleys, and drainage areas. This hill and valley topography has resulted in a predominance of low-density estate-type residential lots and agricultural land uses. Houses are generally located far apart and randomly, on hillsides and hilltops, as well as in the valleys. Surrounding the houses are large open spaces composed of fallow fields, undisturbed native vegetation, and agriculture. Agriculture is a key factor in Bonsall’s rural community character, as are the scenic, sometimes narrow and winding, rural roads and rolling hill and valley topography. Also characterizing the BCP area is its golf courses and equestrian facilities. Commercial activity in Bonsall is centered in the Mission Road/Olive Hill Road and SR-76 area. Open space is an outstanding characteristic of the community of Bonsall and, along with the uses and pleasures it affords, comprises the “rural atmosphere” which Bonsall residents are committed to preserving.

Project Vicinity

The vicinity of the project site consists of rural hills, valleys, and riparian habitat, as well as estate residential development. The area surrounding the project site is characterized by its agricultural and residential land uses. Several hundred homes of varying types exist in the project area ranging from small lot townhomes to farm homes on large parcels with mostly citrus and avocado groves. Single-family residential homes are located on parcels ranging from less than 5,000 square feet to 40 acres. The residential developments near the site are located off West Lilac Road, Covey Lane, Rocking Horse Road, Old Highway 395, Mountain Ridge Road, Circle R Drive, and SR-76. Typical architectural styles are Mission or Ranch style homes and are mostly one or two stories. Also close to the community are small commercial and office buildings, an industrial rock manufacturing and concrete batch plant, and an RV Park (All Seasons RV Park and Campground). The area immediately around the project site does not contain streetlights, lighted signs, or traffic signals, and outside lighting of residences is customarily kept to a minimum to maintain dark skies.

3.1.4.2 Analysis of Project Impacts and Determination of Significance

Guidelines for the Determination of Significance

Based on CEQA Guidelines, Appendix G, the project would have a significant impact if it would conflict with any applicable land use plan (including a habitat conservation plan or NCCP, see subchapter 2.7), policy, or regulation of an agency with jurisdiction over the

project (including, but not limited to the General Plan, Community Plan, or Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Impact Analysis

The project proposes land uses and densities that are not consistent with the adopted General Plan Land Use Element Regional Category of Semi Rural and the adopted land use designation of Semi Rural SR4SR-4 (VCCP Land Use Map) and Semi Rural SR--10 (BCP Land Use Map). As part of the project, the General Plan Regional Land Use Map is proposed to be amended to change the adopted regional category (Semi-Rural) designation of the project site and to re-designate the entire 608-acre site as "Village" (as shown in Figure 1-1). In addition, the project proposes to change the VCCP land use designation to Village Residential (VR 2.9) and Village Core (C-5) and the BCP land use designation to Village Residential (VR 2.9) (as shown in Figure 1-2). The proposed project includes a General Plan Amendment, which if approved, would result in the project being consistent with the General Plan.

San Diego County General Plan Land Use Element/Community Development Model

~~The proposed project would be consistent with the Community Development Model of the County General Plan and designed to meet the LEED-Neighborhood Development Certification or an equivalent. The project includes Village Core areas which include the highest densest neighborhoods offering a broad range of commercial and civic uses that are supported by a network of local roads containing bicycle lanes and walkways linking the central neighborhoods with parks, schools, and public areas. Densities decrease outside of the core areas and away from the high-intensity centers.~~

General Plan Goals and Policies

~~As shown in Figure 1-2, proposed land use designations include Village Core/Mixed-Use centers, surrounded by Village Residential. Every subchapter of the EIR throughout Chapters 2.0 and 3.0 contain a discussion of the project's consistency with existing regulations, including General Plan goals and policies, relevant to the environmental issue area. A detailed compilation of the project's consistency with all General Plan goals and policies is included as an attachment to the EIR (see General Plan Consistency Analysis as Appendix W).~~

~~The project proposes a land use plan that is consistent with Land Use Policies LU-1.1 and LU-1.2. Land Use Policy LU-1.1 reflects the County's Community Development Model, and Land Use Policy LU 1.2 defines the Leapfrog Development.~~

Land Use Policy LU-1.1, Community Development Model

~~The project is consistent with the Community Development Model because it proposes a "Village" Regional Category that is surrounded by the Semi-Rural Regional Category, which transitions to the Rural Regional Category as discussed and illustrated in the regional Land Use text. The General Plan defines the Community Development Model as a central core, referred to as a "Village" in which the highest intensities of development are located, that is surrounded by areas of lesser intensity including "Semi-Rural" and "Rural Lands." The edge of a "Village" can be defined by a boundary that can be used to differentiate permitted development densities and design standards. The "Village" would contain the densest neighborhoods and a broad range of commercial~~

and civic uses that are supported by a dense network of local roads containing bicycle lanes and walkways linking the neighborhoods with parks, schools, and public areas. Outside of the "Village," "Semi-Rural" areas would contain low-density residential neighborhoods, small-scale agricultural operations, and rural commercial businesses. Following this model, the project has been designed with the highest intensities (commercial, mixed-use and attached residential) within the central portion of the project (Town Center) and the lower-intensity residential uses around the perimeter of the site (single-family detached).

Land Use Policy LU-1.2, Leapfrog Development

Under Land Use Policy LU-1.2, new Villages are allowed if they meet the following criteria: (1) are consistent with the Community Development Model and, (2) provide necessary services and facilities and, (3) are designed to meet the LEED-Neighborhood Development Certification or an equivalent.

(1) Community Development Model

As discussed above and further shown in Figure 1-2, the project proposes to change the Regional Category to "Village" with land use designations of Village Core/Mixed-Use and Village Residential. The proposed Village Regional Category is surrounded by the Semi-Rural Regional Category, which transitions to the Rural Regional Category. The General Plan defines the Community Development Model as a central core, referred to as a "Village" or, in very rural communities, a "Rural Village" in which the highest intensities of development are located, that is surrounded by areas of lesser intensity including "Semi-Rural" and "Rural Lands." The edge of a "Village" or "Rural Village" can be defined by a boundary that can be used to differentiate permitted development densities and design standards. The project proposes the development of Town and Neighborhood Centers with high-intensity land uses and pedestrian-friendly circulation, surrounded by less dense and intense land uses, accommodating future growth in a compact and sustainable footprint (LU-1-1). Additionally, the

(2) Provide Necessary Services and Facilities

The project is not "leap frog development" because it is designed to conform to the Community Development Model, provides would provide all necessary services and facilities, and would be designed to meet including water, sewer, parks, schools, and fire service. The VCMWD has provided service availability forms for both water and sewer that state that services are reasonably expected to be available within the next five years. In addition, the project includes four options for fire service. All options would allow fire service to be provided to the project in conformance with the requirement of the General Plan (see subchapter 2.7).

(3) Designed to Meet the LEED for Neighborhood Development Certification or an Equivalent

The project is designed to meet the LEED for Neighborhood Development Certification or an equivalent program and was planned by Calthorpe and Associates in order to create a new urban village consistent with these principles.

LEED for Neighborhood Development, or LEED-ND, is a rating system that integrates the principles of smart growth, new urbanism and green building into the first national system for neighborhood design. As stated in the Policy LU-1.2, the proposed Project is not required to be LEED-ND certified, but requires that the project be designed to meet LEED-ND certification or an equivalent.

The project is equivalent to the standards and principles of the LEED-ND program because the project integrates principles of smart growth new urbanism and green building design. The project's planning and design applies these sustainable development principles to site selection, compact development footprints, variation in lot and building design, mixed-use and clustered development, innovative planning techniques (such as following the Compact development model and other principles set forth in the Specific Plan) zoning techniques, conservation of wildlife habitat, soil, steep slopes, water and energy, best practices storm water management, water efficient and native palette landscaping, operation and maintenance plans, recycling and wastewater technology, and integrated pedestrian and bike paths connecting the community amenities and reducing automobile use. The project encourages sustainability through the following green neighborhood practices that are incorporated into the project's Specific Plan or are a part of the various accompanying Tentative and Final Maps, Site Plans, Landscape Plans and EIR Technical Appendices that would be adopted as a part of the project:

Smart Location. The project incorporates principles of smart location as required by the County General Plan, which requires new villages to be located within existing water and sewer districts and near existing infrastructure and facilities. In addition, State and Local planning policies (for example, SB-375 and AB-32) encourage locating projects near major transportation corridors, in part to reduce commuting distances and carbon footprints by lowering VMTs. The project site is located less than a half-mile from the I-15, and as shown in Table 4.12 of the TIS (Appendix E), would reduce trip lengths within the Valley Center community by 0.08 miles, assuming the construction of Road 3, and 0.09 miles without the construction of Road 3. The project is projected to have an average vehicular trip length of 7.6 miles, which is over a half-mile lower than the rest of the Valley Center community, both with and without the construction of Road 3. Finally, the project is outside the County's PAMA of the draft North County MSCP and is not located within an Agricultural Preserve or Williamson Contract lands.

Sustainable Site Design. The project was designed to be consistent with the Community Development Model. Lower intensity, residential land uses graduate out from a dense, clustered, mixed-use, high intensity, village core. The project is pedestrian-oriented and shifts reliance from automobiles as every resident is a short walk from goods and services. Live/work units and offices offer alternatives to highway commuting. Recycling of wastewater, containers, and compost conserve water, energy and raw materials. Community gardens and orchards, and specialty retail, including farmer's markets, promote agricultural sustainability by supporting local farms and decrease the reliance on imported produce. The project would preserve sensitive biological resources over one-sixth of the project

site. The open space areas would support wildlife habitat, protect creeks and wetlands, associated upland habitats and management of open space preserve areas, and oak woodlands. 99.7 percent of all proposed grading would not impact RPO Steep Slope land. The project also proposes to restore natural drainages and wetland habitat on-site. Portions of the existing agricultural on-site would remain within open space and the project would mitigate its direct impacts to agriculture by purchasing a conservation easement for agriculture land on or off-site. The project's Specific Plan incorporates residential and commercial uses in the village core, diversifying housing types from 1,000 square foot live/work lofts, to townhomes, to larger attached and detached homes, of varying configurations, creating thoroughly integrated, walkable commercial centers and neighborhoods, making a development footprint that is compact and provides community-based amenities, thus reducing regional automotive trips.

Innovative Land Use. As stated above, the project design and proposed compact land uses would create a walkable community. All residents could walk or bike on dedicated, community paths, to stores, parks and recreational fields, the civic center, professional offices, a senior center, a recycling center, a gym and pool, community gardens and orchards, and nature trails. The location of homes near the Town Center reduces driving distances thus reducing gas and electricity consumption. The project's Specific Plan incorporates a number of landscaping measures and policies that enhance sustainable planning principles such as the use of native, drought tolerant and regionally appropriate plants and ornamentals and the use of reclaimed water, allowance for rain-water harvesting, and grey-water systems. A biological preserve compliments the regional habitat program and enhances stormwater management. Grading Design, Erosion Control, Stormwater and Drainage Best Management Practices are incorporated into the Specific Plan and the accompanying project plans such as the Stormwater Management Plan and Water Conservation Plan.

Integrated Transportation Planning. The project site is less than a half-mile from I-15, with access to regional destinations, and faces West Lilac Road, maximizing efficient community access within Valley Center and Bonsall. The village core could accommodate a mass transit stop, a short walk or bike ride from all points within the community. A 16-plus mile community path and trail network supports pedestrians, bicyclists, and equestrians and is connected to the County trail system at the north and south ends of the project. Streets are designed to promote traffic calming through the use of narrow lanes, curvatures, roundabouts, treescaping, and parallel parking. The proposed paths are placed parallel to the streets to reduce vehicle speeds, promote pedestrian connections and increase roadway safety. Finally, the Project would implement a TDM Plan and private interim-transit program until regional transit plans are coordinated.

Sustainable Building. The project's homes and buildings would be designed, constructed and built to CAL-GREEN building standards and would be designed to exceed 2008 Title 24 Energy Standards by 30 percent. All buildings would be solar ready and have roofs built for solar panels and pipes for solar hot water, and are individually planned to consider solar orientation. All buildings would have dual pipe irrigation systems to conserve fresh water resources. The project would also plant approximately 35,000 trees, which would negate the formation of urban heat islands and reduce energy demand during the hottest weather. Sustainable green buildings, designed to CAL-GREEN and would exceed 2008 Title 24 standards by 30 percent, consume less energy and water, improve indoor air quality, and preserve and enhance natural biological resources.

Finally, implementation of these project plans would be through the HOA which would manage landscaping, pathways, parks, and community agriculture. The RF and WRF would be managed by the VCMWD and all Resource Management plans would need approval of the applicable governmental agencies to ensure the conservation of biological open space would include management components. Therefore, because the project is consistent with the Community Development Model, provides necessary services and facilities (and is within established water and sewer service boundaries), and is designed to be equivalent to the LEED-ND, the project is consistent with General Plan Policies LU-1.1 and LU 1-2.

(4) Other Relevant General Plan Policies

The project likewise provides a "complete neighborhood" to include a neighborhood center within easy walking distance of surrounding residences (LU-3-3) while providing a mixture of residential land use designations and development regulations that accommodate various building types and styles (LU-3-1 and LU-3-2).

The project includes an amendment to the General Plan's Mobility Element to redesignate West Lilac Road from its existing current classification as a Light Collector with intermittent turn lanes (2.2C) to a Light Collector with reduced shoulder (2.2F) from Main Street to the mapped Road 3. Goal M-1 of the General Plan's Mobility Element identifies the County's need for a balanced road network, requiring "a safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities." The proposed amendment would not be inconsistent with this goal or related policies. It would amend the General Plan Mobility Element road classification of West Lilac Road from 2.2C to 2.2F from the project entrance at Main Street to Road 3. As detailed in the Traffic Impact Study (see Appendix E), a number of these road segments would fail with the addition of project traffic. However, the General Plan Amendment to the Mobility Element includes the amendment of Mobility Element Table M-4 to include Old Highway 395 from E. Dulin Road to West Lilac Road, West Lilac Road from Old Highway 395 to the project entrance (2.2C) and from the project entrance to Road 3 (2.2F-), and Old Highway 395 between West Lilac Road and the I-15 SB ramps. Table M-4 which identifies road segments with road classifications that could result in a LOS E / F and it is more appropriate to retain the classification rather than increase but where the number adverse impacts of adding additional travel lanes. As detailed in do not justify the Traffic Impact Study (see Appendix E) West Lilac Road would operate at a LOS B resulting benefit of increased traffic capacity. The project is designed with two direct connection points to West Lilac Road with no private

driveway access (M-2.2). With the inclusion of the amendment to Table_M-4 the project would be consistent with the General Plan Mobility Element.

A discussion of the project's conformance with other General Plan policies is detailed in the General Plan Consistency Analysis (see Appendix W). Overall, the project would be consistent with the General Plan; therefore, land use impacts associated with policy inconsistencies would be **less than significant**.

Community Plan Goals and Policies

The community character of the project can be examined from both a local and regional perspective. As described above, both Valley Center and Bonsall are characterized as "rural communities" by their respective community plans. Compliance with the goals and policies of the community plans are detailed in the General Plan Consistency Analysis (see Appendix W). Relevant policies are discussed in the following paragraphs.

Valley Center Community Plan

As currently written, the VCCP envisions the two existing rural Villages as the only areas recognized on the plan map where urban levels of development are permitted. The project proposes, as part of its General Plan Amendment, to modify the text of the VCCP to be consistent with the proposed project by changing the number of rural villages from two to three. As discussed above, the General Plan's goals and policies permit the establishment of a new village that is designed to be consistent with the Community Development Model, provide necessary services and facilities, and meet the LEED-ND Certification or an equivalent.

Goal 1 of the VCCP Community Character Goals is to preserve and enhance the rural character of Valley Center. The project proposes many different densities and architectural styles, integrated into a cohesive community through landscaping, trails, and a Town Center to provide community focus. The Design Guidelines and other provisions of the Specific Plan assure that monotony in design is avoided. The proposed project further assures consistency with relevant policies associated with this goal through the requirement for Site Plan review.

The VCCP Land Use policies seek to preserve sensitive natural resources including steep slopes, canyons, floodplains, ridge tops, and unique scenic views (VCCP Policies A-1 through A-3). As detailed throughout the EIR including, subchapters 2.1 (Visual Resources) and 2.5 (Biological Resources), the project is designed to avoid disturbance of a majority of the on-site steep slopes and most sensitive habitats. Additionally, mitigation measures are included to assure the reduction of significant impacts to scenic views to the greatest extent possible.

The Agricultural Goal of the VCCP seeks the preservation and enhancement of existing and future agricultural uses. As detailed in the Agricultural Resources Report (see Appendix F of the EIR), one of the project's objectives includes the recognition of the existing rural atmosphere of the surrounding area through use of agriculture on-site and provision of transitional types of residences. The Specific Plan includes agriculture throughout the project site including common open space areas, biological open space, and manufactured slopes. HOA-maintained agricultural open space would be retained along many of the boundaries of the project site, as agricultural compatibilities buffers

including groves of orchard trees, such as avocado and citrus. Other agricultural-related commercial uses may also be established by the project as allowed in the C-36 zones.

The Conservation Goals of the VCCP require projects to preserve Valley Center's unique, natural and cultural resources while supporting its traditional semi-rural lifestyle; preserve native vegetation and wildlife habitat; minimize soil erosion; and promote a system of interconnecting trails and paths for horses, pedestrians and bicyclists; As detailed in subchapter 2.6 (Cultural Resources) the project includes mitigation measures required to assure that no unknown cultural resources are disturbed or lost as a result of project implementation. The project design also includes the preservation of wetland and upland habitat within an on-site protective easement, an extensive network of trails, and the implementation of BMPs throughout the site.

The project is consistent with the relevant policies of the VCCP. Additional discussions, including a detailed matrix of the project's consistency with all other policies of the VCCP is located in the General Plan Consistency Analysis (see Appendix W).

Bonsall Community Plan

As currently written, the BCP recognizes three areas with the Village Regional Category located in the Olive Hill Road/Mission Road and SR-76 area. The project proposes as part of its General Plan Amendment to modify the text of the BCP to be consistent with the project by changing the number of areas with the Village Regional Category from three to four. As discussed above, the General Plan's goals and policies permit the establishment of a new village that is designed to be consistent with the Community Development Model, provide necessary services and facilities, and meet the LEED-ND Certification or an equivalent.

BCP Policy LU-1.1.1 requires development in the community to preserve the rural qualities of the area. Conformance to this policy is reflected through the varied land uses proposed within the project site including different patterned homes, the maintenance of on-site agriculture within biological buffers and common areas, and small village commercial centers. Additionally, the project places the highest density of homes closest to the center of the site, furthest from adjacent agricultural operations. Developing the village in this manner would provide housing needs in a compact village design, while preserving outlying rural areas outside of services and infrastructure (Policy LU-1.2.1). Project grading would conform to the natural contours of the land and would not substantially alter the profile of the site (Policy LU-1.1.3). The proposed project further assures consistency with relevant policies associated with this goal through the requirement for Site Plan review (LU-1.2.2).

BCP Goal COS-1.1 requires the preservation of unique natural and cultural resources. As detailed in subchapter 2.6 (Cultural Resources), the project includes mitigation measures required to assure that no known or unknown cultural resources are disturbed or lost as a result of project implementation.

BCP Policy COS-1.1.4 requires development to be compatible with adjacent natural preserves, sensitive habitat areas, agricultural lands, and recreation areas. As detailed in subchapter 2.5 (Biological Resources), the project is designed to avoid disturbance of the site's most sensitive habitats through the dedication of 103.6 acres of open space. Additionally, Goal COS-1.2 requires the continuation of agriculture as a prominent use

throughout the Bonsall community. The project includes agriculture throughout the project site including common open space areas, biological open space, and manufactured slopes. HOA-maintained agricultural open space would be retained along many of the boundaries of the project site, as agricultural ~~compatibilities~~compatibility buffers including groves of orchard trees, such as avocado and citrus. Other agricultural-related commercial uses may also be established by the project as allowed in the C-36 zones. With respect to recreation, the project includes 23.8 acres of park land plus miles of trails to assure on-going recreational uses throughout the project site and the community.

The project is consistent with the relevant policies of the BCP. Additional discussions, including a detailed matrix of the project's consistency with all other policies of the BCP is located in the General Plan Consistency Analysis (Appendix).

Overall, land use impacts associated with policy inconsistencies would be **less than significant**.

County Zoning Ordinance

The project proposes residential, commercial, and other land uses, along with residential densities, that are not consistent with existing zoning. Existing zoning is A70, Limited Agricultural Use Regulations for the 532 acres within the VCCP area and RR, Rural Residential for the 76 acres within the BCP area. The project proposes the construction of a maximum of 1,746 units with an overall density of 2.9 du/ac. Residential density within the planning areas ranges from 0.5 du/ac for the single-family units to 25 du/ac for a portion of the mixed-use residential areas. Also, proposed within the project site are commercial uses; facilities and amenities to serve the senior population (including a senior community center and group residential and group care facility); and civic uses that may include a fire station, school (K-8), public and private parks, and other recreational amenities. An on-site RF, WRF, and other supporting infrastructure also would be located on the 608-acre site. Biological open space is proposed to preserve 103.6 acres of sensitive biological/wetland habitat. Some of the proposed uses would not be consistent with the existing zoning.

As part of the project, the applicant is requesting a Rezone for the entire 608-acre site. The Town Center and two Neighborhood Centers would be rezoned to C34 "General Commercial/Residential." The remainder of the project site would be rezoned as RU – Residential. Proposed zoning is defined within the Specific Plan and illustrated on Figure 1-3. Approval of the rezone would remedy current inconsistencies between the proposed GPA Land Use designation and impacts associated with zoning would be **less than significant**.

County Subdivision Ordinance

The project would comply with the requirements of the County of San Diego Subdivision Ordinance, as all final subdivision maps associated with the project would conform to the zoning as proposed by the Specific Plan. **No impacts** would occur.

Resource Protection Ordinance

The project has been designed to the greatest extent possible to preserve RPO steep slopes, sensitive habitat, wetlands, and cultural resources on-site.

A steep slope analysis prepared for the project identified the various slope categories on the project site and was used extensively to determine suitable development locations by minimizing development encroachment into the steep slopes and preserving significant slopes. The project would preserve 18.4 acres of the 20.0 acres (97 percent) of on-site RPO steep slopes. The minimal areas of encroachment are within the allowances identified in RPO. Project grading would impact 1.6 acres of the existing 20 acres of RPO steep slopes on-site. This is within the 10 percent allowance permitted under RPO.

Approximately 37.1 acres of the 608-acre site includes RPO sensitive habitat and wetlands. Development would be focused in the previously disturbed and agricultural areas of the site, and the project would limit impacts to the existing RPO habitats on-site. The project would avoid and preserve 90 percent of RPO wetlands existing on-site (refer to subchapter 2.5). Wetland impacts (2.0 acres) would be limited to where crossings over wetlands are required to provide access to the proposed development. The proposed crossings meet the findings necessary to allow the impacts through impact avoidance and minimization by placing the proposed crossings where RPO wetlands are narrow, disturbed, and at existing roads. The project would provide a limited building zone and a minimum of a 50-foot buffer from wetlands to adequately avoid indirect impacts in accordance with RPO requirements. The project would mitigate for impacts in accordance with the County's HLP Ordinance. With the implementation of the proposed mitigation, RPO habitat impacts would be **less than significant** (refer to Biological Resources, subchapter 2.5).

Several cultural resource sites are located within the project site and off-site areas, but only one site within the on-site development footprint meets the threshold of significance under RPO. This site would be preserved in dedicated on-site open space. One RPO-significant archaeological site is located within the proposed off-site roadway and utility alignments, but would not be impacted by the proposed improvements. No RPO significant cultural resources would be directly impacted by the project.

Additional information regarding RPO compliance is contained in the Cultural Resources, Biological Resources, and Aesthetics sections of this EIR. As such, impacts associated with inconsistencies with the RPO would be **less than significant**.

San Diego County Community Trails Master Plan

The County's CTMP shows two County (public) trails planned to cross the project site. The first trail roughly parallels West Lilac Road in an east-west direction along the northern boundary of the project site and is classified as a "Third Priority Pathway" by the County. The second trail, also classified as a "Third Priority Pathway" is planned to cross from east to west along an existing VCMWD water easement, near the southern boundary of the project. The project would construct public trails that would follow West Lilac Road, the VCMWD easement, consistent with CTMP guidelines. The project is consistent with the Community Trails Master Plan. **No impacts** would occur.

County Light Pollution Code

The project site is located approximately 3,700 feet beyond the Zone A boundary of Palomar Observatory. The LPC contains policies restricting the use of outdoor lighting to minimize light spill over into the dark night sky and adjacent neighborhoods. Currently, the project site and immediate surrounding area are not lit with streetlights. Visible night lighting is associated with private homes, commercial operations and I-15 vehicular traffic.

Project lighting would include lights similar to, or lesser in intensity than, other developed areas in the County. Section III.D.10 of the Specific Plan identifies lighting concepts, describing how lighting throughout the project would be done in a manner that minimizes light intrusion onto adjacent properties through the use of fixtures that are compatible with the design of each planning area and that light be shielded and directed downward. Park P-10 would be designed per County Park Standards and could have pole-mounted lighting installed to light sports fields per County standards. Although project lighting would produce light levels brighter than currently exist on the project site, all lighting would adhere to the County of San Diego's Dark Sky Ordinance. Lighting design would include the use of shields and full cut-off light fixtures to ensure that light rays are projected downward and that glare and spillage into the sky or onto adjacent property are limited. Each light would provide the lowest light level necessary, and would be limited to less than 4,050 lumens output, maintaining compliance with the LPC. The sports fields at the public park would include pole-mounted lighting with the condition that the field lights are turned off prior to 10:00 p.m. as provided in the Specific Plan. Based on compliance with the LPC and the design measures to minimize glare and spill, project lighting would result in **less than significant** visual impacts, as described in subchapter 2.1 of this EIR.

County of San Diego Board of Supervisors Policy I-17

Project public improvement and facilities impacts are analyzed in EIR subchapter 3.1.7. As discussed in subchapter 3.1.7, the project provides all public improvements and facilities with the associated lands, easements, and rights-of-way, necessary to ensure adequate public services and that adequate utilities would be provided to serve the project. Conditions of approval would be satisfied in accordance with build-out of the project, such that adequate facilities are available concurrent with need. The project would therefore be consistent with Board Policy I-17. Impacts associated with policy consistency would be **less than significant**.

County of San Diego Board of Supervisors Policy I-18

As discussed in subchapter 3.1.7, the project would include all necessary public infrastructure required to support the project. The project would therefore be consistent with Board Policy I-18. Impacts associated with policy consistency would be **less than significant**.

County of San Diego Board of Supervisors Policy I-48

Policy I-48 applies only to County sanitation districts. This project is not located in such a district. **No impact** would occur.

County of San Diego Board of Supervisors Policy I-73

The project would impact 1.07 of the 14.87 acres of RPO steep hillsides located on-site. Natural hillsides would be retained, as feasible. As discussed in subchapter 2.8, the project would impact less than 10 percent of steep hillsides on-site, which complies with the RPO steep hillsides requirements. Thus, the project would comply with this policy and impacts associated with policy consistency would be **less than significant**.

County of San Diego Board of Supervisors Policy I-78

As discussed in subchapter 3.1.7, ~~the project would make the findings required findings regarding the proposed by this policy could be made for the project's wastewater requirements to serve the project, such that the proposed facility would be operated by a public agency authorized to provide sewer service (VCMWD).~~ The project would be consistent with Board Policy I-78, and impacts associated with policy consistency would be **less than significant**.

County of San Diego Board of Supervisors Policy I-84

As discussed in detail in subchapter 3.1.7, adequate fire facilities would be available to serve the project within the allowable response time. Likewise, with the satisfaction of certain conditions, law enforcement services; water and sanitary sewer service; and school, library, and recreational facilities, would be adequate as evidenced by the PFAF, included as Appendix R of this EIR. Conditions of approval would be satisfied in accordance with build-out of the project, such that adequate facilities are available concurrent with need. The project would be consistent with Board Policy I-84, and impacts associated with policy consistency would be **less than significant**.

County Board of Supervisors Policy I-132

The project would include a Mitigation Monitoring and Reporting Program in compliance with CEQA to ensure that the mitigation measures identified for the project are enforceable and completed. The project would be consistent with Board Policy I-132; **no impacts** would result.

County of San Diego Board of Supervisors Policy I-136

If a Community Facilities District is proposed for the project, it would comply with Policy 1-136. **No impacts** would result.

County of San Diego Board of Supervisors Policy J-34

A traffic impact study has been completed for the project and is included as Appendix E to this EIR. The traffic impacts study identifies project impacts to Circulation/Mobility Element roads and associated mitigation. The project ~~would implement mitigation measures~~ applicant has been working closely with the Department of Public Works, as required to conclude that adequate levels of service would exist. As such, the project would comply with by this policy, and to assure that project-related off-site improvements are included as project design features or as mitigation measures that would relieve the project's percentage of increased traffic in a way that is appropriate for the project's vicinity. Please refer to subchapter 2.3, Traffic, for details on the project's impacts to

Circulation/Mobility Element roads/roadways. The project is consistent with this policy and impacts would be less than significant.

Natural Community Conservation Plan

The project's open space system is consistent with the goals and objectives of the NCCP, qualifying the Specific Plan for permitting authority under 4 (d) rule under the NCCP. As detailed in subchapters 2.5.2.2 and 2.5.2.5, the project would result in impacts to coastal sage scrub. Coastal California gnatcatcher was not located on-site during focused surveys. In accordance with the NCCP, the project would obtain an Habitat Loss Permit (HLP). The proposed mitigation for impacts to coastal sage scrub habitat would be in accordance with Section 4.13 of the NCCP process guidelines. Mitigation for all project impacts to coastal sage scrub would be accomplished by the off-site preservation of coastal sage scrub habitat at a 2:1 ratio within a proposed future PAMA area. The project would not have impacts to any narrow endemic species or to any core populations of any narrow endemic species identified in the MSCP. Therefore, the project is consistent with the NCCP and HLP requirements, and associated impacts would be **less than significant**.

Multiple Species Conservation Program

The project site is located within the proposed North County MSCP Subarea. The entire project site is located outside of the proposed PAMA. The proposed PAMA is located to the north and northeast and to the west of the project site. Mitigation for habitats that is not accommodated on-site would be located within the proposed North County MSCP Subarea PAMA or an approved mitigated bank (as discussed in subchapter 2.5). As such, the project would comply with the draft MSCP Subarea Plan, and impacts to biological resources would be **less than significant** after mitigation.

3.1.4.3 Cumulative Impact Analysis

Plan Consistency

~~As described in subchapter 1.7, study of the project's cumulative impacts includes both a local and regional component. The localized area surrounding the project site includes the projects listed on Table 1-5 and shown on Figure 1-24. Specifically, the~~ The project is located in an area characterized by predominantly low-density residential development and agricultural uses. Cumulative projects identified within the localized The cumulative project area for land use and planning would be those projects surrounding the project site, similar to the cumulative area identified for visual resources (see Figure 2.1-24). The projects identified within this cumulative project area propose residential development. These projects are relatively minor in nature, and none of the projects require general plan amendments or rezones General Plan Amendments or Rezones.

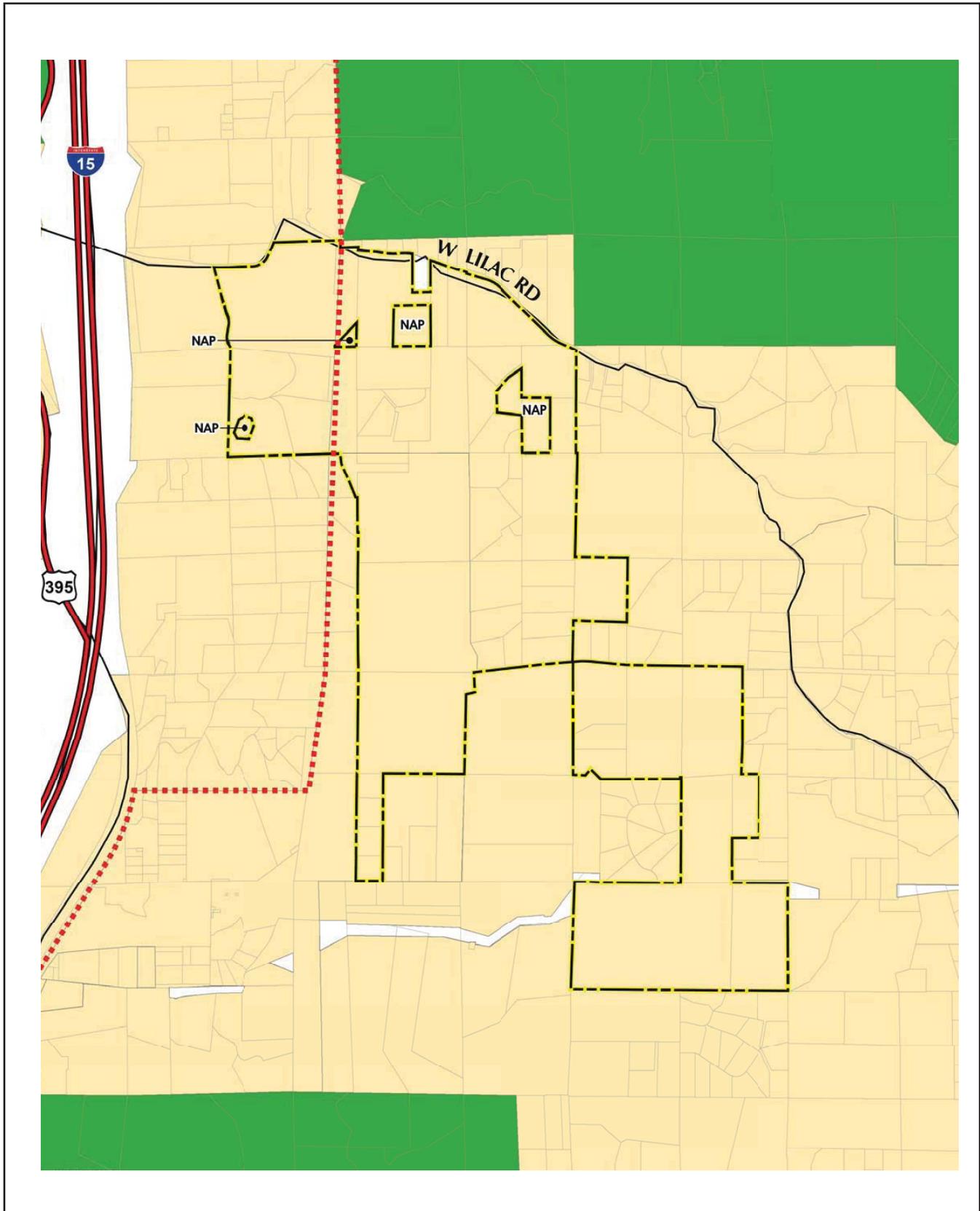
~~It is also appropriate to examine a larger, regional, cumulative study area, which includes portions in the analysis of adjacent community plan areas within the northern portion~~ impacts associated with cumulative land use. Figure 1-24 shows a large, regional area including parts of the VCCP, BCP, Fallbrook Community Plan, North County, a Metro Community Plan, and Pauma Community Plan area. A number of projects within this cumulative project area, as identified in Table 1-6, require community plan amendments. Community Plan Amendments. Additionally, at least 27 Property Specific

Requests are included in ~~the~~this regional cumulative project area. These projects are being considered for General Plan redesignation as detailed in Table 1-6, Map Key 3s 96 through 108. Approval of the Property Specific Requests would increase residential densities beyond those shown in the adopted General Plan and associated community plans. Overall, these Property Specific Requests represent an increase of approximately 1,598 dwelling units throughout the regional cumulative project area. The specific densities and land use designations for these projects ~~will~~would be determined by the Board of Supervisors.

For this project and other projects, including the ~~property specific requests~~Property Specific Requests, to be approved they must be found consistent with the General Plan. Therefore impacts would be **less than significant**.

3.1.4.4 Conclusion

Because the project is not consistent with the existing General Plan designations and zoning for the project site, a GPA and Rezone are required as part of the project's approvals in order to reconcile the inconsistency. The GPA and Rezone would also allow the implementation of land use patterns defined by the Community Development Model and conform to ~~specific General Plan policies~~General Plan Policies LU-1.1 and LU-1.2, as well as all other relevant goals and policies as shown in the General Plan Consistency Analysis (see Appendix W). Overall, the project would be consistent with relevant plans, providing a community defined by compact land use patterns, where residents live closer to jobs, businesses, schools, parks, services, and their neighbors.

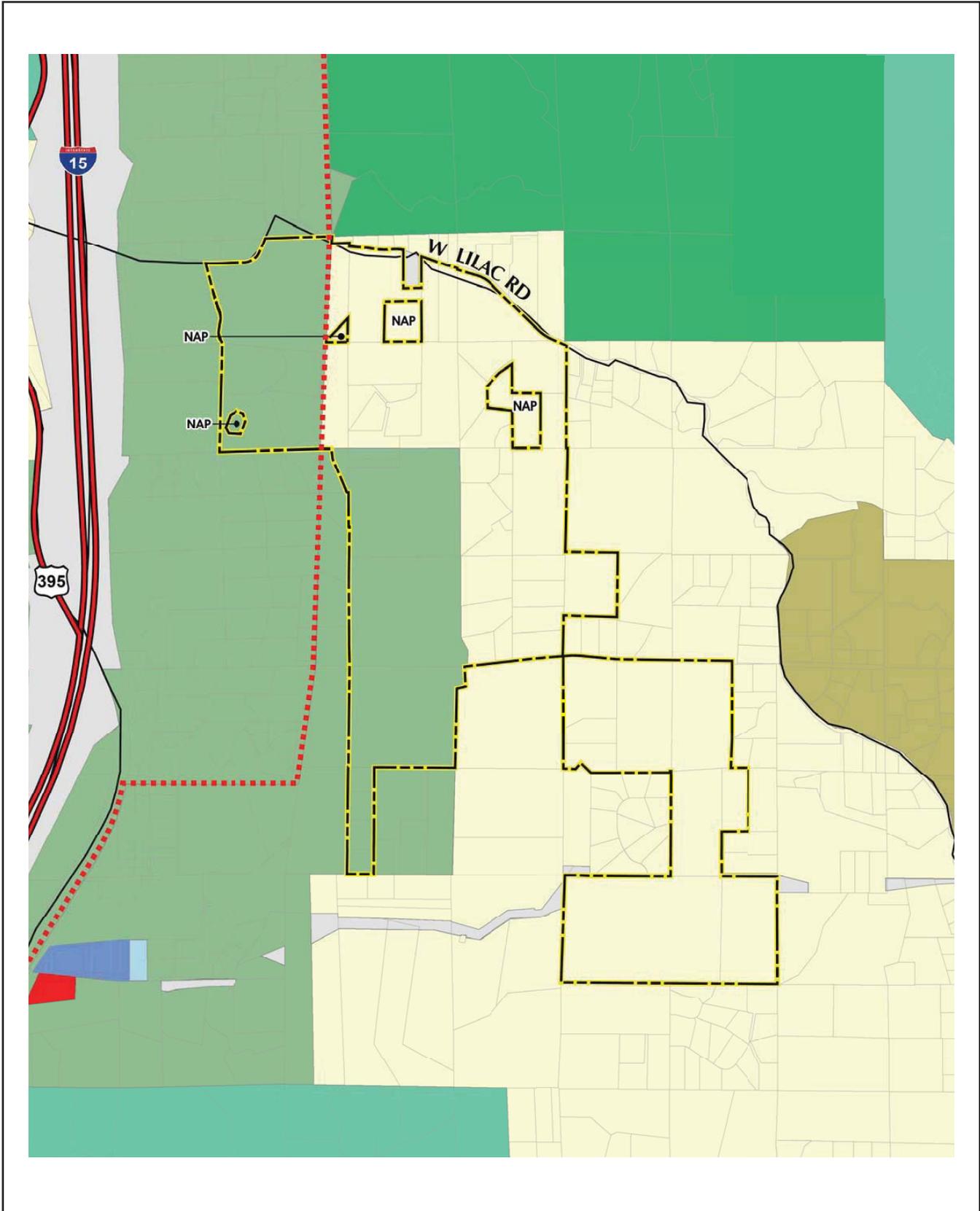


EXISTING REGIONAL CATEGORIES

- RURAL
- SEMI-RURAL
- NO JURISDICTION



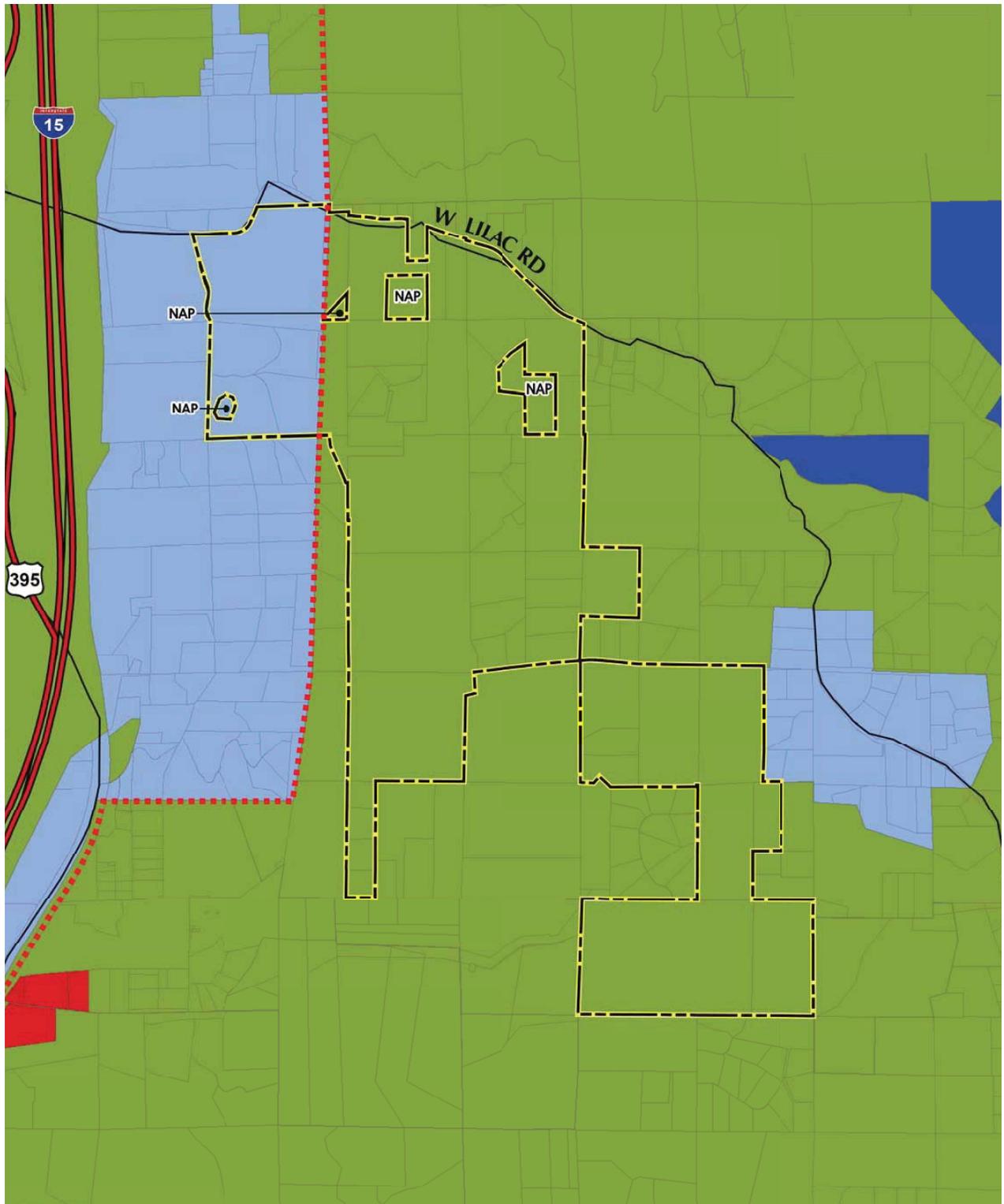
FIGURE 3.1-2
Existing Regional Categories within the Project Area



- SEMI-RURAL RESIDENTIAL (SR-2)
- SEMI-RURAL RESIDENTIAL (SR-4)
- SEMI-RURAL RESIDENTIAL (SR-10)
- RURAL LANDS (RL-20)
- RURAL LANDS (RL-40)
- GENERAL COMMERCIAL
- LIMITED IMPACT INDUSTRIAL
- MEDIUM IMPACT INDUSTRIAL
- PUBLIC/SEMI-PUBLIC FACILITIES
- COMMUNITY PLANNING AREA BOUNDARY



FIGURE 3.1-3



- AGRICULTURE
- COMMERCIAL AND OFFICE
- RURAL RESIDENTIAL
- SPECIFIC PLAN



FIGURE 3.1-4
Existing Zoning within Project Area

3.1.5 Public Services

Public services include basic support systems necessary for a functioning community. This subchapter of the EIR ~~will address~~es schools, fire protection, law enforcement, and library services.

3.1.5.1 Existing Conditions

Regulatory Framework

Senate Bill 50/CA Government Code Section 65995

SB 50 was signed into law in 1998 imposing limitations on the power of cities and counties to require mitigation of school facilities' impacts as a condition of approving new development. It also authorizes school districts to levy statutory developer fees at a higher rate for residential development than previously allowed. SB 50 amended Government Code Section 65995(a) to provide that only those fees expressly authorized by law (Education Code Section 17620 or Government Code Sections 65970, et seq.) may be levied or imposed in connection with or made conditions of any legislative or adjudicative act by a local agency involving planning, use, or development of real property.

Other relevant sections of the Government Code include:

- Section 65995(h), which declares that the payment of the development fees authorized by Education Code Section 17620 is "full and complete mitigation of the impacts of any legislative or adjudicative act . . . on the provision of adequate school facilities."
- Section 65995(i), which prohibits an agency from denying or refusing to approve a legislative or adjudicative act involving development "on the basis of a person's refusal to provide school facilities mitigation that exceeds the amounts authorized [by SB 50]."

Assembly Bill 16

In 2002, AB 16 created the Critically Overcrowded School Facilities program, which supplements the new construction provisions within the School Facilities Program (SFP). SFP provides state funding assistance for two major types of facility construction projects: new construction and modernization. The Critically Overcrowded School facilities program allows school districts with critically overcrowded school facilities, as determined by the California Department of Education (CDE), to apply for new construction projects in advance of meeting all SFP new construction program requirements. Districts with SFP new construction eligibility and school sites included on a CDE list of source schools may apply.

California Health and Safety Code (Section 13000 et seq.)

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which include regulations concerning building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection

devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Code of Regulations Title 24, Part 2 and Part 9

Part 2 of Title 24 of the CCR refers to the California Building Code which contains complete regulations and general construction building standards of state adopting agencies, including administrative, fire and life safety and field inspection provisions. Part 9 refers to the California Fire Code which contains fire-safety-related building standards referenced in other parts of Title 24. This code is preassembled with the 2000 Uniform Fire Code of the Western Fire Chiefs Association. This code was revised in January 2008 with a change in the base model/consensus code from the Uniform Fire Code series to the International Fire Code.

Subdivision and Fire Hazards Bill AB 2447

AB 2447 requires the legislative body of a county to deny approval of a tentative map for development, or a parcel map for development, if the project is in a SRA or a very high fire hazard sensitivity zone. The exception to AB 2447 includes projects that obtain written verification from each fire protection agency having jurisdiction over the project site or provide verification that there would be sufficient structural fire protection for the structures created by the project (San Diego County 2011d). Effective October 28, 2011, the Consolidated Fire Code (San Diego County 2011d) includes County amendments to the 2010 California Fire Code and the ordinances of the 16 unincorporated County fire protection districts. Response time is defined as the elapsed time from the fire department's receipt of the first alarm to when the first fire unit arrives at the scene (San Diego County 2011d). Response time within the unincorporated County is generally accepted as five minutes.

San Diego General Plan- Land Use Element

The purpose of the Land Use Element is to provide a framework to accommodate future development in an efficient and sustainable manner. The Land Use Element includes specific goals and implementing policies generally relevant to the maintenance of adequate public services.

GOAL LU-1

Sustained Integrity of the Community Development Model. The development of a land use plan that sustains the intent and integrity of the Community Development Model and the boundaries between Regional Categories.

Policy

LU-1.2 Services and Facilities. Assure that necessary services and facilities are provided for new development.

GOAL LU-9

Development of Community Cores. Well-defined, planned, and developed community cores, such as villages and town centers that contribute to a community's identity and character.

Policy

LU-9.7 School Development. Encourage new school development in town centers and villages.

GOAL LU-12

Promoting Sustainable Infrastructure. The promotion of sustainable infrastructure, public facilities, and essential services that meet the community needs and are provided concurrent with growth and development.

Policy

LU-12.3 Infrastructure Compatibility. Plan for compatibility and infrastructure and services compatibility.

County of San Diego General Plan-Safety Element

The purpose of the Safety Element is to include safety considerations in the planning and decision making process by establishing policies related to future development that would minimize the risk of personal injury, loss of life, property damage, and environmental damage.

Policies S-3.1, S-3.3, S-3.4, S-3.5, S-3.6, S-3.7. Minimize injury, loss of life, and damage resulting from wildland fire.

Policies

S-6.1, S-6.3, and S-6.4 Development Fire Protection. Ensure development has adequate fire protection services and funding.

San Diego County Board of Supervisors Policy I-84, Project Facility Availability and Commitment for Public Sewer, Water, School and Fire Services

Board of Supervisors Policy I-84 establishes procedures for using Project Facility Availability forms, and in certain cases, Project Facility Commitment forms, for the processing of major and minor subdivisions and certain other discretionary land use permits. These standardized procedural forms have been used to: (1) obtain information from special districts and other facility providers regarding facility availability; (2) ensure that this information is reviewed by the appropriate decision-making body; and (3) provide data to the facility provider in order to determine what capital improvements are required to serve the project.

Environmental Setting

Schools

As discussed in subchapter 1.2.1.3, Proposition BB was approved by voters in the Fallbrook and Bonsall school districts to create a new K-12 district, BUSD. Under Proposition BB, a new Bonsall high school would be established by the district using existing facilities. Approximately 208 acres of the northern portion of the site are within the existing BUSD as a result of the successful unification election that was held in November 2012. The majority of Phase 1 (122.1 acres) and Phase 2 (67.6 acres) and a portion of Phase 3 (18.2 acres) are located within the BUSD. The BUSD is composed of four schools, all of which could potentially serve students from the project site: Vivian Banks Charter School (grades K-5); Sullivan Middle School (grades 6-8); Bonsall Elementary (grades K-5); and Bonsall West Elementary (grades K-6).

Approximately 401 acres of the project site are located within VCPUSD, including small portions of Phase 1 (0.4 acre) and Phase 2 (6.2 acres), the majority of Phase 3 (218.2 acres), and all of Phases 4 and 5. Phases 4 and 5 are the Senior Citizen Neighborhood. The VCPUSD is comprised of eight schools. Pursuant to the PFAF provided by the district, the following schools that could serve students from the project site include Valley Center Elementary; Valley Center Upper Elementary (currently closed); Valley Center Middle; and Valley Center High School.

An exhibit depicting the school district boundaries is provided as Figure 1-5.

~~Approximately 401 acres is located within VCPUSD, including small portions of Phase 1 (0.4 acre) and Phase 2 (6.2 acres), the majority of Phase 3 (218.2 acres), and all of Phases 4 and 5. Phases 4 and 5 are the Senior Citizen Neighborhood. An exhibit depicting the school district boundaries is provided as Figure 1-5. Pursuant to Government Code Section 65995 et seq., new development is assessed fees by school districts to offset demands for service, with limits on the assessment set by state law. The assessment is divided by the school districts where their service areas overlap. The school fees are collected when building permits are issued. None of the schools anticipated to serve the project site are listed on the state's Critically Overcrowded School list.~~

Fire Protection

Fire protection services for the project site would be provided by the DSFPD and/or CAL FIRE. As discussed in subchapter 2.7 (Hazards and Hazardous Materials), significant fire hazards in the County have been mapped by CAL FIRE through their Fire and Resource Assessment Program. Based on FHSZ maps, portions of the project site are located within a very high FHSZ, and the other remainder of the project site is within a moderate FHSZ (CAL FIRE 2009).

The DSFPD, under a cooperative fire protection agreement with CAL FIRE, provides fire, rescue, emergency medical, safety education, and hazard prevention services to a population of approximately 13,000 in an area covering 47 square miles.

The DSFPD operates three fire stations: Stations 11 (District Headquarters) located at 8709 Circle R Drive, Escondido, CA 92026; Station 12 located at 1321 Deer Springs

Road, San Marcos, CA 92069, and Station 13 located at 10308 Meadow Glen Way East Escondido, CA 92026. CAL FIRE Station 15 (Miller Station) located at 9127 West Lilac Road, Escondido, CA 92026, is also located within the DSFPD. The firefighting services of the DSFPD are provided under contract with CAL FIRE.

The DSFPD currently provides staffing for the following resources within the district:

- Five Type 1 Front Line Engines (two at Station 11, two at Station 13, and 1 at Station 12)
- One Type-3 Wildland Brush Engines (located at Station 12)
- One Paramedic ALS (Advanced Life Support) ambulance is staffed and housed at DSFPD Station 11 under contract with Mercy Ambulance Service, Inc.
- Firefighters
- One Chief

Table 3.1-107 is the record of responses and call volumes for all fire stations (including CAL FIRE’s Miller Station) within the DSFPD for 2005–2011:

**TABLE 3.1-107
2005-2011 RESPONSE DATA FOR DSFPD**

Response	District Totals for Seven-Year Period	Calls Per 24-Hour Shift for District by Response Type
Medical Aid (MU)	3571	1.4
Traffic Collision (TC)	1075	0.4
Vehicle Fire (VF)	400	0.2
Vegetation Fire (VEG)	203	0.1
Structure Fire (STR)	80	0.03
Hazardous Material Response	23	0.01
False Alarm (FA)	676	0.3
Illegal Burn (IB)	88	0.03
Smoke Check (SC)	229	0.12
PSA	465	0.2
Mutual Aid/Assist Out of District (MUT)	658	0.26
Assist to other DSFPD Units	1612	0.6
Total Responses	8087	3.2
Cancel	1653	0.65
District Total, including Cancell	9740	3.8
Calls per 24-Hr Shift for District	3.8	--

NOTE: Data provided by DSFPD.

The response data above indicates that DSFPD averages 3.8 calls per 24-hour shift for all stations (including the CAL FIRE Miller Station). The data is for seven years and thereby shows the variation of responses over a period of time. The data also indicates that a very large volume of responses for DSFPD is for medical aid (37 percent), traffic collisions (11 percent), and cancelled calls (17 percent).

Law Enforcement

The San Diego County Sheriff's Department (SDSD) is the chief law enforcement agency in the County. The department is comprised of approximately 4,000 employees, both sworn officers and professional support staff providing general law enforcement, detention, and court services. SDSD staffing goals and facility plans are based upon population. Generally, SDSD has a goal of providing one patrol position per 10,000 residents. Therefore, the project, which would generate approximately 5,135 residents at build-out, would necessitate less than one full-time patrol position.

The project site is located with the Valley Center command area. The Valley Center Substation provides law enforcement services to approximately 21,869 residents and an area encompassing 330 square miles. The facility is approximately 5,490 square feet in size, with a total of 23 sworn personnel serving the area. The closest substation in proximity to the project site is located at 28205 North Lake Wohlford Road, Valley Center, approximately 12 miles from the project site.

With 23 officers for 21,869 residents, the Valley Center Substation currently maintains a staffing ratio of one sworn officer per 950 residents, which far exceeds the SDSD goal of one officer per 10,000 population. The project would add 5,135 residents to the area. With the addition of project residents, the service ratio would be one sworn officer per 1,174 population. Pursuant to the comments received from SDSD, with the addition of three new officers, provided through the payment of property taxes, adequate personnel would be available to serve the project.

Response time to a call for service is just one measure of how police services are keeping pace with growth. A call for service is registered when a citizen or law enforcement personnel requests assistance for public safety services. Calls are assigned a priority based on the nature of the incident and the level of urgency. Priority 1 is considered the highest priority and includes officer assistance and/or vehicular pursuit calls. Priority 2 calls include injured persons, robbery in progress, bomb threats, carjacking, rape, and stolen vehicles. Priority 3 calls include assaults, prowlers, disturbances, tampering with vehicles, and burglary alarms. Finally, Priority 4 calls are the lowest priority calls and include security checks, animal noise disturbances, traffic stops, harassing phone calls, illegal dumping, and abandoned vehicles. Response times are used as guidelines to measure adequate levels of service. SDSD does not have adopted response time standards; however, pursuant to SDSD 2009 data, average response time at the Valley Center Substation was 17 minutes for priority calls and 33 minutes for non-priority calls.

Public Library Service

The San Diego County Library (SDCL) system serves over one million residents in the County's unincorporated communities. In 1996, the Board of Supervisors adopted recommended Standards of Library Service. Library branches are assigned to a particular category based on a combination of factors including the size of branch location, the population served, and the volume of materials checked out. The minimum space service goal for the SDCL system is 0.5 square feet per capita.

The Valley Center branch library is located at 29200 Cole Grade Road. As disclosed in the GPU FEIR, the facility requirement for Valley Center is 6,856 square feet based on a

population of 13,759 residents. The existing facility is 14,068 square feet, representing a surplus of 7,212 square feet in library facility services.

3.1.5.2 Analysis of Project Impacts and Determination of Significance

The project would result in a significant adverse environmental effect to public services if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: schools, fire, law enforcement, public libraries.

Issue 1: Schools

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for schools.

Analysis

Implementation of the project would increase the demand on school services. Table 3.1-118 provides a breakdown of new student generation based on student placement under the approved Proposition BB. As discussed above, Proposition BB created the BUSD, uniting Bonsall elementary and middle school students with a portion of Fallbrook Union High School District students. The project site is among those areas affected by the unification.

The project includes a 12-acre site for the construction of an elementary/middle school site. Prior to construction of the on-site school, students living within each district would attend local facilities. Once constructed, the on-site school would accommodate all elementary and middle schools students living within the project site. High school students would attend Valley Center High School.

Under the Specific Plan, the school site is zoned RU with an S designation. The 12-acre K-8 school site within Phase 3 is proposed for public or private school to serve the educational needs of the residents of the project and surrounding areas. The two local school districts would have an opportunity to acquire the site based on their independent assessment of their facility needs. It is also possible that a private school would acquire the site, or the site would be developed as a charter school. The site would be held for acquisition for two years, as required by the Map Act Section 66480, after grading and utility installation before it could be used for something else. If neither a public or private entity obtains the site, it may be considered for an alternative use. If this site is not needed for a school use, the site could be used for RU uses including residential development by transferring unallocated units to the school site as provided for in the

Specific Plan. Any proposal to add residential units above the 1,746 authorized by the plan would require a General Plan Amendment.

This school may not open until after a portion or all of the proposed residences are constructed. As stated below, until that time the district's existing schools have adequate capacity to accommodate students residing with the project site. The site will be set aside for as long as required pursuant to state law.

Implementation of the project would result in the development of 1,086 single-family and 192 multi-family residential dwelling units. As shown in Table 3.1-118, the project would generate approximately 519 elementary and middle school students and 519 high school students.

**TABLE 3.1-118
STUDENT GENERATION RATES FOR SCHOOL DISTRICTS
SERVING THE PROJECT**

School District	Grades	Student Generation Rate (student/DU)	Proposed Residential Units Within District	Project Student Generation
VCPUSD	K-8	0.4	SF = 463	Total = 185
	9-12	0.4	SF = 463	Total = 185
BUSD	K-8	SF = 0.416 MF = 0.393	SF = 623 MF = 192	SF = 259 MF = 75 Total = 334
BUSD	9-12	SF = 0.416 MF = 0.393	SF = 623 MF = 192	SF = 259 MF = 75 Total = 334

DU = dwelling unit
SF = single-family; MF = multi-family

~~The project would generate approximately 519 elementary and middle school students and 519 high school students (see Table 3.1-8). Overall, the project would therefore increase attendance at off-site VCPUSD grades K-8 schools by 185 students and grades 9-12 (Valley Center High School) by 185 students. Additionally, the project would increase attendance at the BUSD K-8 (Bonsall Elementary School and Sullivan Middle School) by 334 students, and the newly established BUSD high school by 334 students.~~

Based on the increased student body associated with the project, there would not be adequate capacity in the local schools to serve the project's student generation. Pursuant to its PFAF, VCPUSD indicated that Valley Center Elementary Upper School, which is currently closed, could re-open to accommodate students. Additionally, BUSD has indicated its ability to place temporary portable classrooms on existing school sites as an interim solution to the new students.

The students within the project would continue to attend schools in their associated districts which have indicated their capacity to accommodate such students. However, a the proposed school site would be offered to the local districts, or potentially as a private school, and reserved for possible acquisition by a school district for two years pursuant to the Map Act Section 66480. Construction of the school facility on the site would

ultimately be the responsibility of the school district. In addition, the applicant will be required to pay school impact fees pursuant to California Government Code Section 65996(b).

~~With the opening of the proposed school, the students within the project site would continue to attend schools in the BUSD and the VCPUSD. Elementary and middle school students residing on-site and within the VCPUSD school district (mostly Phase 3) would likely attend the new on-site school.~~

The project is consistent with relevant General Plan goals and policies, including Goals LU-1, LU-9 and LU-12, and relevant implementing policies. For example, Policy LU-1.2 assures that public services are available to meet the needs of new development. Policies LU-9.7 and 12.3 encourage the development of new schools and promoting compatibility between planning and infrastructure and services compatibility. Goal LU-12 promotes the provision of public facilities, and essential services concurrent with growth and development. The project was planned with roads and other infrastructure sized to accommodate a new school on the indicated site. Provision of the school site in a central location within the project ensures that additional school facilities would be available should the appropriate district determine that such facilities were necessary. These General Plan goals and associated policies would assure that public facilities and services are available to support growth and development.

~~Ultimately, the provision of schools is the responsibility of the school districts. SB 50 provides that the statutory fees found in the Government and Education Codes are the exclusive means of considering, as well as mitigating for school impacts. It does not just limit the mitigation that may be required, but also limits the scope of review and the findings to be adopted for school impacts. Imposition of the statutory fees constitutes full and complete mitigation (Government Code §65995(b)).~~

Regulatory compliance assures that there would be sufficient facilities to serve the project's additional students. Ultimately, the provision of schools is the responsibility of the school districts. SB 50 provides that the statutory fees found in the Government and Education Codes are the exclusive means of considering, as well as mitigating for school impacts. It does not just limit the mitigation that may be required, but also limits the scope of review and the findings to be adopted for school impacts. Imposition of the statutory fees constitutes full and complete mitigation (Government Code §65995(b)). Additionally, the imposition of school fees required to be paid prior to the issuance of building permits assure that school facilities are available to accommodate the projected student population.

Implementation of the project would not result in physical impacts associated with the provision of new or physically altered facilities no new facilities outside of the project site would be required to be constructed. Traffic impacts associated with the school use have been analyzed in the Traffic Impact Study prepared for the EIR (see Appendix E) and would be less than significant. Should either school district determine that a new school site is required, Ppotential impacts associated with the new school facilities would be evaluated by the district when the location and project details are available.

At this time, have been included herein. Impacts associated with the temporary accommodation of increased student capacity or the expansion of existing or construction of new off-site facilities would be less than significant.

Issue 2: Fire Protection

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.

Analysis

An indicator to determine adequate regional fire protection and emergency medical demand is the capacity to respond to every emergency within acceptable time parameters. Travel time is defined as the estimated time it would take for responding emergency personnel to reach the furthest structure in a proposed development project. Travel time is determined by measuring the most direct reliable route with consideration given to safe operating speeds for heavy fire apparatus. The County's General Plan sets policy for fire protection services for development. It requires that new development demonstrate that fire services can be provided that meets minimum travel times. The acceptable response time associated with the proposed project is five minutes. A discussion of the project's exposure to a significant risk of loss, injury, or death resulting from fire is detailed in subchapter 2.7.2.4, Wildland Fires. Subchapter 2.7.2.4 provides a detailed analysis of the availability and adequacy of fire protection services, including the project's inclusion of three ~~four~~ possible options for fire facilities. The selection of any one of the four options would reduce time response impacts to less than significant and the project would be adequately served by either DSFPD and/or CAL FIRE. This ~~subchapter section~~ examines whether significant impacts would occur as a result of the selection of the fire protection option requiring construction or expansion of fire facilities.

~~A permanent or temporary fire services include options to construct a fire station on-site to within in Phase 1 may be constructed, or expand or construct a station at the off-site Miller Station site as described in subchapter 2.7.~~ No additional impacts would occur as a result of the on-site temporary station because it would be located on-site within a commercial use zone. Fire sirens are an exception to noise restrictions and would therefore be compatible with residential neighbors within the mixed-use residential areas. Because the location of the temporary fire station would be within the development footprint of the Specific Plan, construction impacts would be less than significant for air emissions from building construction, noise, cultural resources, biological resources, hydrology, and water quality with implementation of the mitigation measures and incorporation of the design measures proposed in the EIR.

Likewise, the construction of a new fire station in either of the options or expansion of Miller Station would not result in adverse physical impacts. ~~The on-site location would be within the development footprint of the specific plan and would be a permitted use.~~ As discussed throughout Chapter 2.0, the off-site (Miller Station) improvements associated with the construction of a fire protection facility would be **less than significant**.

Issue 3: Law Enforcement

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for law enforcement police protection services.

Analysis

The SDSA does not have adopted response times because response times depend on such factors as type of call, call priority, previous calls pending, time of day, location of squad car and amount of traffic. Therefore, the performance measurement for adequate service standards is service ratio.

The SDSA reviewed the project to determine whether any new or expanded facilities would be needed as a result of an increase in residential population by approximately 5,135 people. The SDSA indicates the project would result in the need for three additional sworn personnel to achieve a service level of three patrol shifts per day per 10,000 residents. The project would not require the expansion of existing police protection facilities or the construction of new facilities. As such, the project would not result in impacts associated with the provision of new or physically altered facilities.

General Plan policies also assure that adequate police protection services are available. ~~As discussed in the Specific Plan, the project is consistent with relevant General Plan goals and policies. Those specifically applicable to police protection services are discussed above including Policy LU-12.3, which promotes compatibility between planning and services. Specifically, Policy LU-12.2 requires development to mitigate significant impacts to existing service levels. Residents of the project would support the SDSA through property tax payments as is done by all County residents~~

While the projected population of the project would result in the requirement for increased police sworn personnel, there would be no need for new or expanded facilities. Existing policies and regulations assure that police protection would be available to support the project's needs and are provided concurrent with growth and development. Potential impacts associated with the construction of new or expanded law enforcement facilities would be **less than significant**.

Issue 4: Public Library Facilities

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities, including libraries.

Analysis

The residential component of the project would increase population by a total of 5,135 new residents. Applying the minimum space service goal for the SDCL system of 0.5 square feet per capita, an additional 2,567.5 square feet of library facility services would be needed. As stated above, there is a surplus of 7,212 square feet which would accommodate this requirement. Therefore, the project would not result in a need for expanded or newly constructed facilities.

The SDCL system has created a Strategic Plan that identifies goals and objectives of the Library System from 2007-2012. Within this plan, goals are identified that involve financial management and fundraising strategies so that library facilities can be enhanced in the upcoming years. The Strategic Plan also identifies the need to develop and implement a facilities plan, which would guide the construction of library facilities in the future. This would continue to assure that adequate services are available consistent with anticipated growth. Additionally, General Plan policies assure that adequate public library services are available. As discussed in the General Plan Amendment Report (GPAR) Consistency Analysis, the project is consistent with relevant General Plan goals and policies. Those specifically applicable to libraries are discussed above including Policy LU-12.3, which promotes compatibility between planning and services. Policy LU- 12.2 specifically requires development to mitigate significant impacts to existing service levels.

The projected increase in population growth associated with the project would result in an increase in the number of persons that must be provided with public library services. The Valley Center branch library is able to maintain the SDCL library service ratio. Therefore, no the additional construction or expansion of library facilities would not be required as a result of the project. Additionally, existing County policies and regulations assure the ongoing provision of library facilities. As no new or expanded public library facilities would be required, public library facility impacts would be **less than significant**.

3.1.5.3 Cumulative Impact Analysis

The project, in conjunction with other projects in the area, would place an added demand on public services. A list of cumulative projects considered in developing the cumulative impacts is discussed in subchapter 1.7 of this EIR. The cumulative study area for fire protection, law enforcement and public library facilities consists of the localized area and associated cumulative projects in Table 1-5. Due to the school district boundaries extending beyond the localized cumulative study area, the larger cumulative school study area and associated cumulative projects in Table 1-6 are appropriate for the school analysis. The school, fire protection, law enforcement and public library facilities cumulative analysis is presented below.

Schools

Cumulative projects that involve residential development would increase the public school population in the cumulative project area. While population growth was accounted for in the GPU, new applications for General Plan Amendments or Rezones could result in a further increase in residential densities within the cumulative project area. An increase in student population could require the construction or expansion of school facilities in the future, which would result in adverse environmental impacts. However, like the project, cumulative projects would undergo individual environmental

review, and would be required to demonstrate compliance with state and local regulations, and General Plan policies, as well as CEQA prior to project approval. Therefore, the project, in combination with the identified cumulative projects would have a **less than significant** cumulative impact associated with the construction of schools.

Fire Protection

As required by the General Plan, each cumulative project within the study area would be required to assure adequate fire ~~service availability~~. Additionally, any of the fire service options discussed above would provide more robust fire service capabilities for properties in proximity to the project site. The construction or expansion of a new fire station would not result in adverse physical impacts as discussed throughout Chapter 2.0. The impact associated with construction of a fire protection facility would less than significant.

Law Enforcement

Projects in the cumulative project area would require increased law enforcement~~police protection~~ services to serve new development. Based on growth studies relied upon for the preparation of the GPU FEIR, the Valley Center command area is one of the SDCS beat areas that would experience the greatest percentage growth in housing and population under the GPU, an estimated 127 percent increase in housing and population. To address this anticipated increase in law enforcement~~police~~ services, the SDCS completed a two-year planning effort in 2005 that culminated in a Law Enforcement Facilities Master Plan (LEFMP). This plan was prepared to guide facility decisions and development over the next 15 years.

While population growth was accounted for in the GPU, new applications for General Plan Amendments or Rezones could result in a further increase in needs above that anticipated in the LEFMP. The increase in demand for law enforcement~~police protection~~ services from implementation of cumulative projects could have the potential to result in the need to construct or expand existing police facilities, which would have the potential to create an adverse impact on the environment. However, like the project, individual cumulative projects would undergo environmental review, and would be required to demonstrate compliance with General Plan policies and prior to project approval to assure the adequacy of services. General Plan policies assure that services would be provided with the needs of development. The construction completion~~of a new or expanded facility is unknown at this time and~~ would be required to undergo subsequent environmental review. Therefore, the project, in combination with the identified cumulative projects would have a **less than significant** cumulative impact associated with the construction of police facilities.

Public Library Facilities

Cumulative projects that involve residential development could increase the population of library users. While population growth was accounted for in the GPU, new applications for General Plan Amendments or Rezones could result in a further increase in needs above that anticipated in the SDCL Strategic Plan. The increase in demand for library services from implementation of cumulative projects could result in the need to construct additional or expand existing library facilities, which would create an adverse impact on the environment. However, at this point, the SDCL has no plans to expand an existing library or to locate and construct a new library to serve this area. Any such

~~construction would be subject to review under CEQA, and significant impacts would be mitigated to the extent feasible. Like the project, cumulative projects would undergo environmental review, and would be required to demonstrate compliance with General Plan policies and CEQA.~~ Therefore, the project, in combination with the identified cumulative projects would have a **less than significant** cumulative impact associated with the construction of library facilities.

3.1.5.4 Conclusion

Impacts to public services from the project would be less than significant. Regulatory compliance and application of General Plan policies would ensure the availability of adequate public services for the project.

Schools

The project includes 11.2 acres designated as a school site to serve the projected increase in the on-site elementary/middle school student population. All impacts associated with school construction and operation have been identified in other applicable issue subchapters of this EIR including, but not limited to, air quality, noise, transportation/traffic, biological resources, and cultural resources. While no other new facilities or facility expansions would be required to service the project, the project would include the payment of SB 50 fees that fund needed school services and facility improvements. Pursuant to Government Code Section 65996(b), payment of school fees in accordance with SB 50 makes potential impacts to schools less than significant, as a matter of law. Therefore, impacts associated with the construction of new schools, beyond what is planned as part of the project, would be less than significant.

Fire Protection

The project includes options that would improve overall fire services. The selection of any of the four options would result in the need for a new or expanded facility. The on-site location would be within the development footprint of the Specific Plan and discussed in applicable subchapters of the EIR, and as discussed throughout Chapter 2.0, impacts associated with any off-site improvements associated with the expansion or construction of a fire protection facility at the Miller Station location would be less than significant.

Law Enforcement

The project has received notification from the SDSA indicating that while the project would result in the need for three additional sworn personnel, it would not require new or expanded facilities. Therefore, project impacts related to the provision of adequate law enforcement ~~Sheriff~~ facilities would be less than significant.

Public Library Services

The Valley Center branch library is able to maintain the SDCL library service ratios to support the anticipated population growth associated with the project. Therefore, the additional construction or expansion of library facilities would not be required and impacts would be less than significant.

3.1.6 Recreation

This subchapter describes and evaluates the potential impacts to recreational resources and facilities associated with the project.

3.1.6.1 Existing Conditions

Regulatory Setting

California State Government Code §66477 (The Quimby Act)

Cities and counties have been authorized since the passage of the 1975 Quimby Act (California Government Code §66477) to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The County implemented the Quimby Act by adopting the Park Lands Dedication Ordinance (PLDO). The PLDO is the mechanism that enables the funding or dedication of local parkland in the County, and is discussed in detail below.

County of San Diego Code of Regulatory Ordinances § 810.101 – 810.114 (Park Lands Dedication Ordinance)

The PLDO establishes several methods by which developers may satisfy their park requirements. Options include the payment of park fees, the dedication of a public park, the provision of private recreational facilities, or a combination of these methods. PLDO funds must be used for the acquisition, planning, and development of local parkland and recreation facilities. Local parks are intended to serve the recreational needs of the communities in which they are located.

County of San Diego Code of Regulatory Ordinances § 812.201 – 812.214 (Trails Ordinance)

The County's Trails Ordinances specify the uses allowed on trails (mountain bicycling, hiking, and horseback riding) and the activities that are prohibited (motorized vehicles, tampering with or destroying trail signs, etc.). Other County ordinances that pertain to trails include Ordinance Number 9701, which amended multiple sections of the San Diego County Code Relating to Subdivision Improvements. This ordinance determined that there is a significant demand for recreational trails throughout the unincorporated area of the County, but that there are not enough trails to meet this demand. This ordinance also determined that the Subdivision Ordinance should be amended to provide for the dedication and improvement of trails in conjunction with the approval of major and minor subdivisions and revised maps.

County Zoning Ordinance Section 4900 (Usable Open Space Regulation)

These regulations promote the availability of outdoor areas for leisure and recreation throughout San Diego County by establishing requirements for minimum areas of usable open space for residential developments with three or more dwelling units per lot or building site. The provisions for usable open space include standards for surfacing,

location, size and shape, accessibility, openness, screening, and maintenance of the required usable open space.

County of San Diego Department of Parks and Recreation, Strategic Plan

The mission of the County of San Diego Department of Parks and Recreation (DPR) is to provide opportunities for high quality parks and recreation experiences and to preserve regionally significant natural and cultural resources. The DPR Strategic Plan discusses what DPR does, including how it implements programs and achieves objectives.

County of San Diego Trails Program

In January 2005, the County Board of Supervisors adopted the County Trails Program (CTP). The components of the CTP include a CTMP and Regional Trails Plan, as described below. The CTP also included the Trails Ordinance (described above). The CTP allows the County to develop a system of interconnected regional and community trails and pathways. These trails and pathways are intended to address an established public need for recreation and transportation, and also provide health and quality of life benefits associated with hiking, mountain biking, and horseback riding throughout the County's biologically diverse environments. For certain discretionary projects, the County may require the dedication and improvement of trails. Dedication will be considered only if (1) the land for which the approval is sought includes some or all of a trail corridor as shown on the Regional Trails Map or on a community trail map in the CTMP; and (2) there is the necessary rough proportionality between the required dedication and the impacts of and/or benefits to the proposed development.

Community Trails Master Plan

The CTMP is the implementing document for the CTP and contains adopted individual community trails and pathways plans. The CTMP involves trail development, maintenance and management on public, semi-public and private lands. The main focus of the CTMP is to implement and maintain a realistic system of interconnected and continuous regional and community trails. The CTMP also includes development and management guidelines that can be applied to community level trail systems. The community trails maps contained in the CTMP depict corridors of general alignments. The term "general alignment" is used to describe the general location of a future trail generally within a quarter-mile wide corridor.

Regional Trails Plan

The Regional Trails Plan identifies County-approved general alignment corridors of regional trails in the County. Regional Trails have characteristics and conditions that serve a regional function by covering long linear distances, transcending community and/or municipal borders, having state or national significance, or providing important connections to existing parks and preserves. There are no Regional Trails within the vicinity of the project site.

San Diego County Board of Supervisors Policies

F-26 Utilization of Park Fees and Interest Derived from Park Fees

This policy establishes guidelines and procedures for the acquisition and development of parkland with fees derived from the PLDO and the maintenance and operation of County parks with the interest accumulated on Park Lands Dedication fees.

BOS G-6 User Fees for County Parks and Recreation Facilities

This policy defines a policy for charging fees for the use of County operated parks and recreation facilities and to establish certain group exemptions to this policy.

BOS G-15 Design Standards for County Facilities

This policy establishes general principles and objectives for the design, construction and improvement of owned or leased County facilities.

DPLU CP-15 Public Passive Park/Recreational Areas

This policy establishes criteria to assist in the evaluation of proposals for Public Passive Park/Recreational Areas, as defined in the County Zoning Ordinance. Public Passive Park/Recreational Areas may be of any size and may include wilderness, ecological or natural preserves. These areas are classified in the Zoning Ordinance (Section 1335) as an example of the Essential Services use type.

County of San Diego General Plan

The General Plan includes numerous goals and policies related to parks and other recreational facilities.

Land Use Element

GOAL LU-12

Infrastructure and Services Supporting Development. Adequate and sustainable infrastructure, public facilities, and essential services that meet community needs and are provided concurrent with growth and development.

Policies

LU-12.1 Concurrency of Infrastructure and Services with Development. Require the provision of infrastructure, facilities, and services needed by new development prior to that development, either directly or through fees. Where appropriate, the construction of infrastructure and facilities may be phased to coincide with project phasing.

LU-12.3 Infrastructure and Services Compatibility. Provide public facilities and services that are sensitive to the environment with characteristics of the unincorporated communities. Encourage the collocation of infrastructure facilities, where appropriate.

Mobility Element

GOAL M-12

County Trails Program. A safe, scenic, interconnected, and enjoyable non-motorized multi-use trail system developed, managed, and maintained according to the County Trails Program, Regional Trails Plan, and the Community Trails Master Plan.

M-12.1 County Trails System. Implement a County Trails Program by developing the designated trail and pathway alignments and implementing goals and policies identified in the Community Trails Master Plan.

M-12.2 Trail Variety. Provide and expand the variety of trail experiences that provide recreational opportunities to all residents of the unincorporated County, including urban/suburban, rural, wilderness, multi-use, staging areas, and support facilities.

M-12.4 Land Dedication for Trails. Require development projects to dedicate and improve trails or pathways where the development will occur on land planned for trail or pathway segments shown on the Regional Trails Plan or Community Trails Master Plan.

Housing Element

GOAL H-2

Neighborhoods That Respect Local Character. Well-designed residential neighborhoods that respect unique local character and the natural environment while expanding opportunities for affordable housing.

Policy

H-2.2 Projects with Open Space Amenities in Villages. Require new multi-family projects in Villages to be well-designed and include amenities and common open space areas that enhance overall quality of life.

Conservation and Open Space Element

GOAL COS-21

Park and Recreational Facilities. Park and recreation facilities that enhance the quality of life and meet the diverse active and passive recreational needs of County residents and visitors, protect natural resources, and foster an awareness of local history, with approximately ten acres of local parks and 15 acres of regional parks provided for every 1,000 persons in the unincorporated County.

Policies

COS-21.1 Diversity of Users and Services. Provide parks and recreation facilities that create opportunities for a broad range of recreational experiences to serve user interests.

COS-21.2 Location of Parks. Locate new local parks and recreation facilities near other community-oriented public facilities such as schools, libraries, and recreation centers where feasible, so that they may function as the “heart” of a community.

COS-21.3 Park Design. Design parks that reflect community character and identity, incorporate local natural and cultural landscapes and features, and consider the surrounding land uses and urban form and cultural and historic resources.

COS-21.4 Regional Parks. Require new regional parks to allow for a broad range of recreational activities and preserve special or unique natural or cultural features when present.

COS-21.5 Connections to Trails and Networks. Connect public parks to trails and pathways and other pedestrian or bicycle networks where feasible to provide linkages and connectivity between recreational uses.

GOAL COS-22

Park and Recreational Services. High-quality parks and recreation programs that promote the health and well-being of County residents while meeting the needs of a diverse and growing population.

Policies

COS-22.1 Variety of Recreational Programs. Provide and promote a variety of high quality active and passive recreation programs that meet the needs of and benefit County residents.

GOAL COS-24

Park and Recreation Funding. Adequate funding for acquisition, development, maintenance, management, and operation of parks, recreation facilities, and preserves.

Policies

COS-24.1 Park and Recreation Contributions. Require development to provide fair-share contributions toward parks and recreation facilities and trails consistent with local, state, and federal law.

COS-24.2 Funding Opportunities. Maximize funding opportunities for the following: (1) the acquisition, expansion, and development of parks, recreation facilities, preserves, and trails; (2) the operation, maintenance, and management of parks, recreation facilities, preserves, and trails.

Environmental Setting

Types of Parks, Recreational Facilities, and Trails

There are a wide range of park and recreation opportunities within the San Diego region provided by cities, state entities, federal entities, special districts, school districts, and private nonprofit organizations, in addition to those provided by the County:

Local Parks—Local parks range in acreage depending on the uses and community or neighborhood they serve, and may be associated with joint use facilities such as schools. Typically, local parks contain recreation areas such as a community center, athletic fields, or facilities of special interest to the community. Smaller local parks may be located within or near town centers, where they can be used as common recreation and gathering areas by the community.

In order to address a diverse range of conditions within various communities, the amount and type of local parks are tailored to an individual community's needs. For example, some communities may want larger, community parks while others may prefer an extensive system of smaller, neighborhood parks. The acreage goal identified for local parks in the General Plan is 10 acres per 1,000 residents. There are three different types of local parks within the County. These are described below.

1. **Mini-parks** are small specialized facilities that serve a limited population who live, work or shop in a distinct area. They are typically less than one acre in size. Mini-parks generally offer active, child-oriented recreation, such as tot lots and picnic benches, combined with passive recreational uses.
2. **Neighborhood Parks** serve a residential area, and should be located to minimize walking distances for residents. They typically range in size from five to ten acres, and may be associated with other public use facilities such as a school. Neighborhood parks provide both active recreation areas and/or facilities, such as game courts and jogging trails, and passive recreational areas such as family picnic areas and benches.
3. **Community Parks** serve the community as a whole. They typically range in size from 20 to 50 acres and may be associated with other public use facilities such as a school. Community parks typically contain recreation areas including a community center, athletic fields, or facilities of special interest to the community. Smaller community parks may be located within or near town centers, where they can be used as common recreation and gathering areas by the community.

Regional Parks—Regional parks serve County residents and visitors and are often larger than 200 acres, although smaller facilities may be appropriate for specific sites of regional interest. Regional parks include a variety of passive and active recreational uses and may include an interpretive center. Most regional parks contain open space, natural resources, cultural resources, and multi-use trails. Most regional parks also contain a local park element by serving as the recreation outlet for a community.

Trails—Trails provide recreational opportunities and allow for enjoyment by the public of parks and open space preserves. Trails provide connection between recreation uses. The CTMP developed a simplified approach to trail classification rather than rigid standards. This approach resulted in a classification of three trail types (A, B, C) and two pathway types (D and D-Special), discussed in detail below.

1. **Urban/Suburban Trail:** Trail type intended for an intense volume of use generally associated within an urban/suburban setting. These trails provide the widest tread so they may function as both recreation and transportation facilities and will be accessible to all trail users.

2. **Rural Trail:** Trail type intended for medium volume of use generally associated within a rural setting. These trails are intended to function as recreation and transportation facilities. Although accessible to all trail users, some uses may not be practical in steep terrain.
3. **Primitive Trail:** Trail type intended for medium to low volume of use generally associated within a primitive or wilderness setting. They have the smallest trail tread and are intended to function as low impact, remote recreational experiences, and connector trails. Steep terrain and remote wilderness areas dictate that accessibility is limited and may not be suitable for all persons or user groups.
4. **Pathway:** A specific type of trail called a “pathway” is intended for a high volume of use located within a public road right-of-way. These trails are generally intended for transportation purposes including bike, hike, pedestrian and equestrian use, although they may be utilized for establishing trail connections and recreational experience in areas with trail Type A-C constraints. Grade and accessibility will be established by the grade of the right of way. This restriction may impede the ability to provide accessibility to pedestrian traffic within the industry standards. The “typical” type D pathway refers to those which currently exist. The “special” type D pathway refers to new pathways.

Recreation Facilities—Recreational facilities include community centers, teen centers and gymnasiums and are operated and maintained by County staff, volunteers, and service contracts.

Preserves—Preserves include areas of environmental significance and beauty. The dual purpose of preserves is to protect biological, cultural, and historical resources, as well as community character, and to make these resources available for public recreation opportunities. However, typically only minimal improvements such as trails, parking, and restroom facilities are found in preserves. Some preserves may also provide interpretive or educational amenities. Preserves vary in size depending on the resources being protected, and public access can be limited according to the sensitivity of the resources.

Existing Recreational Facilities

There are no local parks, regional parks, recreational facilities, or preserves within the project site. The CTMP shows two County (public) trails planned to cross the project site. The first trail roughly parallels Old West Lilac Road in an east-west direction along the northern boundary of the project site and is classified as a “Third Priority” Pathway by the County. The second trail, also classified as a “Third Priority” Pathway, is planned to cross from east to west along an existing VCMWD water easement, near the southern boundary of the project.

The nearest regional park is the planned San Luis Rey River Park, located approximately 3 miles north of the project site, which will include open space areas including trails, staging areas, and habitat preservation corridors. The nearest preserve is the 1,900-acre Hellhole Canyon Preserve, which includes 13.5 miles of trails. The preserve is located approximately 15 miles to the east of the project site.

Existing community parks within the Valley Center community planning area include the Valley Center Community Park (14 acres), located approximately 7 miles east the project site; and Robert Adams Community Park (38 acres), located approximately 7 miles east of the project site. Both facilities are managed by the Valley Center Parks and Recreation District. The BCP area does not have any community parks.

According to the County General Plan Update EIR (see Table 2.14-4), the VCCP area is currently 126 acres short of its identified park acreage goal. The BCP area is currently 93 acres short of its identified park acreage goal.

3.1.6.2 Analysis of Project Impacts and Determination of Significance

The project would result in a significant impact if it would:

1. *Deterioration of Parks and Recreational Facilities:* Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated
2. *Construction of New Recreational Facilities:* Include recreational facilities or require the construction or expansion of recreational facilities which would have an adverse effect on the environment.

Issue 1: Deterioration of Parks and Recreational Facilities

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.

Analysis

The project would provide a variety of on-site recreational opportunities to future residents of the project site, and thus would not substantially increase the use of existing neighborhood and regional parks within the community. As discussed above, the PLDO establishes several methods by which developers may satisfy their park requirements. Options include the payment of park fees, the dedication of a public park, the provision of private recreational facilities, or a combination of these methods. The project requires 15.09 acres of public parks pursuant to the PLDO. The project would exceed the PLDO requirement by providing a total of 23.6 ~~23.8~~ acres of parkland. As shown ~~on~~ in Figure 1-9, the project would provide numerous parks located throughout the project site including a 13.5-acre public park, and 12.1 acres of private parks which would include private recreation facilities. The public park would be dedicated to and owned by the County, and maintained by the HOA.

~~One of the private parks would be located within the Town Center. As detailed in Section II.7, of the Specific Plan, this park, located adjacent to the Town Center, would serve as the Village Green, and it would host events as decided by the HOA. The Village Green would be owned and maintained by an HOA. As described in the Specific Plan, the~~

~~Village Green would serve as a focal point for community events such as a farmers' market.~~

The ~~42~~13.5-acre public park would be located in the center of the community (see Figure 1-9), adjacent to the school site. This park would serve the project residents as well as the general public, and would allow for joint use with the school. Detailed park concept plans are included in Section III of the Specific Plan.

A private recreational facility would also be located within the project site (Planning Area ~~PRCPF, Phase 3~~) and would provide active indoor and outdoor uses possibly including, a swimming pool, gym, basketball courts, and tennis courts. The facility would be privately operated and maintained. A smaller private recreational center would be constructed in Phase 1. The Phase 1 private recreational center would include two tennis courts, one multi-use field (approximately 110 feet x 175 feet), a pool, spa, 3,600-square-foot clubhouse, and 1,850-square-foot classroom/reception hall.

In addition, the project would include a network of trails and pathways that meander along streets and within open space areas. As detailed in Section II, 3 of the Specific Plan, the project would construct two CTMP trail segments. One Type D-Pathway Existing Conditions Multi-Use trail will be improved along the project boundary to the north (Old West Lilac Road), and the other, included as part of the Ranch Multi-Use Trail in the southern portion of the project site (along the VCMWD easement). These trail segments would be designed as a multi-purpose, Type D trail of decomposed granite per the Valley Center Community Road Design Guidelines and would provide an equestrian linkage, thus avoiding equestrian conflicts in the Village Center. The trails would be set back from the street and lined with an equestrian themed fence, where required for safety.

As shown in Figure 1-8, the project proposes a community trail –network that would provide access from one neighborhood to another. The trail system would be designed to serve the project residents and surrounding area residents and would connect to the trails identified in the CTMP at each end of the project site, allowing access to other communities. Overall, the project trail system would include 1.4 miles of multi-use trails as shown on the CTMP; approximately 8 miles of ranch multi-use trails located in undeveloped and open space areas and/or landscaped easements parallel to the streets; approximately 4 miles of community trails primarily used to connect the Town Center with the northern Neighborhood Center, school site, and public park; and approximately 4 miles of feeder trails located within neighborhoods, on local streets. Other than the portion of the trails system within the Senior Citizen Neighborhood, the trail would be available for public use.

The parks, recreational facilities, and trails provided by the project are intended to provide convenient recreational opportunities for residents of the project site. The project would exceed the amount of parkland required by the PLDO. The new parks would be maintained by the HOA. The trail system has been designed concurrently with County staff to ensure impacts to sensitive habitats are minimized. Further, the new trails and pathways would provide connectivity to trails planned for in the CTMP. Overall, the project would provide adequate recreational facilities, and impacts associated with the deterioration of existing recreational facilities would be **less than significant**.

Issue 2: Construction of New Recreational Facilities

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would include recreational facilities or require the construction or expansion of recreational facilities which would have an adverse effect on the environment.

Analysis

The project would provide adequate parks and recreation facilities on-site to meet the needs of new residents. The timing of construction of the parks would be consistent with the requirements of the Specific Plan. No other new- parks, recreational facilities, nor trails are within the identified development area for the project. Impacts for all environmental issues within the development area are addressed throughout the applicable issues analyses in Chapters 2 and 3 of this EIR. No other impacts would be associated with the construction of parks, recreation facilities, or trails, and impacts associated with the construction of new recreational facilities would be considered **less than significant**.

3.1.6.3 Cumulative Impact Analysis

The cumulative study area consists of the Valley Center and Bonsall Community Planning Areas.

Deterioration of Parks and Recreational Facilities

The project would provide parks, recreational facilities, and trails in accordance with PLDO and the CTMP, as would the cumulative projects. Smaller development projects would most likely contribute fees in accordance with the PLDO, which the County would use for acquisition or construction of new parks and parkland. The project would provide on-site facilities adequate to serve new residents and would not contribute to the deterioration of existing parks. If other cumulative projects include the construction and dedication of public parks and trails as a part of the project, residents of those cumulative projects would be able to use the provided facilities. Conformance with the PLDO, either through payment of fees or dedication of parkland, would ensure that **no cumulative impacts** associated with the deterioration of parks and recreational facilities would result.

Construction of New Recreational Facilities

The project would provide park and recreational facilities adequate to serve new residents in the project, and would mitigate any significant impacts of the park and recreational facilities, and would not contribute to the need for an off-site parks need for parkland. Projects that involve the construction of parks and recreational facilities would likewise be subject to CEQA. All projects considered in the cumulative study area would result in an increased demand for parks. However, the County requires new development to construct parks to meet its demand. The project is providing adequate parkland to provide for its demand. If a project, for example, was the construction of a park on sensitive biological habitat, the project would be required to mitigate for such

~~impacts.~~—Therefore, cumulative impacts associated with the construction of new recreational facilities would be **less than significant**.

3.1.6.4 Conclusion

Compliance with the PLDO and the CTMP would ensure that no significant direct or cumulative impacts associated with parks, recreational facilities, and trails would occur.

3.1.7 Utilities and Service Systems

3.1.7.1 Existing Conditions

This subchapter of the EIR addresses the provision of water and wastewater services required for project development—addressed, as well as service providers and facilities needed to meet this demand. The following water and wastewater services technical reports were prepared and are attached as Appendices to the EIR: Wastewater Management Alternative Report for Lilac Hills Ranch (DWE 2014~~3~~3a) (Appendix S); Overview of Water Service, Lilac Hills Ranch Project (DWE 2014~~3~~3b) (Appendix T); WSA Report for the Lilac Hills Ranch Project (DWE 2012e) (see Appendix Q), and Preliminary Hydrogeologic Assessment (Wiedlin & Associates 2013) (see Appendix P).

Regulatory Framework

Senate Bill 610

The California Legislature has adopted legislation that addresses water supply planning efforts. The legislation, commonly referred to as SB 610 and SB 221, are now codified in Water Code §§10910-10914 and Government Code §§65867.5, 66455.3, and 66473.7 and became effective January 1, 2002. SB 610 requires that the water supplier of a public water system, or, if no water supplier of a public water system is identified, the city or county, acting as the lead agency, shall be required to prepare a water supply assessment (WSA) for projects within cities and counties that propose to construct 500 or more residential units or the equivalent. The water supply assessment is to be included in the environmental documentation for certain projects subject to CEQA, as specified in Water Code §10912.

Senate Bill 221

Enacted in 2001, SB 221, which has been codified in the Water Code beginning with Section 10910, requires that the legislative body of a city or county which is empowered to approve, disapprove or conditionally approve a subdivision map must condition such approval upon proof of sufficient water supply. The term “sufficient water supply” is defined in SB 221 as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that would meet the projected demand associated with the proposed subdivision. The definition of sufficient water supply also includes the requirement that sufficient water encompass not only the proposed subdivision, but also existing and planned future uses, including, but not limited to, agricultural and industrial uses. SB 221 requirements do not apply to the general plans of cities or counties, but rather to specific development projects.

San Diego County General Plan Land Use Element

The Community Services and Infrastructure section of the Land Use Element discusses adequate wastewater collection, treatment, and disposal capacity to meet future demands. The goal of the General Plan is to provide adequate wastewater facilities for wastewater disposal that address potential hazards to human health and the environment. To meet this objective, the Land Use Element sets specific policies, including:

Policies

LU-12.1 Concurrency of Infrastructure and Services with Development. Require the provision of infrastructure, facilities, and services needed by new development prior to that development, either directly or through fees. Where appropriate, the construction of infrastructure and facilities may be phased to coincide with project phasing. In addition to utilities, roads, bicycle and pedestrian facilities, and education, police, and fire services, transit-oriented infrastructure, such as bus stops, bus benches, turnouts, etc., should be provided, where appropriate.

LU-13.1 Adequacy of Water Supply. Coordinate water infrastructure planning with and use planning to maintain an acceptable availability of a high quality sustainable water supply. Ensure that new development includes both indoor and outdoor water conservation measures to reduce demand.

LU-13.2 Commitment of Water Supply. Require new development to identify adequate water resources, in accordance with state law, to support the development prior to approval.

LU-14.2 Wastewater Disposal. Require that development provide for the adequate disposal of wastewater concurrent with the development and that the infrastructure is designed and sized appropriately to meet reasonably expected demands.

LU-14.3 Wastewater Treatment Facilities. Require wastewater treatment facilities serving more than one private property owner to be operated and maintained by a public agency. Coordinate the planning and design of such facilities with the appropriate agency to be consistent with applicable sewer master plans.

LU-14.4 Sewer Facilities. Prohibit sewer facilities that would induce unplanned growth. Require sewer systems to be planned, developed, and sized to serve the land use pattern and densities depicted on the Land Use Map. Sewer systems and services shall not be extended beyond either Village boundaries or extant Urban Limit Lines, whichever is more restrictive, except:

- When necessary for public health, safety, or welfare;
- When within existing sewer district boundaries;
- When necessary for a conservation subdivision adjacent to existing sewer facilities; or
- Where specifically allowed in the Community Plan.

San Diego County General Plan Conservation and Open Space Element

The County General Plan recognizes that San Diego County relies upon a safe and reliable supply of water resources for its quality of life and economic prosperity. Groundwater aquifers and local surface water reservoirs are of great importance to providing an adequate water supply for communities that are not served by imported water. It is critical to protect the water quality found in the local drinking water reservoirs and aquifers to ensure a continual source of drinking water, as well as increasing local

supplies through recycling and conservation efforts. Because of these facts, the General Plan includes a Conservation and Open Space Element which sets policies pertaining to water resources, including:

Policies

COS-4.1 Water Conservation. Require development to reduce the waste of potable water through use of efficient technologies and conservation efforts that minimize the County's dependence on imported water and conserve groundwater resources.

COS-4.2 Drought-Efficient Landscaping. Require efficient irrigation systems and in new development encourage the use of native plant species and non-invasive drought tolerant/low water use plants in landscaping.

County of San Diego Board of Supervisor Policies

Policy I-78

The County Board of Supervisors adopted Policy I-78 for the purpose of establishing a policy relating to the approval of requested locations for on-site "small wastewater treatment facilities." "Small wastewater treatment facilities" is defined as a facility with a capacity of up to 2,000 equivalent dwelling units or approximately 0.48 million gallons per day. Pursuant to Policy I-78, prior to approving "small wastewater treatment facility" specific findings must be made ~~(in addition to the findings pursuant to the Public Facility Element; however, Policy I-78 provides a waiver~~ locational criteria in the policy of the requirement to make these findings if the decision makers determines that, in the particular case, it would not be in the public interest to follow the policy and the certain specified conditions are met. ~~proposed facility will be operated by a public agency authorized to provide wastewater service~~

Policy I-84

Board Policy I-84 was adopted to establish consistent procedures for using PFAF and, in certain cases, Project Facility Commitment forms, in the processing of land divisions and certain other projects requiring discretionary approval by the County. Specifically, the County General Plan requires that the County ensure that adequate facilities are available concurrent with need before giving final approval to projects. The policy generally requires PFAF and Project Facility Commitment forms to be submitted at intake of a project; however, the significance is to assure that water, sewer and fire protection services are available prior to Final Map recordation and issuance of building permits.

San Diego County Department of Environmental Health

The County DEH is the primary agency charged with regulating the design, construction, and maintenance of septic tanks, leach lines, seepage pits, and alternative on-site wastewater treatment systems (OWTS) throughout the County through a delegation from the Regional Water Quality Control Board. The County DEH regulates these facilities through a Septic Tank Permit Process.

Potable Water Service

Metropolitan Water District of Southern California

The Metropolitan Water District of Southern California (MWD) is a public agency that was formed in 1928 by state legislation for the purpose of developing, storing, and distributing water to the residents of southern California. MWD's service area is nearly 5,200 square miles and includes portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties. MWD is composed of 26 member agencies, including 14 cities, 10 MWDs, one utilities agency, and one county water authority (San Diego County 2012e). MWD is a water wholesaler with no retail customers. Currently, member agencies receive treated and untreated water from MWD at various delivery points. To aid in planning future water needs, member agencies advise MWD of how much water they anticipate they will need during the next five years. In addition, MWD works with its member agencies to forecast future water demand and develop emergency supply strategies to ensure a secure, long-term water supply.

MWD imports water from two primary sources for Southern California. One source is the Colorado River, which is connected to the District's six-county service area through a 242-mile aqueduct. Another source is water from Northern California, which supplies water through a series of dams and aqueducts known as the State Water Project (SWP). In addition, MWD is active in increasing local supplies through sponsoring recycling, conservation, groundwater recovery and desalination efforts. Imported supplies also help to replenish local groundwater basins. Close to half of the water used in this region is supplied by MWD, and about 90 percent of the regional population receives at least some of its water from MWD. MWD provides approximately 71 percent of the total water supply for the entire San Diego County, including incorporated areas. The San Diego County Water Authority (SDCWA) is one of MWD's 26 member agencies and is the largest MWD member agency in terms of deliveries.

San Diego County Water Authority

SDCWA is a regional water wholesaler that was organized on June 9, 1944, and became a member of MWD in 1946 in order to obtain a water supply from the Colorado River. The mission of SDCWA is to provide a "safe and reliable supply of water to its member agencies serving the San Diego region" (San Diego County 2012e). SDCWA currently has 24 member agencies, which include six cities, five water districts, three irrigation districts, eight municipal water districts, one public utility district, and one federal agency (military base). Its service area encompasses approximately 951,000 acres and a population of approximately three million people, or 95 percent of the county's population.

Up to 80 percent of the region's water is imported from the Colorado River and Northern California. The MWD is the SDCWA's largest supplier, providing more than half of the water used in the region in fiscal year 2010. Since 2003, the SDCWA has received a growing percentage of its water supply from its long-term water conservation and transfer agreement with the Imperial Irrigation District and conserved water from projects that lined portions of the All-American and Coachella canals in Imperial Valley. The remaining water comes from local supply sources including groundwater, local surface water, recycled water, and conservation.

Valley Center Municipal Water District

The VCMWD provides water service to the residents of Valley Center and surrounding areas (generally located east of I-15). VCMWD serves approximately 7,600 meters, seven aqueduct connections and a service area of 64,000 acres. VCMWD operates 26 pump stations, 96 pumps, 15 pressure reducing stations, 270 miles of pipeline, and 79 reservoirs and storage facilities (421 AF total capacity). All of VCMWD's water is imported from SDCWA. Land uses served include agriculture (79 percent), residential (17 percent), and commercial (four percent) (VCMWD 2012). Average daily consumption for VCMWD is approximately 34.7 mgd. VCMWD also provides wastewater service to approximately 2,750 customers through two facilities: the 500,000 gallon per day (gpd) Lower Moosa Canyon WRF, and the 70,000 gpd Woods Valley Ranch WRF. Lower Moosa Canyon WRF serves the I-15 corridor area from the Lawrence Welk Development on the southern end, east to Rimrock and Hidden Meadows, and north to Circle R. Woods Valley Ranch treats wastewater from the Woods Valley Ranch Development, returning the reclaimed water to the Woods Valley Ranch Golf Course for irrigation.

Water Supply Plans

MWD, the San Diego Region, SDCWA and the VCMWD have developed plans that address long-term water supply demand, as well as catastrophic supply interruption and emergency storage. These plans are described below, and are hereby incorporated by reference into this EIR. The plans are available on each agency's website.

Metropolitan Water District: 2010 Regional Urban Water Management Plan (MWD 2010a); Integrated Water Resources Plan (MWD 2010b); Water Surplus and Drought Management Plan (MWD 1999)

The Urban Water Management Planning Act (the Act) requires all urban suppliers in the state to prepare UWMPs and update them every five years. MWD adopted an updated Regional Urban Water Management Plan (RUWMP) in November 2010. The 2010 RUWMP provides a comprehensive summary of MWD's demand and supply outlook through 2035. As with MWD's previous plans, the 2010 RUWMP does not explicitly discuss specific activities undertaken by its member agencies unless it relates to one of MWD's water demand or supply management programs. The information included in the 2010 RUWMP represents the most current available planning projections of supply capability and demand developed through a collaborative process with the member agencies.

The 2010 RUWMP outlines how MWD will meet current and future challenges; describes MWD's planning activities and explains how the agency will manage the region's water resources to ensure a reliable water supply for the region; describes the actions MWD has taken to implement the plans and lists future programs and activities; addresses the issue of water quality and steps taken to deliver high-quality water to its service area, and details the public outreach component integrated with MWD's planning processes.

MWD uses an Integrated Resource Planning process to evaluate the supplies necessary to meet demands over at least a 20-year period in average, single year, and multi-year drought conditions. MWD's 2010 Integrated Water Resources Plan (IRP) Update was approved by the Board on October 12, 2010. The updated IRP is MWD's strategic plan

for water reliability through the year 2035, collaboratively developed with input from water districts, local governments, stakeholder groups and the public. The 2010 IRP Update represents MWD's comprehensive planning process and serves as its blueprint for long-term water reliability, including key supply development and water use efficiency goals.

MWD has also developed a Water Surplus and Drought Management (WSDM) Plan (MWD 1999), which guides water supply operations in both surplus and shortage. In the WSDM Plan, MWD outlines shortage actions in various stages, including actions needed to address up to a 50 percent reduction in MWD's water supplies (as required by the Act). During shortages, MWD will meet demands by relying on storage. In the stages of severe or extreme shortage, MWD will take additional actions, such as issuing calls for public conservation, considering curtailment of interim agricultural deliveries, exercising water transfer options, or purchasing water on the open market.

Integrated Regional Water Management Plan for the San Diego Region (2007)

The Integrated Regional Water Management (IRWM) program is a local water resources management approach preferred by the Governor, California Department of Water Resources (DWR), and State Water Resources Control Board. It is aimed at securing long-term water supply reliability within California by first recognizing the inter-connectivity of water supplies and the environment, and then pursuing projects yielding multiple benefits for water supplies, water quality, and natural resources.

The San Diego IRWM program is an interdisciplinary effort by water retailers, wastewater agencies, storm water and flood managers, watershed groups, the business community, tribes, agriculture, and regulatory agencies to coordinate water resource management efforts and to enable the San Diego region to apply for grants tied to DWR's IRWM program. The Regional Water Management Group (RWMG), which is the group responsible for administering and implementing the San Diego IRWM program, is comprised of the SDCWA, City of San Diego, and County of San Diego. A Regional Advisory Committee (RAC) serves to shape the IRWM program and upcoming planning and funding application(s). Additionally, broad stakeholder outreach engages members of the public and other interested parties in the IRWM planning process.

The IRWM Plan provides a mechanism for: (1) coordinating, refining, and integrating existing planning efforts within a comprehensive, regional context; (2) identifying specific regional and watershed-based priorities for implementation projects; and (3) providing funding support for the plans, programs, projects, and priorities of existing agencies and stakeholders (San Diego Integrated Regional Water Management 2012).

SDCWA 2010 Urban Water Management Plan

On June 23, 2011, the SDCWA's Board of Directors adopted its final 2010 UWMP Update in accordance with California state law (SDCWA 2011). The UWMP serves as the SDCWA's long-term planning document to ensure a reliable water supply for the region. In accordance with its Administrative Code, the SDCWA will also prepare annual water supply reports commencing in 2012 to provide updated information on development of local and imported water supplies. New for the 2010 UWMP are the following sections: the SDCWA's climate change mitigation and adaptation strategies; measures, programs, and policies to achieve per capita water use targets as required by

Water Code § 10608.36 at both the retail agency level and the SDCWA as a wholesale provider; a discussion on the SDCWA's Integrated Regional Water Management Plan; the SDCWA's Scenario Planning process to deal with future uncertainties in long-range water planning; and details on the 2007-2011 water shortage.

This 2010 Plan identifies a diverse mix of water resources projected to be developed over the next 25 years (through 2035) to ensure long-term water supply reliability for the region. The 2010 UWMP includes demand management, or water conservation, as an important part of the SDCWA's water supply portfolio and its diversification efforts for the San Diego region. The SDCWA works closely with its member agencies to implement water conservation programs, including the installation of hundreds of thousands of water-saving devices, development of a landscape auditor internship program, and development of a water budget software tool.

The 2010 UWMP identifies supply sources, beyond imported water from MWD, including the all-American canal and Coachella canal lining projects; the IID water conservation and transfer agreement; the Carlsbad seawater desalination project, and other water authority seawater desalination efforts. In addition to SDCWA supplies expected during a normal water year, the SDCWA has also invested in carryover storage supplies to assist in achieving reliability in dry year and multiple dry years. Finally, local resources developed and managed by the SDCWA's member agencies are critical to securing a diverse and reliable supply for the region. Local projects, such as recycled water and groundwater recovery, reduce demands for imported water and often provide agencies with a drought-proof supply.

SDCWA's UWMP also includes the required water supply reliability planning process (as described above for MWD) to ensure a long-term water supply for its member agencies and address water shortage and catastrophic interruptions in supply. The water supply and demand assessment must compare the total projected water use with the expected water supply over the next 20 years in 5-year increments. This reliability assessment is required for normal, single dry-year and multiple dry water years. The assessment contained in the 2010 plan projects reliability through the next 25 years.

SDCWA Regional Water Facilities Master Plan

As stated in <http://www.sdcwa.org/master-plan-update>: The SDCWA has recently completed an update to its 2003 Regional Water Facilities Master Plan. This 2013 Regional Water Facilities Optimization and Master Plan Update is intended to serve as the agency's roadmap for new infrastructure development through a planning horizon that extends out to 2035. The 2013 Master Plan Update will support future decisions on the need and timing of new facilities that may be required to assure the SDCWA's mission of delivering a safe and reliable water supply is achieved in a cost-effective manner.

Over the last 20 years, the SDCWA has made substantial investments in new pipelines, treatment plants, water supply development, and storage reservoirs. These investments have significantly improved the San Diego region's overall water reliability. Looking forward, the 2013 Master Plan Update is able to focus on optimizing these recent improvements while maintaining the flexibility to adjust to a range of future planning outcomes. The planning approach adopted by the 2013 Master Plan Update considers the "new normal" of reduced water sales volumes, a greater emphasis on local supply

development and conservation, and the need to better manage energy use and seek opportunities to increase renewable energy production.

~~The SDCWA is currently in the process of updating its 2003 Regional Water Facilities Master Plan (master plan) (SDCWA 2003) with planned completion of the update occurring in 2012. The master plan encompasses a region-wide planning effort, incorporating three interrelated components: water demands, water supplies, and facilities. The planning process takes into consideration future water demands, the identification of water supplies and their reliability, and defines facilities needed to treat and transport the supplies to the points of demand. The 2012 master plan will follow the same master planning principles as the 2002 plan and will help define the Water Authority's capital improvement process. The master plan seeks to maintain a reliable water supply infrastructure through 2035.~~

Valley Center Urban Water Management Plan

Aside from water reclamation projects related to its wastewater treatment facilities, the VCMWD relies entirely on water purchased from the SDCWA. In an effort to assist in diversifying water supplies within the SDCWA, the VCMWD is pursuing opportunities for increased water reclamation and the potential for groundwater use. In concert with regional goals set by MWD and SDCWA for conservation, local supplies, SWP State Water Project supplies, Colorado River supplies, groundwater banking, and water transfers, the VCMWD ~~concludes~~presents in its Urban Water Management Plan 2010 Update that adequate supplies of water will be available to the District for the next 20 years (VCMWD 2011).

The VCMWD does not utilize groundwater as an existing source of water due to limited groundwater availability. The District may pursue studies to investigate groundwater sources in the future, but no groundwater management plans have been prepared. Water from the Carlsbad Desalination Plant, which is currently in development, may also be used in the District through purchase from SDCWA.

Water Supply and Distribution

VCMWD Facilities

The project site is located within the boundaries of the VCMWD. The VCMWD has existing water transmission, storage, and distribution facilities in the vicinity of the project site. The existing VCMWD water system is shown in Figure 3.1-5. There are two water pressure zones in the vicinity of the project. The Country Club Pressure Zone (HGL 1210 feet) is served by a SDCWA connection to the Valley Center Pipeline. Water from the Valley Center Pipeline is stored in reservoirs to the south of the connection point and then distributed to the service area. Two of the reservoirs in the Country Club 1210 Pressure Zone are located on Circle R Lane. These are the Old Country Club Reservoir (0.1 million gallons, high water line 1,211 feet) and the Country Club Reservoir (10 million gallons, high water line 1,208 feet). There is a second pressure zone in the vicinity of the project which is fed from a SDCWA connection to the Valley Center Pipeline. This is the West Pressure Zone (HGL 969 feet) which includes two reservoirs, West No. 1 and 2 reservoirs. These reservoirs are located at the end of Stadel Lane and have a combined capacity of 3.5 million gallons. The high water level for these tanks is 969 feet.

Overall, the site currently has approximately 394 acres of irrigated agriculture. There are approximately 293 acres of orchard, 91 acres of row crops such as vegetables, strawberries and flowers, and 10 acres of nursery or intensive agriculture. VMCWD has delivered in excess of 250 ac-ft of water per year to the overall site, principally for irrigation.

Groundwater

The project site is underlain by Mesozoic Era granitic rocks. Groundwater flow and storage is principally via fractures within the granitic rock. As such, groundwater storage capacity is typically low compared to sedimentary rocks and unconsolidated sediment. Rock permeability with respect to water is typically highly variable depending upon the frequency, interconnectedness, and aperture of fractures. Overlying the fractured granitic rock on-site is weathered granitic rock, also referred to as decomposed granite or residuum, which has some secondary porosity, and therefore, additional groundwater storage as feldspar minerals weather to clay. Rock permeability within decomposed granite is typically relatively low. Overlying the granitic rocks, shallow alluvial sediment occurs within the drainages on-site.

Existing on-site agricultural users rely, in part, on groundwater for their irrigation needs. Ten groundwater production wells have been identified at the site. Nine of the wells are currently operational. Based on flow meter data included in the Preliminary Hydrogeologic Assessment (see Appendix P), the total estimated annual groundwater production potential is approximately 213 annual ac-ft within the project site¹.

In order to establish the baseline for groundwater use within the project site, the Preliminary Hydrogeologic Assessment reviewed flow meter data from wells, which have been active for at least a period of five years. Of the ten existing on-site wells, six have reportedly been active over the past 5 years. In order to determine present groundwater production capability, an estimate of how much groundwater has been used on the properties served by active wells was developed. This was done by comparing the difference between the estimated annual irrigation demand at the properties to the volume of VCMWD water delivered to the properties annually. From 2005 through 2009, this estimate represents the amount of water produced from the aforementioned six wells. The analysis suggests that the water wells with at least a five year history of activity may have produced, on average, approximately 191 ac-ft per year.

On-site groundwater obtained from wells was tested for salinity, as documented in the Preliminary Hydrogeologic Assessment (see Appendix P). On June 10, 2010, a groundwater sample was collected from Well 4 and analyzed for a limited suite of cations and anions, pH, and electrical conductivity. The Total Dissolved Solids (TDS) estimated from the electrical conductivity measurement was 704 milligrams per liter (mg/l) where waters with TDS concentrations greater than 1,000 mg/l are considered brackish. Sodium was detected at 300 mg/l, a concentration that is classified as

¹This estimate is very rudimentary as it is based on short period of time and does not rely on either a basic water balance analysis or well hydraulics analyses. Accordingly, it should be relied upon only as an initial indication of the production capacity at the site.

potentially problematic. Other cation and anion concentrations were within acceptable ranges.

In 2011, chloride concentrations and TDS concentrations for groundwater samples collected from seven on-site water wells (see Appendix P) were analyzed. The number of wells where groundwater samples were collected and the general consistency of the results provide a reasonable indication of groundwater conditions at the site. TDS concentrations ranged from 1,408 to 1,857 mg/l. Chloride concentrations ranged from 312 mg/l to 511 mg/l; a range considered high for irrigation, but not considered prohibitive for irrigation, especially if blended with potable water from VCMWD.

Wastewater

VCMWD Sewer System Management Plan

The Sewer System Management Plan (SSMP), adopted in 2010, was prepared to document standards and procedures used to operate and maintain the District's Wastewater Collection Facilities. The primary goal of the plan is to reduce, and possibly eliminate, the potential for sanitary sewer overflow events. The SWRCB adopted a Statewide General Waste Discharge Order requiring each collection system agency to prepare and adopt an SSMP. Also included in the Order were new monitoring and reporting requirements for sewer system overflow (SSO) events.

Lower Moosa Canyon WRF Collection System

The VCMWD operates the Lower Moosa Canyon WRF, which is located at the southeast corner of the intersection of Old Highway 395 and Circle R Drive in the northwest area of the VCMWD. The Lower Moosa Canyon WRF serves the east Interstate 15 corridor from Circle R Drive at the north end to the Lawrence Welk Resort area at the south. The Lower Moosa Canyon WRF provides secondary treatment of wastewater. The plant has a rated capacity of 0.5 million gallons per day (mgd); its discharge permit limits the total plant flow to 0.44 mgd. Presently the average sewage flow to this treatment facility is approximately 0.35 mgd. The facility is currently operating under a MUP Modification issued in 1996. ~~The VCMWD does not currently have the equipment necessary to serve the project within the perimeters of its allowable wastewater capacity.~~

On-site Wastewater Collection, Transmission and Disposal

All on-site homes and agricultural operations presently rely on on-site septic systems and leach fields. No VCMWD sewer lines are located within proximity of the project site.

3.1.7.2 Analysis of Project Impacts and Determination of Significance

A project would have a significant adverse environmental effect related to utilities and service systems if it would:

1. *Wastewater Treatment Requirements*: Exceed the wastewater treatment requirements of the RWQCB.

2. *New or Expanded Water/Wastewater Facilities*: Require or result in new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.
3. *New or Expanded Storm Water Facilities*: Result in new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
4. *Exceed Water Entitlements*: Result in a demand for water that exceeds existing entitlements and resources, or necessitates new or expanded entitlements.
5. *Inadequate Capacity to Serve*: Result in a determination by the wastewater provider which serves or may serve the project area that it has inadequate capacity to service the project's projected demand in addition to the provider's existing commitments.

Issue 1: Wastewater Treatment Requirements

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA guidelines, the project would have a significant impact if it would exceed the wastewater treatment requirements of the RWQCB.

Analysis

The unincorporated area of County of San Diego is under the control of the San Diego RWQCB and the Colorado River Basin RWQCB. The San Diego RWQCB regulates wastewater discharge in the majority of the eastern, central and western unincorporated County, while Colorado River Basin RWQCB regulates wastewater discharge in a smaller portion of the eastern unincorporated County.

Implementation of the project would result in an increase in wastewater treatment demand, which would require the need for new or expanded facilities. New facilities or expanded facilities would be required to meet the wastewater treatment requirements for the RWQCB. However, if the demand for wastewater treatment services increased at a rate disproportionate to capabilities of wastewater treatment facilities, a violation in wastewater treatment standards would occur.

VCMWD wastewater flow generation factors were used to estimate wastewater flows from the project. The wastewater flows were divided between grey water and other wastewater to evaluate wastewater reuse options. Table 3.1-129 summarizes the projected wastewater flows and recycled water generation. The estimated projected 24-hour wastewater generation from the project is 353,474356,510 gpd and the 24-hour recycled water generation would be 25,928 gpd (see Appendix SDWE 2013a).

**TABLE 3.1-129
ESTIMATED WASTEWATER/RECYCLED WATER GENERATION**

Land Use	Count	Peak 24 Hour Wastewater Generation		Average 24 Hour Recycled Water Generation	
		Factor gpd/count	Total gpd	Factor gpd/count	Total gpd
Single-family Detached ¹	903 homes	200	180,600 185,600	150	135,450 139,200
Single-family Senior	468 homes	125	58,500	90	42,120
Single-family Attached	164 homes	180	29,520	130	21,320
Commercial/Mixed-Use	211 homes and 45 17.3 acres	1,900	28,994 32,870	1,340	20,448 23,182
Water Reclamation Facility	2.4 acres	1,000	2,400	700	1,680
Recycling Facility	0.6 acres	1,000	600	700	420
School	12.0 acres	1,000	12,000	700	8,400
Private RecreationCommunity Purpose Facility	2.0 acres	1,000	2,000	700	1,400
Group Residential/ Care	2.0 6.5 acres	1,000	6,500	700	4,550
Institutional	10.7 0 acres	1,000	10,700	700	7,490
Park	23.8 6 acres	700	16,660 16,520	500	11,900 11,800
Existing homes and NAP parcels	25 EDUs	200	5,000	150	3,750
TOTAL			353,474 356,510		258,928 261,072

¹Includes 25 EDUs for existing home sites and perimeter parcels.

Wastewater treatment service and/or facilities would be scaled according to development within the project site. Additional Project Facility Availability Forms would be required prior to approval of any subsequent discretionary applications. Therefore, demand for wastewater treatment services would not increase at a rate disproportionate to capabilities of wastewater treatment facilities.

The project would be required to comply with numerous federal, state and local regulations ~~exist~~ that would reduce the potential for the project to exceed the wastewater treatment requirements of the RWQCB. These include the: Federal Water Pollution Control Act, which regulates discharges of pollutants into waters of the U.S.; California Water Code, which controls almost all considerations of water and its use; Porter-Cologne Water Quality Control Act, which controls polluted discharges into state waters; and County DEH, which sets standards to regulate septic tank discharges, ~~and the San Diego Code of Regulatory Ordinances Section 68.101, which specifies conditions and procedures for sewage facilities.~~ Also, as required by the County, prior to Final Map recordation and issuance of building permits for future phases, the project ~~shall~~ has ~~obtained~~ would comply with the requirement to provide a service commitment letter from the wastewater provider, VCMWD (see Appendix R). ~~This requirement is further enforced with BOS Policies I-25, I-36, I-48, and I-84.~~ Compliance with existing federal, state and County regulations would ensure that the project would not result in a violation of wastewater treatment standards. Impacts would be **less than significant**.

Issue 2: New Water and Wastewater Treatment Facilities

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA guidelines, the project would have a significant impact if it would require or result in new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.

Analysis

The construction of new water and/or wastewater facilities on-site, and on- and off-site water and sewer lines, to serve the project would have the potential to result in environmental impacts associated with air quality, biological resources, cultural resources, noise, hydrology or other environmental issues.

Water Systems

New on-site water reclamation facilities would require the construction of buildings and placement of new facilities. Figure 1-11 shows the proposed on-site water system facilities for the project. The installation of new transmission lines for potable and recycled water and wastewater would require trenching and ground disturbance. Impacts associated with these on-site activities-improvements are included as part of the analysis described within the various issue subchapters-subsections included in Chapters 2 and 3 of this DEIR.

Figure 1-11 presents the recommended backbone on-site water facilities for the project. As shown on Figure 3.1-5 the existing Country Club Pressure Zone includes an off-site network of existing distribution piping located within off-site easements. The project would make use of up to 10 points of connection to the existing water system providing sufficient water service for the project, as well as improve the water system looping for the Country Club Pressure Zone in this area of the water service zone. This will enhance the operation of the existing Country Club Pressure Zone system (see Appendix T). Existing piping from the Country Club Pressure Zone and the West Pressure Zone would extend into the project boundary. The Country Club Pressure Zone is capable of providing water service to the upper elevations of the project site while the West Pressure Zone is capable of providing water service to the lower elevations of the project.

The project is served primarily from the VCMWD's Country Club Zone. The VCMWD requires the project to provide redundancy (both for potable and recycled water) in the zone. To this end, the VCMWD is currently replacing the Country Club Reservoir with two reservoirs. Each reservoir would be approximately 4.8 million gallons and this redundancy will be on line in the summer of 2014 at the existing site.

The Country Club Reservoir would then be available for potable water storage. The Old Country Club Reservoir would be assigned for storage of recycled water and the existing 12-foot line in Circle R Lane, currently used for potable water transmission, could be converted to recycled water use. A new 20-inch line could be placed within the existing Circle R Drive for potable water transmission. Figure 3.1-2 shows the suggested piping changes for the split reservoir.

With the reservoir split, the VCMWD water system is able to provide sufficient water storage, including adequate redundancy to support the project. As discussed above, and shown in Figure 3.1-6, the piping required to connect both potable and recycled water to their respective reservoir would utilize the existing trench located within Circle R Drive, following the existing right-of-way. As shown in Figures 3.1-7a, 3.1-7b, and 3.1-7c-1 and 3.1-7c-2 all piping proposed within any potential routes, including Covey Lane, Mountain Ridge, and Circle R Drive, would be able to fit within the existing easements. Therefore, only construction within already disturbed areas would be required for the project's expansion of the existing water system facilities and impacts would be less than significant.

~~The project would be served primarily from the District's Country Club Zone. As part of the initial development phase, the project includes construction of improvements needed to provide sufficient redundant reservoir capacity within the zone to serve the project. To provide the redundancy, three options could be implemented within the existing site of either the 10 million gallon (MG) Country Club Reservoir or the 0.1 MG Old Country Club Reservoir. These options include: (1) construction of a dividing wall within the existing Country Club Reservoir to effectively create two, 5 MG reservoirs; (2) replacement of the Country Club Reservoir with two, 5 MG reservoirs; and (3) replacement of the Old Country Club Reservoir with a 3 MG reservoir. Implementation of any of these alternatives would provide adequate redundancy and will be pursued at the discretion of VCMWD. This would be done within an existing reservoir site; impacts would less than significant.~~

Wastewater Systems

The project is expected to generate a daily average of 406,930 gallons per day of wastewater based on ultimate build-out of the Specific Plan. The VCMWD does not currently have wastewater capacity to serve the project at build-out. The initial development of the project would be provided wastewater service by the transfer of wastewater from a collection point on-site, to the Lower Moosa Canyon WRF, up to a maximum of 250,000 gallons, 25 mgd of wastewater per day. Pursuant to the conversion calculations in the Wastewater Alternatives Report (see Appendix S) this amount would accommodate construction up to a maximum of 1,250 equivalent dwelling units (calculated at 200 gallons per day per equivalent dwelling unit). The project applicant would be responsible for assuring that adequate wastewater capacity would be provided to the remainder of the project residents either through the construction of an on-site WRF or the cost of upgrading and installing the equipment required for the additional treatment processes to accommodate the project's waste at the Lower Moosa Canyon WRF.

Thereafter, the following on-site wastewater treatment options could be implemented for ~~this project build-out~~: (1) construction of a WRF that would treat all wastewater and solids generated by the project and would provide reclaimed water for on-site use; (2) construction of a WRF on-site that would provide reclaimed water for on-site uses while sending solids to the Lower Moosa Canyon WRF for treatment; (3) off-site treatment of all of the project's wastewater at the Lower Moosa Canyon WRF; and (4) construction of a WRF on-site to serve the northern portion of the project (reclaimed water would be generated on-site and the solids sent to the Lower Moosa Canyon WRF) with the southern portion sending its wastewater to the Lower Moosa Canyon WRF; ~~and (4) off-site treatment of all of the project's wastewater at the Lower Moosa Canyon WRF.~~

All on-site options would be placed in the same location. As shown in Figure 1-4, the WRF site would be located the southwest portion of the project site, within Phase 3.

In summary, the project proposes initial treatment up to a maximum of .25 mgd of wastewater to occur at the VCMWD Lower Moosa Canyon WRF. An MUP is being processed for ~~an~~ the on-site WRF, identified above as option (1), concurrent with this EIR, which can accommodate all of the project's wastewater treatment needs. It should be noted that the ultimate treatment alternative for project-generated wastewater will be determined by the VCMWD prior to final map approval for any future phase.

The options for wastewater treatment are the following:

Option 1: On-site WRF with Solid Treatment

This on-site option for the ~~As shown in Figure 1-4, an on-site~~ WRF with solid treatment would utilize an extended aeration activated sludge process. All treatment processes would be located in concrete tanks. The plant would be designed to meet the reliability requirements in accordance with Title 22 of the California Code of Regulations and would disinfect tertiary recycled water meeting the requirements of Section 60304(a) of Title 22 of the California Code of Regulations. The facility and the reclaimed water system would be operated by the VCMWD. The component parts of the WRF under this scenario are detailed in Table 4-1 of Appendix S. The approval of the MUP for this WRF option would be conditioned on the inclusion of all the component parts identified in Table 4-1 of Appendix S. Specific impacts associated with this on-site option include air (odor), and noise and are discussed in subchapters 2.2 and 2.8, respectively. As discussed in those subchapters, the project includes additional project design features (listed in Table 1-3) that assure no odor or noise impacts would occur.

Should this on-site treatment be the selected alternative, the initial development within the project may be provided sewer service by means of trucking sewage from a collection point on-site to an existing wastewater treatment plant. This would be a temporary approach to allow sufficient wastewater flows to accumulate prior to the operation of a treatment plant. Trucking of sewage would be required for up to the first 100 homes (approximately three truck trips per day) to allow for a sufficient minimum flow to operate the facility.

Option 2: On-site WRF without Solid Treatment

This option would be located in the same location as described above and shown in Figure 1-4. It would include a scalping plant and would have fewer facilities and smaller buildings than the option 1 facility. The component parts of this option are listed in Table 4-2 of Appendix S and would ~~This option~~ entails the construction of an on-site scalping facility. The scalping facility would pull off easily treated liquid; effluent (the remaining liquid and solids) would continue to be treated at the existing Lower Moosa Canyon WRF. The scalping plant would treat liquid effluent and send the treated water into the on-site reclaimed water system. The scalping facility and reclaimed water system would be operated by the VCMWD.

Due to its reduced size and scale, environmental impacts associated with this option would be less than the on-site WRF with Treatment option. If this option is selected by the VCMWD, similar project design features associated with the reduction of odor and

noise would be required to assure the project compliance with County of San Diego Zoning Ordinance Section 6318 (odor) and the County of San Diego Noise Ordinance.

Option 3: Lower Moosa Canyon WRF Alternative

Under this scenario, all wastes would be transported off-site for storage, treatment, and disposal at the Lower Moosa Canyon WRF. No on-site facility would be required to be constructed within the project site.

However, before the Lower Moosa Canyon WRF could serve the entirety of the project site, VCMWD would be required to increase treated water disposal capacity at the Lower Moosa Canyon WRF. To provide this service, the project would be required to install upgrades to the existing tertiary treatment facilities and develop a piping system for recycling the tertiary treated effluent. VCMWD has estimated that the existing site for the Lower Moosa Canyon WRF would accommodate a treatment capacity upgrade to 0.73 mgd tertiary treatment. As stated above, this would serve 250,000 gallons of wastewater, which would accommodate a maximum of 1,250 equivalent dwelling units. Any treatment above this capacity would require a physical expansion of the Lower Moosa Canyon WRF. The land required for 1.0 mgd was analyzed in 1996 MUP modification and the analysis determined it would be adequate. This expansion of the Lower Moosa Canyon WRF is analyzed under a separate CEQA document prepared by VCMWD (ER 96-2-7). This document is incorporated by reference and available for review at the County's website.

Option 4: On-site WRF to Fully Serve the Northern Portion of the Project with the Southern Portion Sending its Wastewater to the Lower Moosa Canyon WRF

Under this option, a scalping plant would be constructed to recycle wastewater from the northern portion of the project. The southern portion of the project would be treated at the Lower Moosa Canyon WRF. ~~all~~ All solids generated by the project would be treated at the Lower Moosa Canyon WRF ~~along with the wastewater generated by the southern portion of the project.~~ Implementation of any of the aforementioned options would provide adequate wastewater service. Like option 2, above, this options size and scale would be less than the full on-site facility and environmental impacts associated with this option would be less. If this option is selected by the VCMWD, similar project design features associated with the reduction of odor and noise would be required to assure the project compliance with County of San Diego Zoning Ordinance Section 6318 (odor) and the County of San Diego Noise Ordinance.

Implementation of any of the aforementioned options would provide adequate wastewater service. All options would be designed to meet VCMWD criteria. In addition the San Diego RWQCB would need to permit all aspects of the treatment and reuse for each options. The Health Department would also need to review and approve all of the recycled water system. Additional permits will also be needed for the emergency generator. New on-site water reclamation facilities would require the construction of buildings, and the installation of new transmission lines required for potable water and wastewater would require trenching and ground disturbance. Impacts associated with these activities are described in the various issue subchapters included in Chapters 2.0 and 3.0 of this DEIR. No expansion beyond the Lower Moosa Canyon WRF footprint would be required and impacts would be **less than significant**.

On-Site Wastewater Facilities

Implementation of any of the aforementioned options would provide adequate wastewater service. In order to accommodate any of these options, the pump stations and on-site collection system would be set up so that wastewater could either be transferred to the Lower Moosa Canyon WRF or transferred to the on-site location. On-site water reclamation facilities would require the construction of buildings, and the installation of new transmission lines required for potable water and wastewater would require trenching and ground disturbance. Impacts associated with these on-site activities are described in the various issue subchapters included in Chapters 2.0 and 3.0 of this DEIR.

Off-Site Wastewater Facilities

As shown in Figure 3.1-8 four options for an off-site force main and gravity system to connect to the Lower Moosa Canyon WRF were considered in the Wastewater Alternatives Report (see Appendix S). While the Mountain Ridge Road (Option 3 on Figure 3.1-8) is the preferred route, easement constraints may not allow this option to be constructed. Both Options 3 and 4 (see Figure 3.1-8) could be considered for the off-site collection system, including recycled water lines. Each of these options follows improved, existing roadways, located entirely within public right-of-way from the project to the Lower Moosa Canyon WRF. The Covey Lane portion would be located within the proposed road improvements. Figures 3.1-7a, 3.1-7b, 3.1-7c-1 and 3.1-7c-2 shows the proposed piping facility layout within Convey Lane, Mountain Ridge, and Circle R Drive and all required pipes would be able to fit within the existing easements. Therefore, only construction within already disturbed areas would be required for the project's sewer system facilities and impacts would be **less than significant**.

In addition to wastewater treatment equipment, facilities, a recycled water pump station would be constructed at the Lower Moosa Canyon WRF to transfer recycled water to the project. As discussed under Water Systems, above, VCMWD has required the project to provide recycled water storage in the zone, and this would be done by converting the Old Country Club Reservoir to recycled water after the Country Club Reservoir is split into two reservoirs.

~~The recycled water line would be constructed within the same trench as the wastewater pipeline which will carry wastewater from the project to the Lower Moosa Canyon WRF.~~

~~Implementation of any of the aforementioned options would provide adequate wastewater service. New on-site water reclamation facilities would require the construction of buildings, and the installation of new transmission lines required for potable water and wastewater would require trenching and ground disturbance. Impacts associated with these activities are described in the various issue subchapters included in Chapters 2.0 and 3.0 of this DEIR. No expansion beyond the Lower Moosa Canyon WRF footprint would be required and impacts would be **less than significant**.~~

Gray Water Systems

The Lilac Hills Ranch Specific Plan includes policies that encourage each of the single-family homes to be built with a gray water reuse system for individual lot irrigation. Gray water systems would not disinfect or monitor the water quality. Therefore, if gray water

systems are integrated comprehensively into a latter phase of development, gray water storage systems for the project would be required to be designed to overflow to the sewer system when they were full. Thus, any future on-site WRF would be required to be designed to treat flows from the gray water system.

Construction of new on-site water and wastewater collection facilities would require trenching, along with limited amounts of grading and ground disturbance that is already considered as part of the proposed project. Likewise, the construction of an on-site WRF would require grading, ground disturbance and construction of on-site facilities, as described in greater detail in Chapter 1.0.

The off-site expansion and improvement of the collection system would be placed entirely within existing off-site roadways and could have the potential to result in environmental impacts associated with air quality, biological resources, cultural resources, noise, hydrology, or other environmental issues. Impacts associated with off-site construction activities and ground disturbance related to the installation of water and wastewater facilities would be **less than significant** as described in the various issue analyses included in Chapter 2.0 of this EIR. Overall, impacts associated with the construction of new or water or wastewater treatment facilities, would therefore, be **less than significant**.

Issue 3: Sufficient Storm Water Drainage/Facilities

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA guidelines, the project would have a significant impact if it would result in new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Analysis

The development of new residential, mixed-use, and commercial land uses, along with other public facilities would increase the amount of impermeable surfaces within the project site. Impermeable surfaces would increase through the development of rooftops, parking lots, roads and driveways; thereby, potentially resulting in increased storm water runoff, which could exceed the capacity of existing storm water drainage systems, requiring the construction of new or expanded facilities.

To ensure that the project does not increase the amount or velocity of runoff either during construction or at build out, a comprehensive drainage plan has been developed, as shown in Figure 1-13. Runoff would be directed from natural channels to development areas, collected at points indicated on the drainage plan, and released into existing drainage courses. It is the intent of the project to convey drainage to existing natural drainages, where feasible. Reinforced concrete boxes with wing walls and/or reinforced concrete pipe culverts would be used where an existing creek bed intersects with roadways or development.

The project would include the construction of on-site drainage facilities, including water quality treatment and three hydromodification basins. All basins have been designed for dretention to allow pre-development conditions to be maintained with three basins allowing for additional capacity to avoid runoff increases and to protect against

sedimentation resulting from storm water runoff. The system would include site design, source control and treatment BMPs, as well as LID measures. These project design measures are detailed in subchapter 3.1.3, Hydrology and Water Quality, as well as the project's SWMP included in Appendix U. Storm water drainage facilities constructed to serve the project would have the potential to result in environmental impacts associated with air quality, biological resources, cultural resources, noise, hydrology or other environmental issues. Impacts associated with construction activities and disturbance related to storm water facilities are described in the various issue analyses included in Chapters 2.0 and 3.0 of this EIR.

The project would be required to comply with the County of San Diego WPO. This regulation requires development projects to demonstrate that they have provided storm water facilities sized appropriately to accommodate runoff flows. Numerous other federal, state and local regulations exist that regulate environmental impacts related to storm water drainage facilities and storm water discharges. These include the Federal Water Pollution Control Act; California Water Code; Porter-Cologne Water Quality Control Act, and the County WPO, which protects water resources and improves water quality. Adherence to these regulations would result in the need for new or expanded storm water drainage facilities the construction of which would have the potential to adversely affect the environment. ~~However, the regulations include the provision that the least environmentally damaging designs and methods be used. In addition to constructing new conveyance systems and drainage facilities,~~ the project would include alternative ways of managing storm water runoff other than constructing new conveyance systems or drainage facilities, such as reducing impervious surfaces in site design, incorporating LID techniques, and employing low-impact BMPs, as required by the existing regulatory framework.

~~Additionally, because the project would construct new storm water drainage facilities, it would be required to comply with the County Grading Ordinance as well as other applicable regulations protecting environmental resources, such as Section 2940 et seq. of the Zoning Ordinance, Noise Ordinance, RPO, HLP Ordinance, and relevant BOS Policies. Through compliance with existing aforementioned regulations the new drainage facilities constructed to serve the project would have less than significant environmental effects.~~

Issue 4: Adequate Water Supplies

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would result in a demand for water that exceeds existing entitlements and resources, or necessitates new or expanded entitlements.

Analysis

Pursuant to Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221), a WSA was prepared for the project by the VCMWD (see Appendix Q). The WSA report evaluates water supplies that are or will be available during normal, single-dry year, and multiple dry water years during a 20-year projection to meet existing demands, existing plus projected demands of the project, and future water demands served by the VCMWD. The WSA includes, among other information, identification of existing water supply

entitlements, water rights, water service contracts, or agreements relevant to the identified water supply for the project and quantities of water received in prior years pursuant to those entitlements, rights, contracts and agreements. The following analysis of water supply is based upon the approved WSA.

Future Water Demand

Historical imported water use for the project site is 513 acre feet per year (afy) (DWE 2012Appendix Q). As discussed in subchapter 3.1.3, operation of on-site wells has resulted in the historical use of 191 afy of groundwater.

The total projected average daily water demand for the project based on typical water use rates for the proposed land uses is 1,151,427 gpd, or 1,290 afy (DWE 2012Appendix Q). The demand does not account for water conservation measures the project is planning to implement or the use of non-potable water sources such as groundwater and recycled water for the irrigation of the HOA landscaped areas. Examples of water conservation features the project may utilize are provided below. Ultimately, the specific water conservation features incorporated into the project will be based on the most effective measures available and those recommended by the CWA and/or the VCMWD.

Interior water conservation features:

- High efficiency clothes washers
- High efficiency dishwashers
- Low flush toilets
- Low flow water faucets and showerheads
- Tankless water heaters

Exterior water conservation features:

- Weather-based irrigation controllers
- Low water use landscaping (xeriscape)
- Restrictions limiting turf use and encouraging artificial turf

Additional conservation features:

- Installation of “smart” meters with leak detection capability
- Individually metered multi-family units

Research by the American Water Works Association has demonstrated that the installation of water-efficient interior water fixtures can result in a water use reduction of 30 to 35 percent with the greatest reductions seen with clothes washers and toilets (DWE 2012Appendix Q). Similarly, the EPA has demonstrated the conversion to water-efficient exterior landscaping has resulted in a reduction in water use of greater than 30 percent (DWE 2012Appendix Q). To account for conservation measures an overall reduction in water use of 25 percent would be applicable to the project. Therefore, the project’s total projected water use would be reduced by 323 afy (DWE 2012Appendix Q).

Additional reductions in water use would be due to the project's proposed use of recycled water. The project includes a WRF, as described in subchapter 3.1.5, above. Any WRF alternative selected could convert wastewater generated by the project into recycled water for landscape irrigation for use on-site at the discretion of VCMWD. Overall, the projected recycled water generation would total 289 afy based on the estimated indoor water use by the project (~~DWE-2012~~Appendix Q).

The project would offset a portion of its water demand through the development of 289 afy of recycled water, 191 afy of groundwater (which has been historically used on-site), and 323 afy in water savings via project design measures resulting in water conservation. The remaining water demand of 487 afy is less than the project's existing imported water demand of 513 afy.

Future Water Supply

The WSA presents existing and planned sources of water supply for normal, single and multiple dry year scenarios. Based on the VCMWD's water supply reliability analysis contained in the 2010 UWMP, incorporated by reference herein and available for review on each agency's website, the WSA concludes that the VCMWD expects to meet and exceed expected demands for a 20-year planning horizon, in normal, single-dry, and multiple-dry years (~~DWE-2012~~Appendix Q). Impacts would be **less than significant**. A detailed discussion of redundancy issues is included under Issue 2, Water Systems (above).

Federal, State and Local Regulations and Existing Regulatory Processes

The project would be required to comply with numerous federal, state and local regulations that exist to ensure adequate water supplies are available, including: California Water Code, which controls almost all considerations of water and its use; SB 610, which requires water supply assessments for large projects within cities and counties; and SB 221, which requires proof of sufficient water supply for various projects. SB 610 mandates a WSA which is included as Appendix Q. SB 221 requires affirmative written verification from the purveyor of the public water system that sufficient water supplies are planned to be available for certain residential subdivisions of property prior to approval of a Tentative Map. The County also requires that projects proposing to use imported water provide availability and commitment letters demonstrating sufficient water resources and access to available water facilities. The County manages anticipated future groundwater demand through the County Groundwater Ordinance (County Code section 67.701 to 67.750~~Ordinance #9826, N.S.~~). Finally, the County's General Plan includes several policies in the Land Use and Conservation Elements that relate to adequate water supply (Policies LU-13.1, 13.2, COS-4.2 and COS-4.1).

Adherence to the above adopted plans and regulations, would ensure that the project would not result in a demand for water that exceeds existing entitlements and resources, or necessitates new or expanded entitlements. Therefore, impacts associated with adequate water supplies or entitlements would be **less than significant**.

Issue 5: Adequate Wastewater Facilities

Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it resulted in a determination by the wastewater provider, which serves or may serve the project area that it has inadequate capacity to service the project's projected demand in addition to the provider's existing commitments.

Analysis

As described under Issue 2 above, the project proposes treatment of on-site generated wastewater for the initial phases to occur at the VCMWD Lower Moosa Canyon WRF. A WRF ~~would~~ could be constructed as one of three on-site options to treat wastewater generated by the project. An MUP is being processed concurrent with this EIR for the on-site treatment facility. The on-site WRF could be either of the following: (1) on-site WRF without solids treatment (scalping plant) or (2) on-site WRF with solids treatment. The ultimate treatment of wastewater for future phases of the project would be under the discretion of the VCMWD. Subsequent Tentative Maps or Major Use Permits for future phases of the project would be required to provide evidence of adequate wastewater treatment capacity to serve the proposed development. Project Facility Availability Forms would be required prior to approval of any subsequent discretionary applications. The use of gray water systems would also be encouraged by future homeowners through Specific Plan policies. Details of the proposed wastewater treatment options and associated infrastructure are described above and in Chapter 1.0.

The project would be in compliance with Policies LU-12.1 and LU-14.2 of the Land Use Element of the General Plan, as well as Board Policy I-84. These policies require reasonable expectation that wastewater treatment and disposal will be available and require that conditions be placed on the approval of Final Maps for all phases of the project to assure that all requirements are met and commitments secured. Therefore, the project would comply with the requirement to provide a service commitment letter from the selected wastewater provider prior to approval of Final Maps.

Land Use Element Policies LU-14.3 and LU-14.4 and Board Policy I-78 relate to the location, creation and operation of on-site wastewater treatment plants. The location and design of any on-site wastewater treatment plant or alternative treatment system for the project, must be approved and be consistent with the VMCWD's Sewer System Management Plan. With approval from the VCMWD, the project would be consistent with these policies.

Any on-site treatment option approved by the VCMWD would be sized to serve the demands of the project and would conform to relevant policies. This would be assured through the limited space set aside within the project site to accommodate construction of the on-site facility. Additionally, the VCMWD maintains facility design guidelines for all proposed facility improvements assigning a specific water demand or wastewater generation rate to each equivalent dwelling unit proposed. In applying the water demand or wastewater generation rate to the number of equivalent dwelling units proposed within a project, a unique design flow is achieved. The project's unique design flow for each facility type has been determined and would serve as the basis for each facility design. Therefore, all proposed facilities would only be designed for the unique design flow.

Therefore, impacts associated with wastewater generation and treatment would be **less than significant**.

3.1.7.3 Cumulative Impact Analysis

The cumulative study area for utilities would be the boundaries of the district.

Wastewater Treatment Requirements

Like the project, other projects proposed within the study area would be required to comply with all federal, state and County regulations. Compliance with these regulations would ensure that neither the project nor other cumulative projects would result in a violation of wastewater treatment standards. **Impacts would be less than significant.**

New Water and Wastewater Treatment Facilities

Other projects within the VCMWD service area could result in a cumulative increase in demand for water and wastewater services and treatment facilities. All new facilities proposed or necessitated by cumulative projects would be subject to CEQA review, and projects, in constructing such facilities, would be required to comply with the County Grading Ordinance, as well as other applicable regulations protecting environmental resources, such as Section 2940 et seq. of the Zoning Ordinance, Noise Ordinance, RPO, BMO, HLP Ordinance, and relevant BOS Policies. Compliance with existing regulations would ensure that new water and sewer facilities constructed to serve cumulative projects within the VCMWD service may not result in any significant cumulative environmental effects. Impacts would be **less than significant**.

Sufficient Storm Water Drainage Facilities

As discussed under Issue 3, above, all cumulative projects would be required to comply with the County of San Diego WPO in order to receive project approval, ~~along with other numerous federal, state and local regulations that regulate environmental impacts related to storm water drainage facilities and storm water discharges. Adherence to these regulations would result in the need for new or expanded storm water drainage facilities the construction of which would have the potential to adversely affect the environment. However, the regulations include the provision that the least environmentally damaging designs and methods be used.~~ All cumulative projects would be required to include alternative ways of managing storm water runoff other than constructing new conveyance systems or drainage facilities, such as reducing impervious surfaces in site design, incorporating LID techniques, and employing low-impact BMPs, as required by the existing regulatory framework.

Additionally, any project that would construct new storm water drainage facilities would be required to comply with the County Grading Ordinance as well as other applicable regulations protecting environmental resources, such as Section 2940 et seq. of the Zoning Ordinance, Noise Ordinance, RPO, BMO, HLP Ordinance, and relevant BOS Policies. Compliance with existing regulations would ensure that new drainage facilities constructed to serve cumulative projects would not result in any significant cumulative environmental effects. Impacts would be **less than significant**.

Adequate Water Supplies

A cumulative demand for water services exists in the project area due to planned development projects. The WSA prepared for the project concludes that there is sufficient water supply to serve the project.

As described above under Issue 4, the project, along with any other cumulative projects would be required to ~~comply with numerous federal, state and local regulations that exist to ensure adequate water supplies are available. The County also requires that development projects proposing to use imported water provide availability and commitment letters demonstrating sufficient water resources and access to available water facilities.~~

Adherence to the above regulations would ensure that cumulative projects would not result in a demand for water that exceeds existing entitlements and resources, or necessitates new or expanded entitlements. Therefore, cumulative impacts associated with adequate water supplies or entitlements would be **less than significant**.

Adequate Wastewater Facilities

A cumulative increase in demand for wastewater services exists within the VCMWD service area due to other planned development projects served by VCMWD. In the future, cumulative wastewater treatment demand would likely warrant the expansion of the Lower Moosa Canyon WRF. The project, along with other proposed development projects within the VCMWD service area would be required to pay ~~its~~ their fair share contribution toward the expansion of wastewater treatment facilities, if and when, they are necessary. The project also provides the VCMWD an opportunity to expand their treatment capacity through the construction of an on-site WRF within the project site, for the purposes of servicing the needs of the project's residents. The design feature of the on-site facility would allow ~~only a facility sized only to treat the on-site waste generated on-site. Alternatively, the project applicant could make and/or the project's~~ a fair share contribution toward the expansion of the existing treatment ~~facility.~~ ~~The project's cumulative contribution to cumulative treatment and disposal capacity impacts would be less than cumulative considerable.~~ ~~w~~Wastewater treatment and disposal capacity impacts would be **less than significant**.

3.1.7.4 Conclusion

The project would construct new water and sewer lines, both on- and off-site, along with new on-site storm drain facilities, sized to serve the needs of the project. The project would comply with all federal, state and local regulations. Impacts associated with the construction of such facilities are described in detail in the applicable issue subchapters of this EIR. No additional impacts would result.

The project proposes treatment of on-site generated wastewater for the initial phases of development to occur at the VCMWD Lower Moosa Canyon WRF. Also, the project would construct an on-site WRF and associated infrastructure. Subsequent Tentative Maps or Major Use Permits for future phases of the project would be required to provide evidence of adequate wastewater treatment capacity to serve the proposed development. Project Facility Availability Forms would be required prior to approval of

3.0 Environmental Effects Found Not to be Significant

any subsequent discretionary applications. Therefore, direct and cumulative impacts associated with wastewater generation and treatment would be less than significant.

Because there is adequate water supply to serve the project as determined by the UWMP, and the project design includes construction of all necessary facilities for provision of water service, direct and cumulative impacts associated with the extension of facilities for water supply and service would be less than significant.

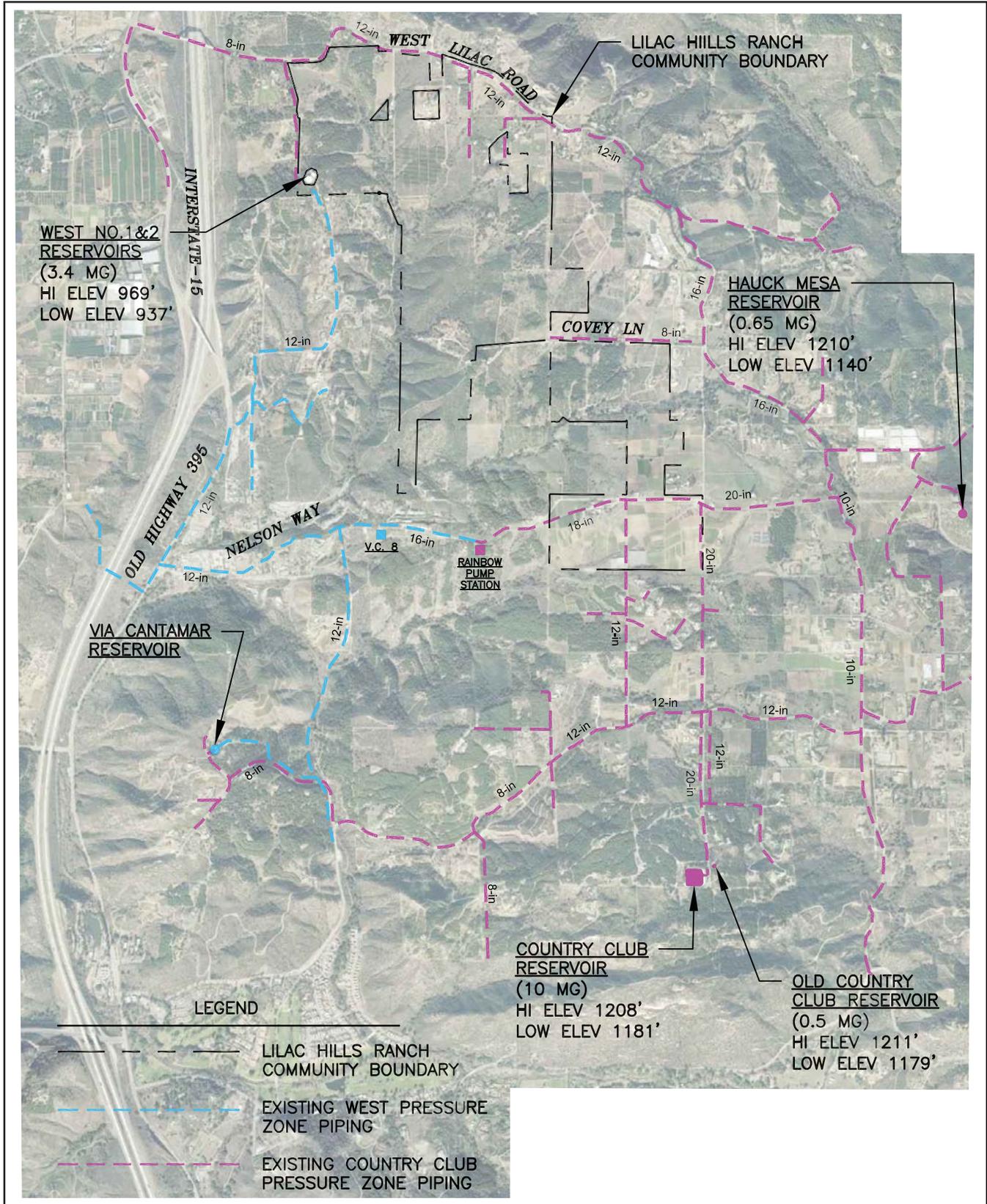


FIGURE 3.1-5
Existing Water System

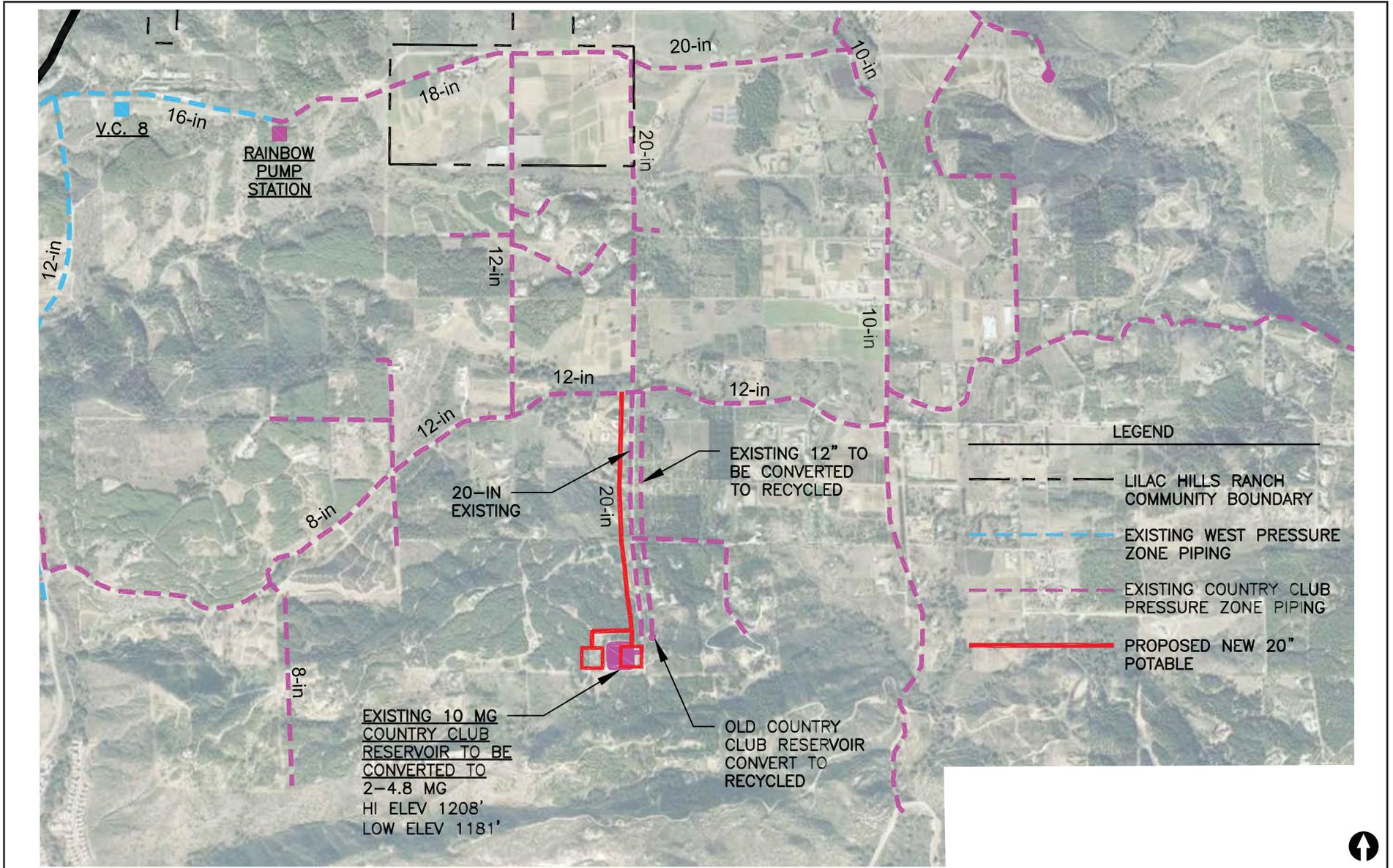
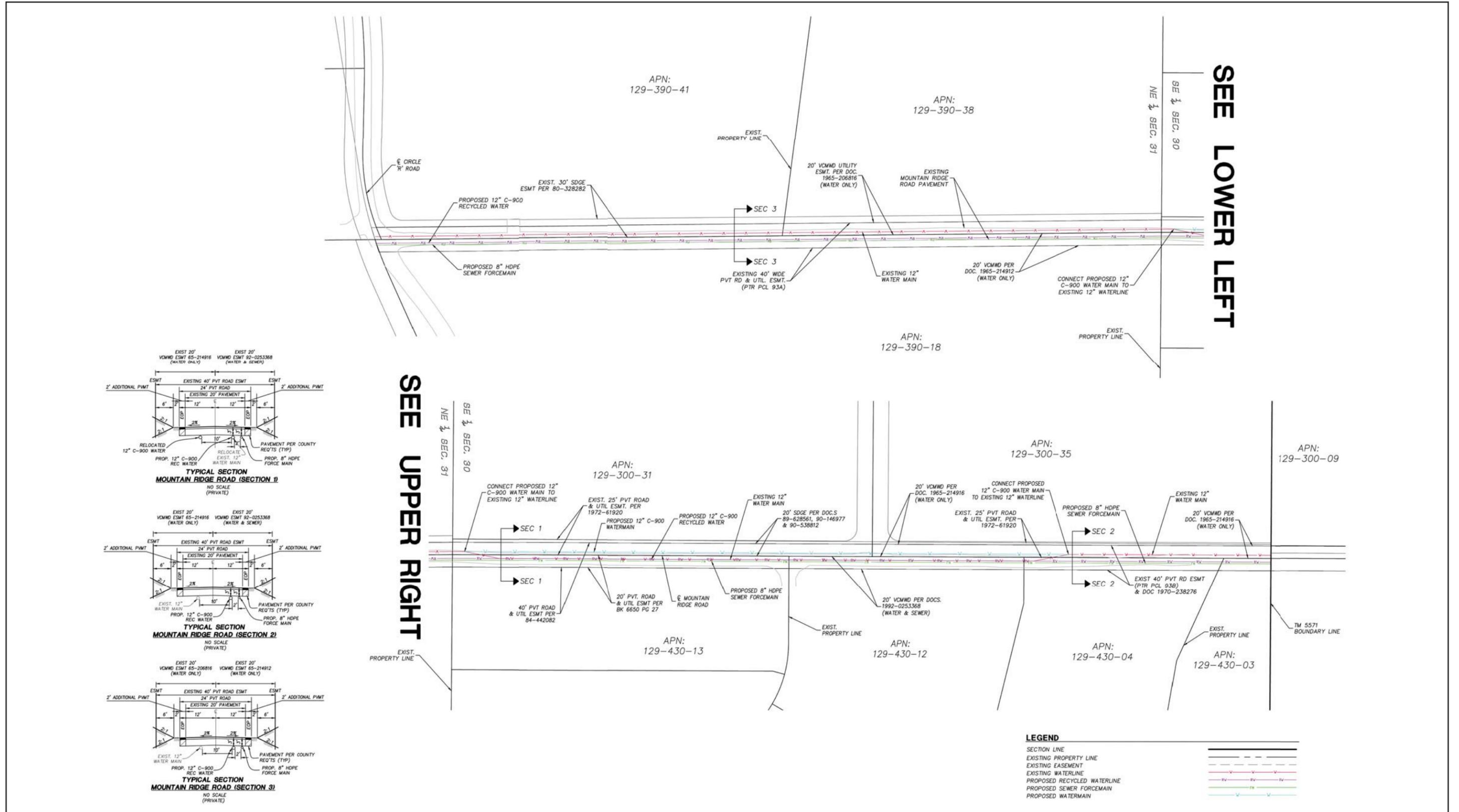


FIGURE 3.1-6

Country Club Reservoir Piping Changes



SEE LOWER LEFT

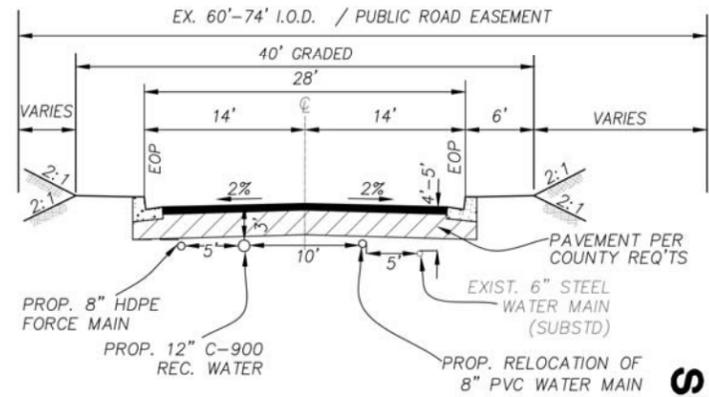
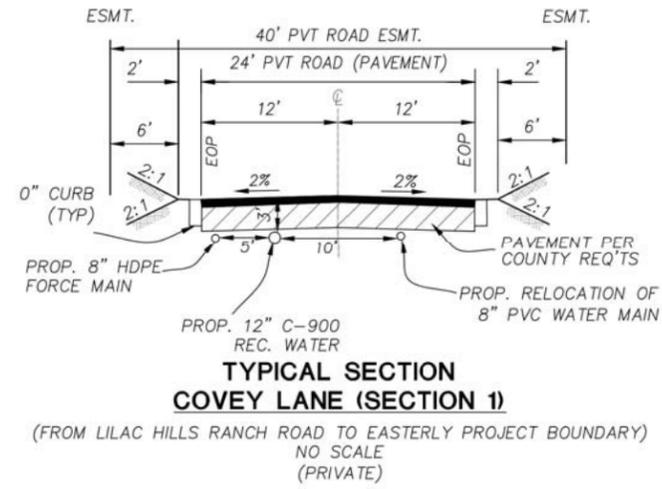
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FIGURE 3.1-7a
Mountain Ridge Road Utility Cross Section

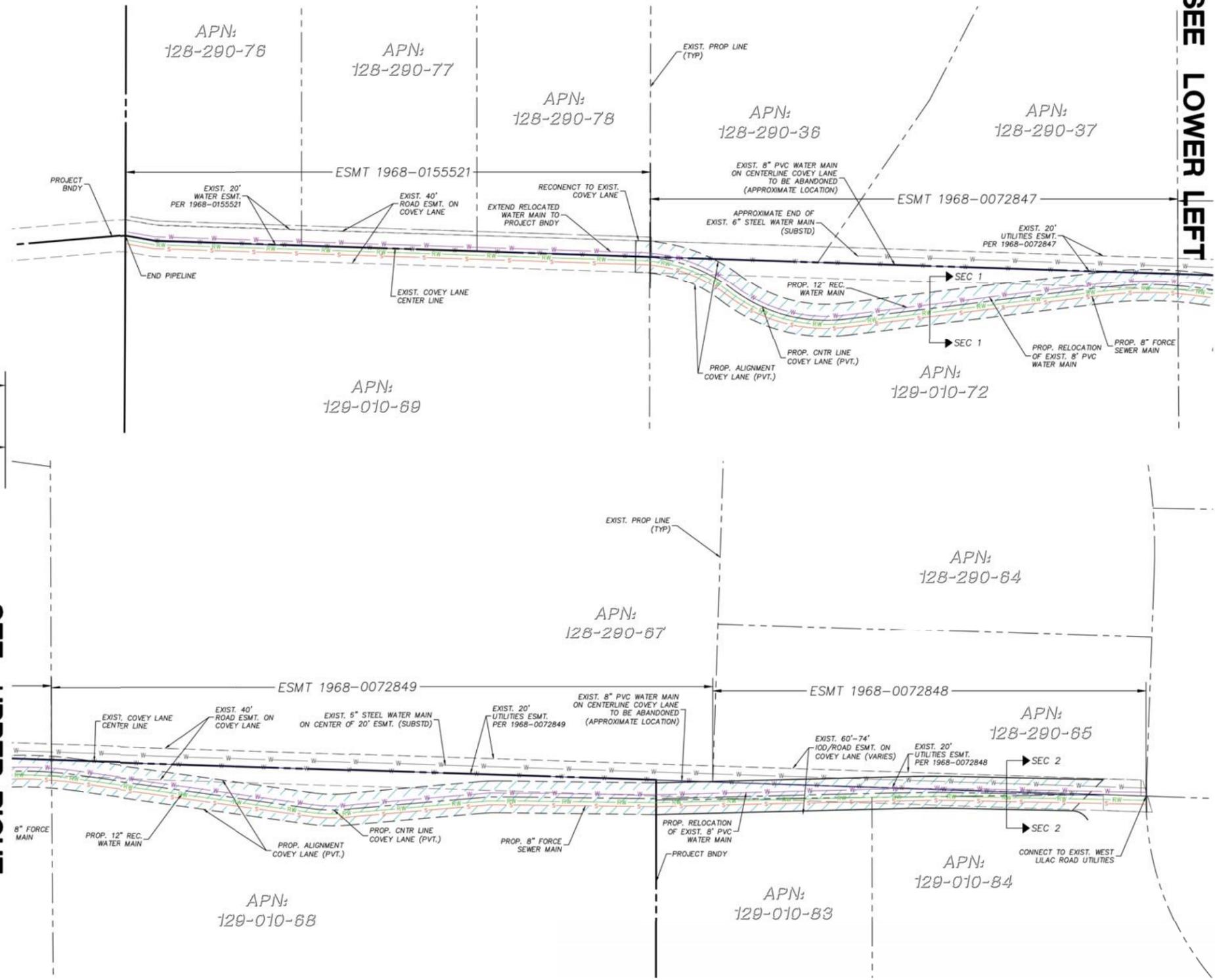
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LEGEND

PROJECT BOUNDARY	---
EXISTING PROPERTY LINE	---
EXISTING EASEMENT	---
EXISTING WATERLINE	W
PROPOSED WATERLINE RELOCATION	W
PROPOSED RECYCLED WATERLINE	RW
PROPOSED SEWER FORCEMAIN	S



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FIGURE 3.1-7b
Covey Lane Utility Cross Section

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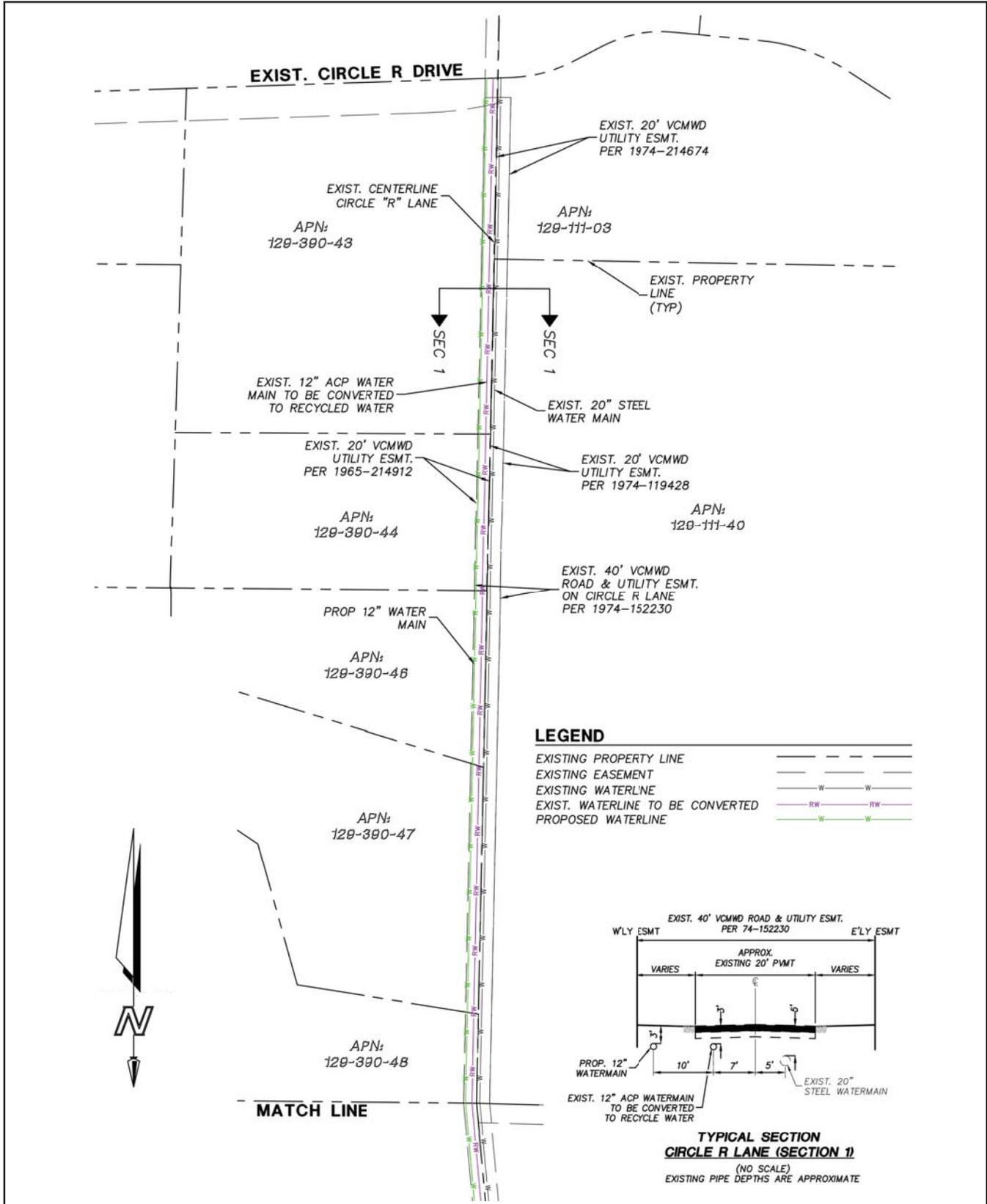


FIGURE 3.1-7c-1
Circle "R" Lane Utility Cross Section

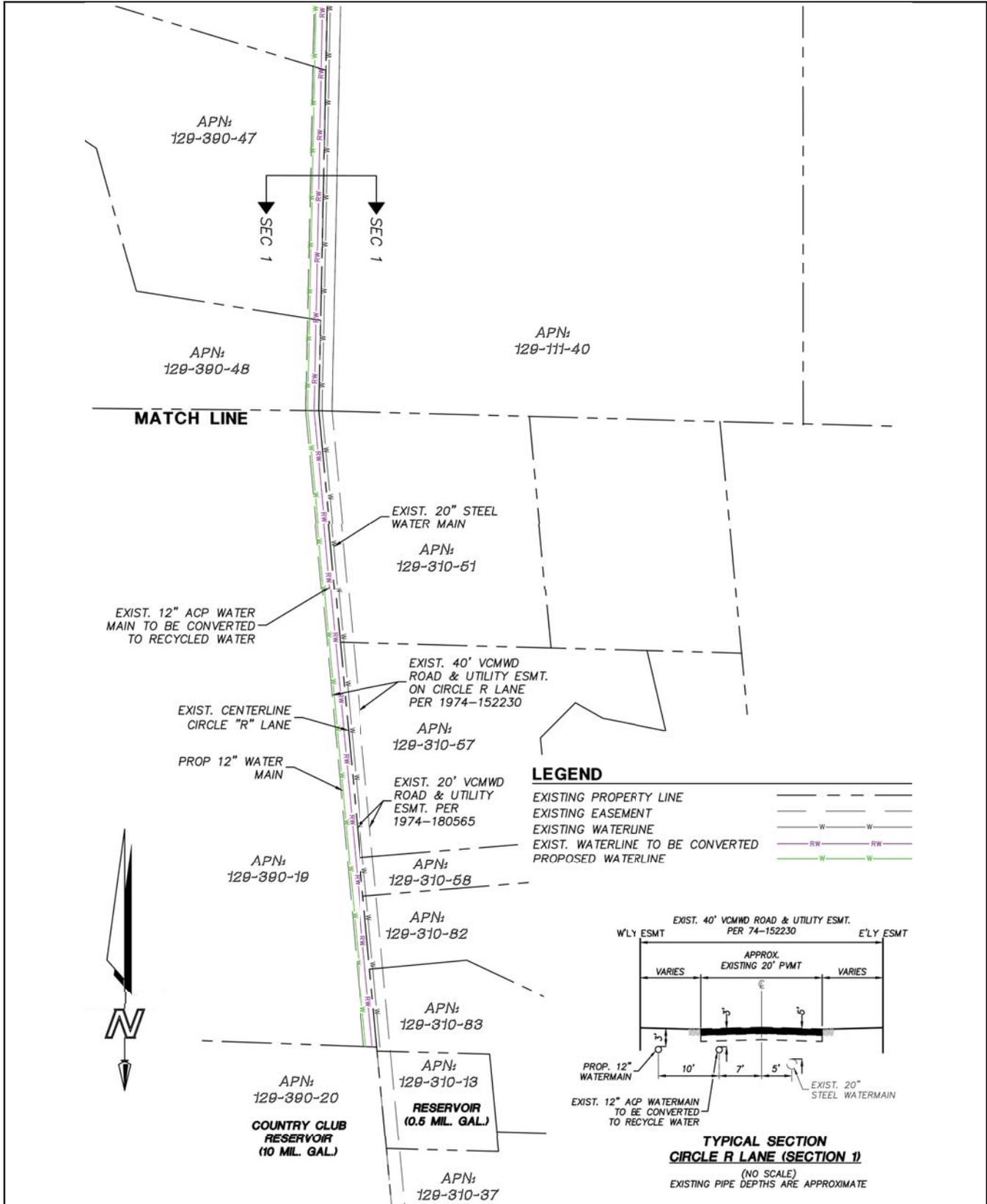


FIGURE 3.1-7c-2
Circle "R" Lane Utility Cross Section

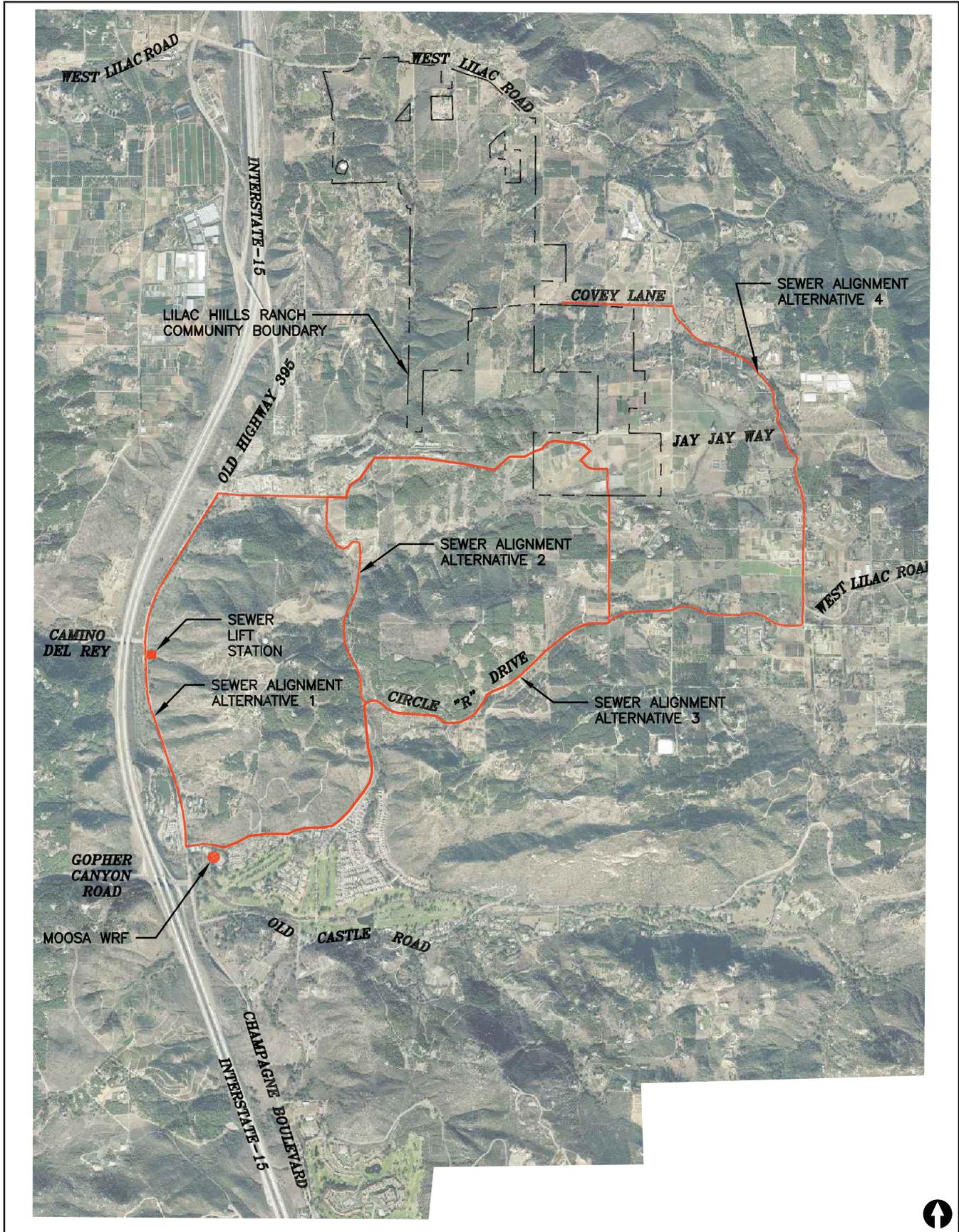


FIGURE 3.1-8
Off-site Sewer Collection System

3.1.8 Energy Use and Conservation

The Public Resource Code (PRC) Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to analyze energy use and conservation and, if necessary, associated mitigation as it is applicable to the project, and in particular to describe any wasteful, inefficient, and unnecessary consumption of nonrenewable energy caused by a project. Thus, this subchapter focuses not on total energy consumed but more on the efficiency with which the electricity, natural gas and fuel (diesel and gasoline) are consumed. The analysis of energy conservation consists of a summary of the energy regulatory framework, the existing conditions at the project site, a discussion of the project's potential impacts on energy resources, and identification of project design features and/or mitigation measures that may reduce energy consumption. The potential for impacts to energy conservation have been evaluated in accordance with Appendix F of the CEQA Guidelines and federal, state, and regional regulations.

3.1.8.1 Existing Conditions

In 2012, total electricity consumed in the State was 302,000 gigawatt-hours (GWh), about 3 percent higher than 2011. While in-state electricity production declined by almost one percent in 2012, net imports from the Northwest and Southwest, made up this difference. Energy imports from the Northwest in 2012 increased by 12 percent, due primarily to an increase in wind generation along with increased biomass and small hydroelectric imports. The installed capacity of the 1,008 in-state power plants with generation rating greater than 0.1 megawatts (MW) totals 69,709 MW. These plants produced 205,695 gigawatt-hours of electricity in 2009 (CEC 2014a). In 2009, 11.6 percent of all electricity came from renewable resources such as wind, solar, geothermal, biomass and small hydroelectric facilities. Large hydro plants generated another 9.2 percent of our electricity (CEC 2014a).

Natural gas is the second most widely used energy source in California. Depending on yearly conditions, 40 to 45 percent of the total is burned for electricity generation; 10 percent is consumed in facilitating the extraction of oil and gas, while the rest is used for everything from space heating to fuel for bus fleets (CEC 2014a).

Natural gas-fired generation has been the primary source of electricity generation in the State for years and fuels over half of electricity consumption, both from in-state and imported sources (CEC 2014a). As natural gas is a resource that can fill in the gaps from other power resources, its total use can vary greatly from year to year. The availability of hydroelectric resources, the emergence of renewable resources for electricity generation, and overall consumer demand are the variables that shape natural gas use consumption. In 2012, 23,323 million therms were consumed statewide.

In 2007, total gasoline consumed in the State was 15,672,334,029 gallons, a decrease of about 153 gallons from the previous year. Diesel fuel is the second largest transportation fuel in California behind gasoline. In 2007, more than 3,000,000,000 gallons of diesel were consumed.

Regional

SDG&E is the owner and operator of natural gas and electricity transmission and distribution infrastructure in the county. SDG&E is regulated by the CPUC. The CPUC

sets the gas and electricity rates for SDG&E and is responsible for making sure that California utilities' customers have safe and reliable utility service at reasonable rates. The project's energy needs would be supplied through the various combinations of energy resources available within the project area, and involving the anticipated future energy resource use patterns discussed in this section.

There are no energy utility facilities located within the undeveloped project site. There are three major electricity-generating power plants in the County, which include the Palomar Energy Center, Otay Mesa Energy Center, and the Encina Power Station (SDG&E 2013a). There are also a number of smaller electricity generating plants in the county that are used as backup during times of peak power demand, which are referred to as "peakers." These in-region assets are currently capable of generating approximately 3,071 MW of electricity. SDG&E also provides natural gas in the amount of 150 million cubic feet per day for residential users and 70 million cubic feet per day for commercial and other users (SDGE 2013b).

Power generation and power use are not linked geographically. Electricity generated within the San Diego region is not dedicated to users in the SDG&E service area. Instead, electricity generated in the County is fed into the statewide utility grid and made generally available to users statewide. SDG&E purchases electricity from this statewide grid, through various long-term contracts. Similarly, natural gas is also imported into southern California and originates from any of a series of major supply basins located from Canada to Texas. Gas is pumped out and shipped to receipt points that connect with major interstate gas pipelines.

Table 3.1-13 lists SDG&E's current energy sources. As shown in Table 3.1-14, SDG&E renewable energy includes biomass and waste, geothermal, small hydroelectric, solar, and wind sources. SDG&E obtained 19.2 percent of its energy from renewable resources in 2012. Additionally, SDG&E's other energy sources include coal, natural gas, nuclear and unspecified sources. As directed by the California RPS in SB 1078, SDG&E and other statewide energy utility providers are targeted to achieve a 33 percent renewable energy mix by 2020.

TABLE 3.1-13
SDG&E POWER CONTENT

<u>Energy Source</u>	<u>SDG&E 2012 Power Mix</u>
<u>Renewables</u>	<u>19.2%</u>
<u>- Biomass & waste</u>	<u>3.9%</u>
<u>- Geothermal</u>	<u>2.4%</u>
<u>- Small hydroelectric</u>	<u>0.1%</u>
<u>- Solar</u>	<u>3.4%</u>
<u>- Wind</u>	<u>9.4%</u>
<u>Coal</u>	<u>2.3%</u>
<u>Large Hydroelectric</u>	<u>-0.1%</u>
<u>Natural Gas</u>	<u>63.1%</u>
<u>Nuclear</u>	<u>0.9%</u>
<u>Unspecified</u>	<u>14.6%</u>
<u>TOTAL</u>	<u>100%</u>

SOURCE: SDG&E 2013a.

Regulatory Framework

The following regulations and guidelines provide the framework for energy conservation. According to the majority of these programs and their requirements, the increased and growing demands for non-renewable energy supplies are best addressed through conservation.

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation, the U.S. Department of Energy, and the EPA are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements.

On the state level, the CPUC and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy. The CPUC regulates utilities in the energy, rail, telecommunications and water fields. The CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards.

Federal

Federal Energy Policy and Conservation Act and Amendments

Minimum standards of energy efficiency for many major appliances were established by the U.S. Congress in the federal Energy Policy and Conservation Act of 1975, and have been subsequently amended by succeeding energy legislation, including the federal Energy Policy Act of 2005. The Department of Energy is required to set appliance efficiency standards at levels that achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most significant new standard it establishes is for general service lighting, which will be deployed in two phases. First, by 2012–2014 (phased over several years), common light bulbs will be required to use about 20–30 percent less energy than present incandescent bulbs. Second, by 2020, light bulbs must consume 60 percent less energy than today's bulb; this requirement will effectively phase out the incandescent light bulb.

Additional regulations at the federal level include Corporate Average Fuel Economy Standards, among others, described in subchapter 3.1.2.1.

StateEnergy Action Plan

The CEC, the CPUC, and the Consumer Power and Conservation Financing Authority (called the CPA - which is now defunct), approved the final State of California Energy Action Plan in 2003. The plan establishes shared goals and specific actions to ensure that adequate, reliable, and reasonably-priced electrical power and natural gas supplies (CEC 2014b). At the beginning of 2008, the CEC and CPUC didn't find it necessary or productive to create a new energy action plan. As the state's energy policies have been significantly influenced by the passage of Assembly Bill 32, the California Global Warming Solutions Act of 2006, rather than produce a new Energy Action Plan, the CEC and CPUC have prepared instead an "update" that examines the state's ongoing actions in the context of global climate change. The update is prepared using the information and analysis prepared for the Integrated Energy Policy Report (IEPR) documents, as well as with recent CPUC decisions (CEC 2014b).

As described in subchapter 3.2.1.1, there are a host of regulations at the state level intended to reduce energy use and GHG emissions. These include, among others, AB1493-Light -duty Vehicle Standards, California Code of Regulations Title 24, Part 6-Energy Efficiency Standards, California Code of Regulations Title 24, Part 11-California Green Building Standards.

County of San DiegoSDG&E Long-Term Resource Plan

In 2004, SDG&E filed a long-term energy resource plan (LTRP) with the CPUC, which identifies how it will meet the future energy needs of customers in SDG&E's service area. The LTRP identifies several energy demand reduction (i.e., conservation) targets, as well as goals for increasing renewable energy supplies, new local power generation, and increased transmission capacity.

The LTRP sets a standard for acquiring 20 percent of SDG&E's energy mix from renewables by 2010 and 33 percent by 2020. The LTRP also calls for greater use of in-region energy supplies, including renewable energy installations. By 2020, the LTRP states that SDG&E intends to achieve and maintain the capacity to generate 75 percent of summer peak demand with in-county generation. The LTRP also identifies the procurement of 44 percent of its renewables to be generated and distributed in-region by 2020.

3.1.8.2 Analysis of Project Impacts and Determination of Significance

Section 15126.4 (a)(1) of the CEQA Guidelines states that an EIR shall describe feasible measures which could minimize significant adverse impacts, including, where relevant, inefficient and unnecessary consumption of energy.

CEQA Guidelines, Appendix F, Energy Conservation provides guidance for EIRs regarding potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing the inefficient, wasteful and unnecessary consumption of energy. The State Resources Agency amended Appendix F to make it clear that an energy

analysis is mandatory. However, the Resources Agency also clarified that the energy analysis is limited to effects that are applicable to the project (Final Statement of Reasons for Regulatory Action [Resources Agency 2009]). Appendix F is not described as a threshold for determining the significance of impacts. Appendix F merely seeks inclusion of information in the EIR to the extent relative and applicable to the project. Therefore, as Appendix F indicates a particular emphasis should be focused on avoiding or reducing the inefficient, wasteful, and unnecessary consumption of energy. For the purpose of determining the significance of an impact in this EIR, implementation of the project would have significant energy impacts if it would:

1. Result in the wasteful and inefficient use of nonrenewable resources during its construction.
2. Result in the wasteful and inefficient use of nonrenewable resources during long-term operation.

Issue 1: Construction-Related Energy Use

Would the project result in the wasteful and inefficient use of nonrenewable resources during the construction phase of the project?

Analysis

The project construction would occur in five phases. Construction of the proposed project is expected to last approximately 10 years.

Grading and construction activities for these phases would consume energy through the operation of heavy off-road equipment, trucks, and worker traffic.

Construction equipment fuel consumption for each of the construction phases was based on equipment lists provided by the project applicant. The construction equipment, summarized in Table 3.1-14, is anticipated to be used in each phase of the project. Based on project design consideration AQ-DC-3, which is included in the Specific Plan, Tier III, or higher, construction equipment will be used, with the exception of concrete/industrial saws, generators, welders, air compressors, or construction equipment where Tier III, or higher, is not available. Additionally, Tier IV equipment would likely be used in the final phases due to ARB off-road emissions control regulations. The fuel consumption of off-road equipment calculated in this analysis is based on the tier levels presented in Table 3.1-14, as well as statewide data sets for horsepower and load factors provided as part of the project air quality analysis.

**TABLE 3.1-14
CONSTRUCTION EQUIPMENT LIST**

<u>Equipment Type</u>	<u>Quantity</u>	<u>Tier</u>	<u>Horsepower</u>	<u>Load Factor</u>
<u>Concrete/industrial saws</u>	<u>1</u>	<u>II</u>	<u>81</u>	<u>0.73</u>
<u>Crawler tractors</u>	<u>1</u>	<u>III</u>	<u>208</u>	<u>0.43</u>
<u>Tractors/loaders/backhoes</u>	<u>1</u>	<u>III</u>	<u>98</u>	<u>0.37</u>
<u>Crawler tractors</u>	<u>2</u>	<u>III</u>	<u>208</u>	<u>0.43</u>
<u>Rubber-tired loaders</u>	<u>3</u>	<u>III</u>	<u>200</u>	<u>0.36</u>
<u>Bore/drill rigs</u>	<u>2</u>	<u>III</u>	<u>206</u>	<u>0.5</u>
<u>Crawler tractors</u>	<u>3</u>	<u>III</u>	<u>208</u>	<u>0.43</u>
<u>Graders</u>	<u>1</u>	<u>III</u>	<u>175</u>	<u>0.41</u>
<u>Rubber-tired loaders</u>	<u>2</u>	<u>III</u>	<u>200</u>	<u>0.36</u>
<u>Scrapers</u>	<u>8</u>	<u>III</u>	<u>362</u>	<u>0.48</u>
<u>Cranes</u>	<u>1</u>	<u>III</u>	<u>226</u>	<u>0.29</u>
<u>Forklifts</u>	<u>3</u>	<u>III</u>	<u>89</u>	<u>0.2</u>
<u>Generator sets</u>	<u>2</u>	<u>II</u>	<u>84</u>	<u>0.74</u>
<u>Tractors/loaders/backhoes</u>	<u>3</u>	<u>III</u>	<u>98</u>	<u>0.37</u>
<u>Welders</u>	<u>1</u>	<u>II</u>	<u>46</u>	<u>0.45</u>
<u>Pavers</u>	<u>2</u>	<u>III</u>	<u>126</u>	<u>0.42</u>
<u>Paving equipment</u>	<u>2</u>	<u>III</u>	<u>131</u>	<u>0.36</u>
<u>Rollers</u>	<u>2</u>	<u>III</u>	<u>81</u>	<u>0.38</u>
<u>Air compressors</u>	<u>2</u>	<u>I</u>	<u>78</u>	<u>0.48</u>

SOURCE: Appendix O.

Based on the above inventory of mostly off-road construction equipment construction-related fuel-energy consumption can be estimated. The total horsepower multiplied by the load factor, hours of use, and gallons per horsepower hour would result in approximately 462,524 gallons of diesel fuel per year, or approximately 4,625,240 gallons over the entire construction period, for the off-road construction equipment (see Table 3.1-14 and Appendix O).

The on-road worker, vendor, and hauling trips would result in a total of 2,568 VMT per construction phase. As these trips would occur in a variety of different vehicles, a county wide average fuel consumption of 18.8 miles per gallon was applied to the VMT per phase (Resources Agency 2009). Based on these factors, it is predicted that 241,392 gallons of fuel would be consumed by on-road worker, vendor, and hauling trips during construction of the project. .

Through the use of more efficient Tier III and IV equipment, which uses clean-fuel technologies or electric-based engines, wherever feasible during construction total fuel-energy consumption would be reduced.

Project design feature AQ-DC-3, combined with local, state and federal regulations, which limit engine idling times and require recycling of construction debris, would reduce short-term energy demand due to project construction and would not result in a wasteful or inefficient use of energy.

Issue 2: Long-term Operational Energy Use

Guidelines for the Determination of Significance

Would the project result in the wasteful and inefficient use of nonrenewable resources during the long-term operation of the project?

Analysis

Long-term operational energy use associated with the project includes electricity and natural gas consumption by residents, energy consumption related to obtaining water, and fuel consumption by operation of vehicles.

Electricity and Natural Gas Consumption

As indicated in subchapter 3.1.2 of the EIR (Greenhouse Gas), the Specific Plan requires residential dwelling units and commercial development to exceed the 2008 Title 24 Part 6 energy efficiency standards by 30 percent. The project also includes design measures (see Table 1-3), which require: installing high-efficiency lighting to achieve a 15 percent lighting energy reduction, using Smart Meters to reduce energy, and installing Energy Star certified appliances including clothes washers; dish washers; fans; and refrigerators, in all residential units. Energy Star certified appliances would also be required to be used in the assisted living facility.

Based on energy consumption data used in the GHG emission estimates, the residential uses would consume 36,936,930 thousand British thermal units (kBtu) of natural gas and 8,797,235 kilowatt hours (kWh) of electricity annually (RECON 2014f). The commercial uses, would consume 4,175,458 kBtu of natural gas use and 2,279,057 kWh of electricity annually. Thus, in total the project is predicted to consume 41,112,388 kBtu of natural gas and 11,076,292 kWh of electricity.

In addition to the design measures quantified for the GHG analysis, the Specific Plan includes other energy conservation measures that were not quantified due to the uncertainty of resident participation, such as the requirement to provide the infrastructure necessary to accommodate the future use of solar photovoltaic panels and/or systems, including wiring for roof mounted solar systems and a recharging connection for electric vehicles in the garage of all buildings.

Based on the “lower than average” energy use anticipated from the project due to project design considerations, including designing residential and commercial buildings to exceed 2008 Title 24 Part 6 energy efficiency standards by 30 percent and providing energy star appliances in all residential units, the project would not result in the wasteful or inefficient use of nonrenewable resources during its long-term operation.

Water Conveyance

The provision of potable water to residences consumes large amounts of energy through its supply, treatment, and distribution. The total indoor water use for the project would be 182.4 million gallons of water per year (see Appendix O). This would result in 1,774,344 kWh for water supply, 20,248 kWh for water treatment, and 232,031 kWh for water conveyance. The total outdoor water use for the project would be 98.6 million

gallons of water per year. This would result in the use of 958,615 kWh for water supply, 10,939 kWh for water treatment, and 125,358 kWh for water conveyance. However, as a design feature identified in the Specific Plan, the project would reduce potable water demand for both indoor and outdoor use by at least 20 percent. The reduction of water demand would result in a reduction of wasteful or inefficient water allowing the conservation of energy use associated with water use.

Fuel Consumption

Energy in the form of fuel (gasoline and diesel) would be consumed by vehicles associated with the project through generation of new vehicle trips. The project includes design measures to enhance walkability and to improve the on-site pedestrian network. The non-vehicular modes of travel, including walking and use of mass transit, would be encouraged through the provision of trails throughout the project's 25.3 acres of recreational open space, and by focusing higher residential densities adjacent to the planned mixed-use and commercial development.

Additionally, the project would provide interim transit services, as described in Section 1.0, for residents after 50 percent of the dwelling units constructed under Phase I are occupied. The availability of interim transit service would also encourage lower vehicle fuel consumption by providing a local transit option for residents. The interim transit service would continue until a transit linkage is provided by the local transit district.

Based on the findings of the GHG analysis, subsection 3.1.2, the project would result in a reduction of 1,537,111 vehicle miles traveled (VMT) than if it did not include these design features. This is an approximate 2.4 percent reduction in VMT over the VMT estimated for the project without these features. Based on an average projected fuel economy of 18.8 miles per gallon for 2020, the project would consume 81,761 fewer gallons of vehicle fuel annually. In addition to the project design features, various federal and state regulations on vehicle and fuel manufacturing would likely result in the substantial reduction of the project's vehicle fuel consumption each year into the future. Specifically, the CAFE, LCFS, Pavley, and LEV III regulations are anticipated to improve the fuel economy of vehicles.

Conclusion

Energy would be consumed through daily residential activities, the delivery of water for potable and irrigation purposes, and daily vehicle use by residents and visitors. While the long-term operation of the project would result in an increase in energy consumption compared to existing conditions, the project incorporates design measures (related to electricity, natural gas and water use) that require the project to exceed energy and water efficiency regulations under the 2008 Title 24 Part 6 and Part 11. In addition, the project is designed to reduce vehicle fuel consumption through promotion of alternative modes of transportation and trip reduction through provision of mixed-uses on-site. The project design features included in the Specific Plan also contain energy conservation measures that were not quantified due to the uncertainty of resident participation, such the requirement to provide the infrastructure necessary to accommodate the future use of solar photovoltaic panels and/or systems, including wiring for roof mounted solar systems and an recharging connection for electric vehicles in the garage of all buildings. These measures would further promote energy-efficiency and reduce future demand for

3.0 Environmental Effects Found Not to be Significant

energy from the project. Overall, the project therefore would avoid the inefficient, wasteful and unnecessary consumption of energy.

3.2 **Effects Found Not Significant During Initial Study**

The following environmental effects were determined not to be potentially significant during the Environmental Initial Study. A complete copy of the Environmental Initial Study is attached as Appendix A.

3.2.1 **Agriculture and Forestry Resources – Forest Lands and Timberland**

The project site and off-site improvement areas do not contain forest lands or timberland. The County of San Diego does not contain any existing Timberland Production Zones. Therefore, project implementation would not conflict with existing zoning for, or cause rezoning of, forest land, timberland or timberland production zones. The absence of forest lands and timberland from the County of San Diego and from the project site ensures that **no impact** would occur.

Because the project site and off-site improvement areas do not contain any forest lands as defined in Public Resources Code section 12220(g), project implementation would not result in the loss or conversion of forest land to a non-forest use. In addition, the project is not located in the vicinity of off-site forest resources. Accordingly, **no impact** would occur.

3.2.2 **Cultural Resources – Paleontology**

Development of the project would not directly or indirectly destroy a unique paleontological resource or site. A review of the County's Paleontological Resources Maps indicates that the project is located entirely on Cretaceous Plutonic Rock and has no potential for producing fossil remains. Therefore, **no impact** would occur.

3.2.3 **Hazards and Hazardous Materials – Airports**

The project site is not located within an Airport Land Use Compatibility Plan (ALUCP), an Airport Influence Area, or a Federal Aviation Administration Height Notification Surface. In addition, the project does not propose construction of any structure equal to or greater than 150 feet in height, constituting a safety hazard to aircraft and/or operations from an airport or heliport. Therefore, the project would not constitute a safety hazard for people residing or working in the project area. Accordingly, **no impact** would occur.

In addition, the project site is not within one mile of a private airstrip. As a result, the project would not constitute a safety hazard for people residing or working in the project area. Therefore, **no impact** would occur.

3.2.4 **Land Use Planning – Divide an Established Community**

The project site is currently a mix of undeveloped open space, agricultural uses, and rural residences. The project site is located along the western fringe of the rural community of Valley Center. The roadways on-site provide access to the on-site uses, but do not provide a connection between community areas. The project would introduce a new village consisting of new infrastructure, including roadways, water supply systems, and utilities to the site~~is undeveloped property~~. Since the site currently does not serve as a connection point between community areas, re is no currently established community,~~the project would not significantly disrupt or divide an established~~

community. ~~The project site is located along the western fringe of the community of Valley Center. The project would therefore not physically divide an established community.~~ Accordingly, impacts would be **less than significant**.

3.2.5 Mineral Resources – Loss of Availability

The lands within the project site have not been classified by the California Department of Conservation – Division of Mines and Geology (Update of Mineral Land Classification: Aggregate Materials in the Western San Diego Production-Consumption Region 1997). The project site is not underlain by a known sand gravel mine, quarry, or gemstone deposit. In addition, the project site is surrounded by developed land uses, including agricultural operations and rural residences, which are incompatible with future extraction of mineral resources on the project site. A future mining operation at the project site would likely create a significant impact to neighboring properties regarding issues such as noise, air quality, traffic, and possibly other impacts. Therefore, because the mineral resource has already been lost due to incompatible land uses, implementation of the project would not result in the loss of availability of a known mineral resource that would be of value.

As further demonstrated in a supplemental letter dated January 4, 2012 (attached to the Geotechnical Investigation, see Appendix N), the alluvial soils within the project canyons and active drainages are generally classified as silty to clayey sands and sandy silts with very limited exposures of “clean” sands that have minimal fines content. The vast majority of alluvium contained in the on-site canyons and drainages are not be considered suitable for use as fine aggregate for concrete production in their current condition. It may be possible, but highly unlikely, to develop a sand mixture that is suitable for use in concrete production through extensive washing, screening and mixing. However, this is not economically feasible due to the following: the relatively minor volumes of materials on-site; significant increased production costs for washing, screening, and mixing; and the additional excavation and handling costs associated with relatively shallow groundwater (8 to 10 feet below grade) necessitating drag lining and drying to develop these deposits. The minor amount of alluvium is estimated to account for less than 25,000 tons having a current market value of less than \$750,000 which is significantly less than the County’s \$12,500,000 construction materials threshold. Accordingly, impacts would be **less than significant**.

Furthermore, the project site is not located in an area that has Mineral Resource Zone (MRZ)-2 designated lands, which is the state classification indicating the presence of mineral resources, or located within 1,300 feet of such lands. Therefore, the project would not result in the loss of availability of locally important mineral resource(s) delineated on local land use plans, including the general plan. **No impact** would occur.

3.2.6 Noise – Airports

The project is not located within an ALUCP for any airport or within 2 miles of a public airport or public use airport. Therefore, the project would not expose people residing or working in the project area to excessive public airport-related noise levels, and **no impact** would occur.

Furthermore, the project is not located within a one-mile vicinity of a private airstrip. Therefore, the project would not expose people residing or working in the project area to excessive private airport-related noise levels. **No impact** would occur.

3.2.7 Population and Housing – Displacement

~~The site contains 12 existing homes and approximately 20 to 30 persons. These homes would be removed and people displaced. However, this is not a substantial number of residential structures or people. Furthermore, the project includes the construction of a maximum of 1,746 dwelling units. The site contains several existing single-family residential structures that would be removed. However, the project includes residential development and would not displace housing because a maximum of 1,746 dwelling units would be constructed. Therefore, impacts would be less than significant.~~

~~The project is a residential development and would not displace substantial numbers of people because a maximum of 1,746 dwelling units would be constructed. Therefore, impacts would be less than significant.~~

3.2.8 Transportation and Housing – Air Traffic

The project is located outside of an Airport Influence Area and is not located within two miles of a public or public use airport. Therefore, the project would not result in a change in air traffic patterns, and there would be no increase in air traffic levels or a change in location that results in substantial safety risks. **No impact** would occur.

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