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, 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 2014a) (Appendix S); Overview of Water Service, Lilac Hills Ranch Project (DWE 2014b) (Appendix T); WSA Report for the Lilac Hills Ranch Project (DWE 2012) (see Appendix Q), Emergency Water Conservation Consistency Analysis (DWE 2015) (Appendix T-1), and Preliminary Hydrogeologic Assessment (Wiedlin & Associates 2013) (see Appendix P).

Regulatory Framework

Executive Emergency Order B-29-15 – Statewide Temporary Water Conservation Restrictions

This temporary, emergency Executive Order (EO) was issued by Governor Brown on April 1, 2015. That EO seeks to achieve a 25 percent reduction in water use across the state as compared to the amount utilized in 2013. The reduction amount required of each urban water supplier is determined based on per capita water use whereby those areas with high per capita use are to achieve proportionally greater reductions than those with low use. This EO also directed the State Water Resources Control Board (SWRCB) to adopt regulations, approved on May 5, 2015, to mandate various water conservation restrictions to achieve the statewide 25 percent overall reduction in potable water usage through February 2016. The SWRCB emergency water conservation regulations require the VCMWD to reduce its service area potable water use by 36 percent relative to its 2013 water use. (see Appendix T-1, pp. 2-3).

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 ; however, Policy I-78 provides a waiver locational criteria in the policy 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.

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. MWDs 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 thou-sands 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.

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 supplies, Colorado River supplies, groundwater banking, and water transfers, the VCMWD concludes 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 Standel 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 site[1].

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

[1]This 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.

(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 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. Consistent with the EIR certified with the MUP Modification, the Lower Moosa Canyon WRF could operate up to 1.0 mgd of treatment on-site, if upgrades were constructed.

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.

6. Emergency Water Conservation Restrictions: Result in inconsistency with temporary, emergency water conservation restrictions identified in the EO B-29-15 and the related SWRCB regulations.

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 gray water and other wastewater to evaluate wastewater reuse options. Table 3.1-1412 summarizes the projected wastewater flows and recycled water generation. The estimated projected 24-hour wastewater generation from the project is 356,510 gpd and the 24-hour recycled water generation would be 25,928261,072 gpd (see Appendix S).

TABLE 3.1-1412
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~~ 928 homes	200	185,600	150	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 17.3 acres	1,900	32,870	1,340	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
Community Purpose Facility	2.0 acres	1,000	2,000	700	1,400
Group ~~Residential/~~ Care	6.5 acres	1,000	6,500	700	4,550
Institutional	10.0 acres	1,000	10,000 ~~10,700~~	700	7,490
Park	23.6 acres	700	16,520	500	11,800
TOTAL			356,510		261,072

[1]Includes 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 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.. Also, as required by the County, prior to Final Map recordation and issuance of building permits for future phases, the project shall obtain a service commitment letter from the wastewater provider, VCMWD (see Appendix R). 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 on-site improvements are included as part of the analysis within the various issue subsections included in Chapters 2 and 3 of this DEIR.

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). 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. Since completion of the redundancy evaluation in Appendix T, the VCMWD has completed a reservoir improvement project which provides the required redundancy in the Country Club Zone. The construction was completed in 2014 and was implemented by the VCMWD.~~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-foot 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~~ right-of-way 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.**

Wastewater Systems

The project is expected to generate a daily average of ~~406,930~~356,510 gallons per day of wastewater based on ultimate build-out of the Specific Plan. The project would be required to construct wastewater capacity sufficient to accommodate the project's 356,510 gpd. The project has provided for all of this to be constructed on-site. The existing Lower Moosa Canyon WRF currently treats approximately 0.35 mgd and has an existing MUP and EIR for up to 1.0 mgd of treatment on-site. The timing of construction of the project in relation to construction within the Lower Moosa Canyon WRF could be such that the VCMWD finds it in the best interest of its customers to construct the wastewater capacity needed for the project at the Lower Moosa Canyon WRF. As the project and the existing Lower Moosa Canyon WRF service area develop over time, any of the four options, below, could be the long-term plan for providing wastewater service to the project ~~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 .25 mgd of wastewater. 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, t~~The following ~~on-site~~ wastewater treatment options could be implemented for 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. 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. For all options, recycled water would be returned to the site.

For all options, the project would be required to construct improvements at the Lower Moosa WRF (secondary, tertiary, and recycled) for any amount of project wastewater treated at the facility. All improvements would be within the existing site of the facility as analyzed in 1996 MUP Modification and associated EIR (see below).

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 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.

Details of the four~~The~~ options for wastewater treatment are the following. Construction of any wastewater treatment and reclamation facilities (whether at the Lower Moosa facility or on-site) 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.

Option 1: On-site WRF with Solid Treatment

This on-site option for the 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 entail 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.

Like Option 1, this option would require the initial temporary trucking of sewage from an on-site collection point to an existing wastewater treatment plant.

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 physically expand existing facilities 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 with the return of recycled water back to the project. ~~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~~ Modification and associated EIR. ~~and t~~The analysis determined ~~it~~the existing site would be adequate to support the upgrades necessary to increase treatment capacity to the 1.0 mgd. 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. Recycled water would be returned to the project site. All solids generated by the project would be treated at the Lower Moosa Canyon. ~~Implementation of any of the aforementioned options would provide adequate wastewater service.~~ Like option 2, above, this option's 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 option~~s~~. The State Water Resources Control Board, Division of Drinking Water ~~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, recycled 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 expansion footprint (within existing site and within CEQA document analysis discussed above) 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, recycled 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 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.

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 detention 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. 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.

Through compliance with 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) (Appendix 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 1,112,528~~1,151,427~~ gpd, or 1,246~~1,290~~ afy (Appendix 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 (Appendix 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 (Appendix 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 (Appendix 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 (Appendix Q). (Any potential adjustments to recycled water amounts due to application of the temporary emergency potable water conservation restrictions pursuant to the EO and SWRCB regulations may result in adjustments to landscape irrigation techniques and plant palettes to be addressed in the Water Management Plan and consistent with the VCMWD Master Plan regulations regarding recycled water use.)

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 (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). 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 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**.

Issue 6: Water Conservation Restrictions

Guidelines for Determination of Significance

The project would have an inconsistency with temporary, emergency water conservation restrictions identified in the EO B-29-15 and the related SWRCB regulations.

Analysis

The project will be consistent with the EO and all related water conservation regulations now in effect, or in effect at the time that project building permits are issued.

The EO requires potable water use reductions to be measured against a 2013 baseline year. The LHR project obtained the 2013 potable water usage numbers from VCMWD

for all of the legal parcels that comprise the proposed development site (see Appendix T-1, pp. 2-3). The 2013 imported potable water use of the LHR parcels totaled 366 afy.

The EO also requires water use reductions statewide to be achieved by urban water suppliers, such as the VCMWD. Compliance with the EO and regulations related to the project was therefore analyzed on a District-wide level. Under the regulations, the District's current potable water usage rate is 291 gallons per capita per day (GPCPD) and would need to be reduced to 186 GPCPD (see Appendix T-1, pp. 4-5). The project's current estimated interior potable water use is 58 GPCPD (see Appendix T-1, p.4), or about 20 percent of the average potable water use rate within the District as a whole. Based on a population estimate for the District of 25,785 and a projected Lilac Hills Ranch project population of 4,464, and based on an existing estimated project water usage rate of 58 GPCPD, the proposed project (without emergency conservation) would result in a decrease in the overall District potable water usage rate from 291 GPCPD to 257 GPCPD (see Appendix T-1, p. 5). This provides the District as a whole with approximately one-third of the 36 percent reduction potable water conservation required by the EO and the SWRCB regulations.

Based on the 36 percent reduction of potable water required by the EO, the District's current 291 GPCPD usage rate would decrease to 186 GPCPD. Using the District's population estimate and the estimated LHR project population, and based on a project water usage rate of 58 GPCPD, the LHR project would further decrease the overall District reduced water usage rate to 167 GPCPD (an additional 10 percent reduction over the mandatory 36 percent reduction) (see Appendix T-1, p. 5). Thus, with VCMWD meeting its target water usage rate reductions under the EO, the Lilac Hills Ranch project would contribute to further lowering those usage rates.

To the extent that the EO and regulations could be interpreted as requiring water use reductions statewide to be achieved by new development at the individual project-level, compliance with the EO and regulations at the project-level also was also analyzed. Utilizing the 2013 base year potable usage of 366 AFY and applying the 36 percent reduction, the annual potable water use by the project parcels would be limited to 234 afy. Based on proposed project population, the project would be required to achieve a target of 47 GPCPD (see Appendix T-1, pp. 5-6).

The Lilac Hills Ranch project will reasonably achieve the target of 47 GPCPD water usage rate under the EO and emergency regulations based on the project design features for water use and conservation listed in Table 1-3, as well as compliance with the mandatory SWRCB emergency regulations at Section 864 and implementation of the mandatory requirements of Article 230 of the VCMWD Administrative Code (Stage 2 conservation measures) in the District's Water Supply Shortage Response Plan. (see Appendix T-1, pp. 6-7). Implementation of these emergency requirements will drastically reduce (or eliminate) the exterior potable water usage (see Appendix T-1, p. 6). The SWRCB regulations identify four urban water suppliers that currently achieve GPCPD water usage rates of 47 or less (without reductions required by the EO). Further, the 2014 residential water usage in San Francisco, before application of emergency water restriction measures, was about 49 GPCPD (see Appendix T-1, p. 7).

The SWRCB emergency regulations are enforceable through significant daily fines and imposition of possible additional civil and criminal penalties, and the VCMWD water

conservation measures are enforceable by significant daily fines (see Appendix T-1, pp. 10-11).

The SWRCB emergency regulations, VCMWD conservation measures, and any other water conservation requirements then in effect could be incorporated into the project's Water Management Plan as discussed and anticipated in Table 1-3. Additional features the project could utilize to further reduce water demands (discussed at Appendix T-1, p. 7) could also be incorporated into the project's Water Management Plan or otherwise utilized to achieve water conservation requirements.

The Lilac Hills Ranch project is consistent with and will adhere to the temporary emergency water conservation regulations from the EO, SWRCB, and VCMWD; and, therefore, there will be **less than significant** impacts resulting from implementation of these water conservation regulations.

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, 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 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**.

Emergency Water Conservation Restrictions

Like the project, other proposed projects and water users within the study area would be required to comply with all state and District emergency water conservation regulations. Compliance with these regulations would ensure that neither the project nor other cumulative projects would result in a violation of emergency water conservation restrictions. **Impacts 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 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 a facility sized only to treat waste generated on-site. Alternatively, the project applicant could make a fair share contribution toward the expansion of the existing treatment facility. The project's contribution to cumulative treatment and disposal capacity impacts would be less than cumulative considerable. 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 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.

Map Source: Dexter Wilson Engineering, 2014

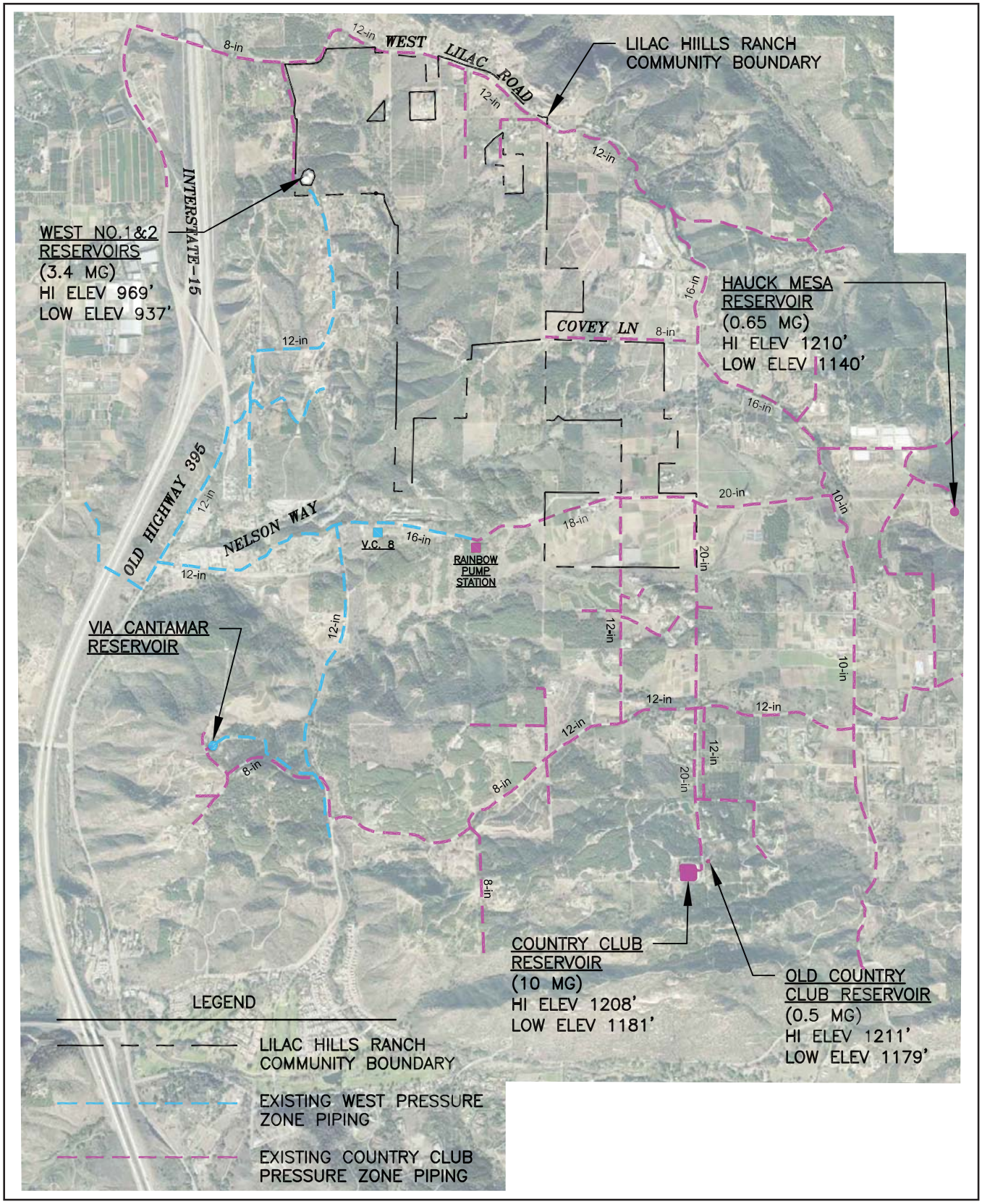

FIGURE 3.1-5

Existing Water System

RECON

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Map Source: Dexter Wilson Engineering, 2014

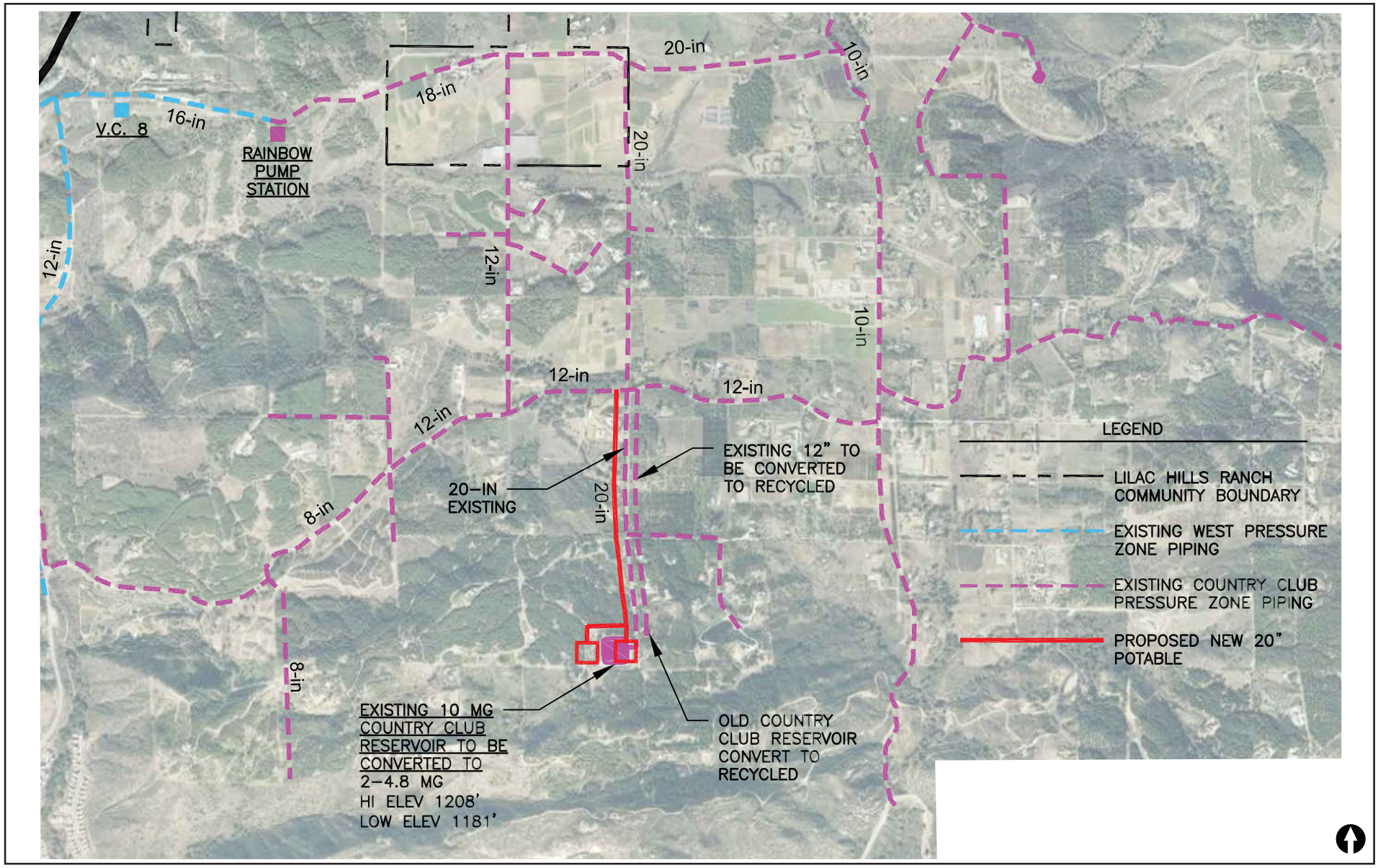

FIGURE 3.1-6
Country Club Reservoir Piping Changes

RECON

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Map Source: Landmark Consulting, 2014

SEE LOWER LEFT

SEE UPPER RIGHT

APN: 129-390-41

APN: 129-390-38

APN: 129-390-18

APN: 129-300-31

APN: 129-300-35

APN: 129-300-09

APN: 129-430-13

APN: 129-430-12

APN: 129-430-04

APN: 129-430-03

SEC 1

SEC 2

SEC 3

SEC 3

SEC 1

SEC 2

℄ CIRCLE 'R' ROAD

EXIST. PROPERTY LINE

EXIST. 30' SDGE ESMT PER 80-328282

PROPOSED 12" C-900 RECYCLED WATER

PROPOSED 8" HDPE SEWER FORCEMAIN

20' VCMWD UTILITY ESMT. PER DOC. 1965-206816 (WATER ONLY)

EXISTING MOUNTAIN RIDGE ROAD PAVEMENT

EXISTING 40' WIDE PVT RD & UTIL. ESMT. (PTR PCL 93A)

EXISTING 12" WATER MAIN

20' VCMWD PER DOC. 1965-214912 (WATER ONLY)

CONNECT PROPOSED 12" C-900 WATER MAIN TO EXISTING 12" WATERLINE

EXIST. PROPERTY LINE

SE ¼ SEC. 30

NE ¼ SEC. 31

CONNECT PROPOSED 12" C-900 WATER MAIN TO EXISTING 12" WATERLINE

EXIST. 25' PVT ROAD & UTIL ESMT. PER 1972-61920

PROPOSED 12" C-900 WATERMAIN

PROPOSED 12" C-900 RECYCLED WATER

EXISTING 12" WATER MAIN

20' SDGE PER DOC.S 89-628561, 90-146977 & 90-538812

20' VCMWD PER DOC. 1965-214916 (WATER ONLY)

CONNECT PROPOSED 12" C-900 WATER MAIN TO EXISTING 12" WATERLINE

PROPOSED 8" HDPE SEWER FORCEMAIN

EXIST. 25' PVT ROAD & UTIL ESMT. PER 1972-61920

EXIST 40' PVT RD ESMT (PTR PCL 93B) & DOC 1970-238276

40' PVT ROAD & UTIL ESMT PER 84-442082

20' PVT. ROAD & UTIL ESMT PER BK 6650 PG 27

℄ MOUNTAIN RIDGE ROAD

PROPOSED 8" HDPE SEWER FORCEMAIN

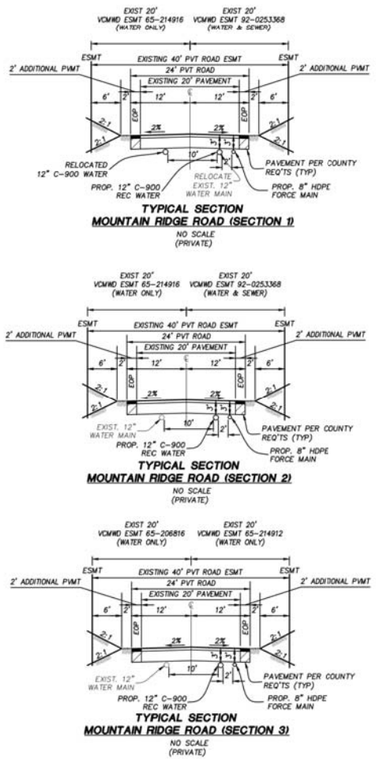
20' VCMWD PER DOCS. 1992-0253368 (WATER & SEWER)

EXIST. PROPERTY LINE

EXIST. PROPERTY LINE

EXIST. PROPERTY LINE

TM 5571 BOUNDARY LINE



TYPICAL SECTION
MOUNTAIN RIDGE ROAD (SECTION 1)
NO SCALE
(PRIVATE)

TYPICAL SECTION
MOUNTAIN RIDGE ROAD (SECTION 2)
NO SCALE
(PRIVATE)

TYPICAL SECTION
MOUNTAIN RIDGE ROAD (SECTION 3)
NO SCALE
(PRIVATE)

LEGEND

- SECTION LINE
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING WATERLINE
- PROPOSED RECYCLED WATERLINE
- PROPOSED SEWER FORCEMAIN
- PROPOSED WATERMAIN

0 Feet 120

RECON

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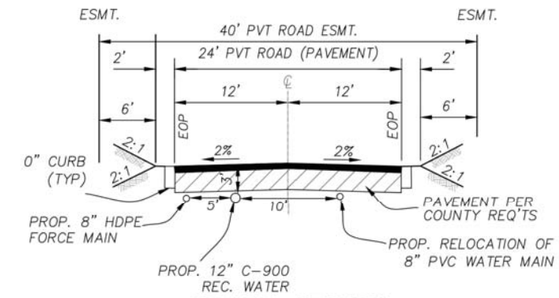
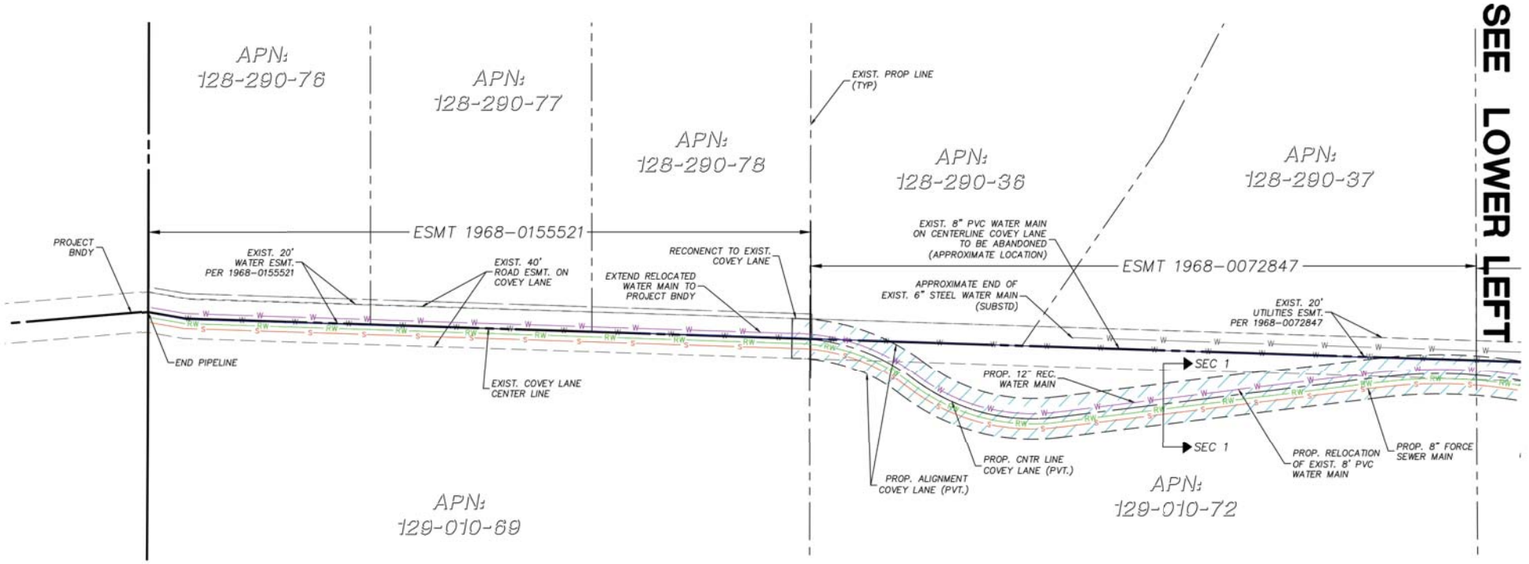
FIGURE 3.1-7a
Mountain Ridge Road Utility Cross Section

Map Source: Landmark Consulting, 2014

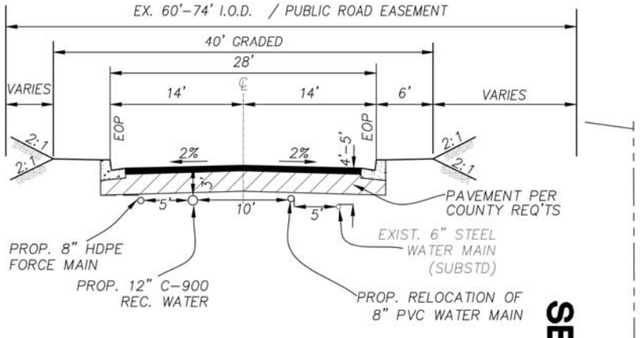


TYPICAL SECTION
COVEY LANE (SECTION 1)

(FROM LILAC HILLS RANCH ROAD TO EASTERLY PROJECT BOUNDARY)
NO SCALE
(PRIVATE)



SEE LOWER LEFT



TYPICAL SECTION
COVEY LANE (INTERIM PUBLIC ROAD)
(SECTION 2)

NO SCALE
(FROM PROJECT BOUNDARY TO WEST LILAC ROAD)
(PUBLIC)

LEGEND

- PROJECT BOUNDARY
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING WATERLINE
- PROPOSED WATERLINE RELOCATION
- PROPOSED RECYCLED WATERLINE
- PROPOSED SEWER FORCEMAIN

SEE UPPER RIGHT

SCALE: 1"=60'

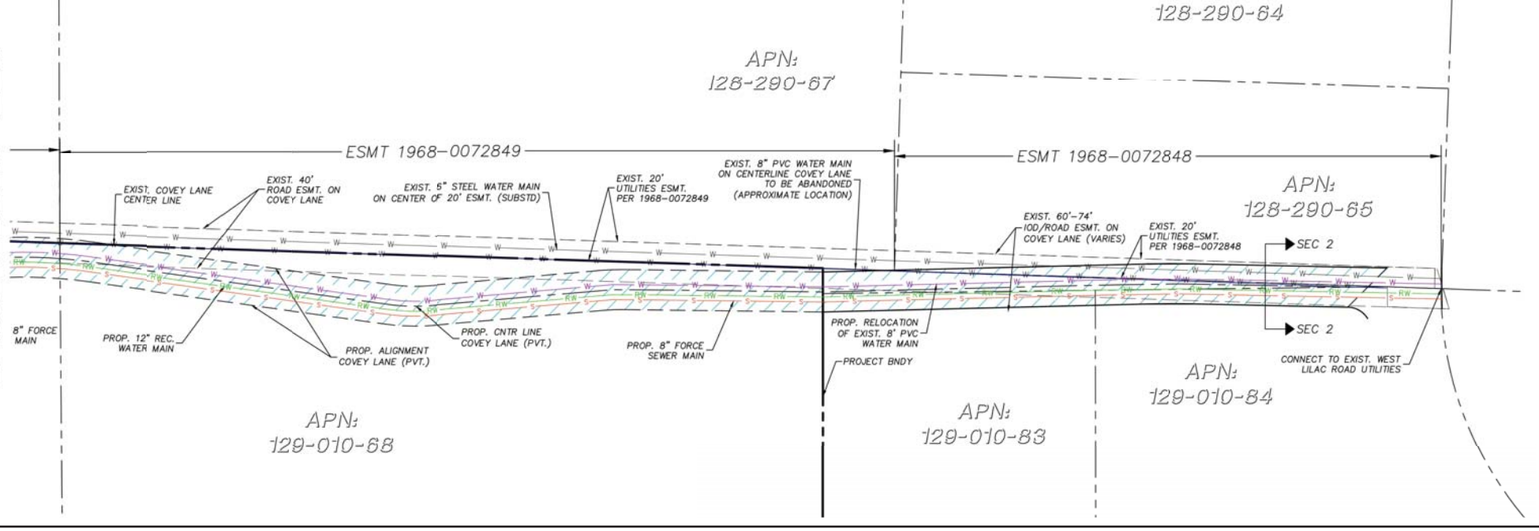


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FIGURE 3.1-7b
Covey Lane Utility Cross Section

Map Source: Landmark Consulting, 2014

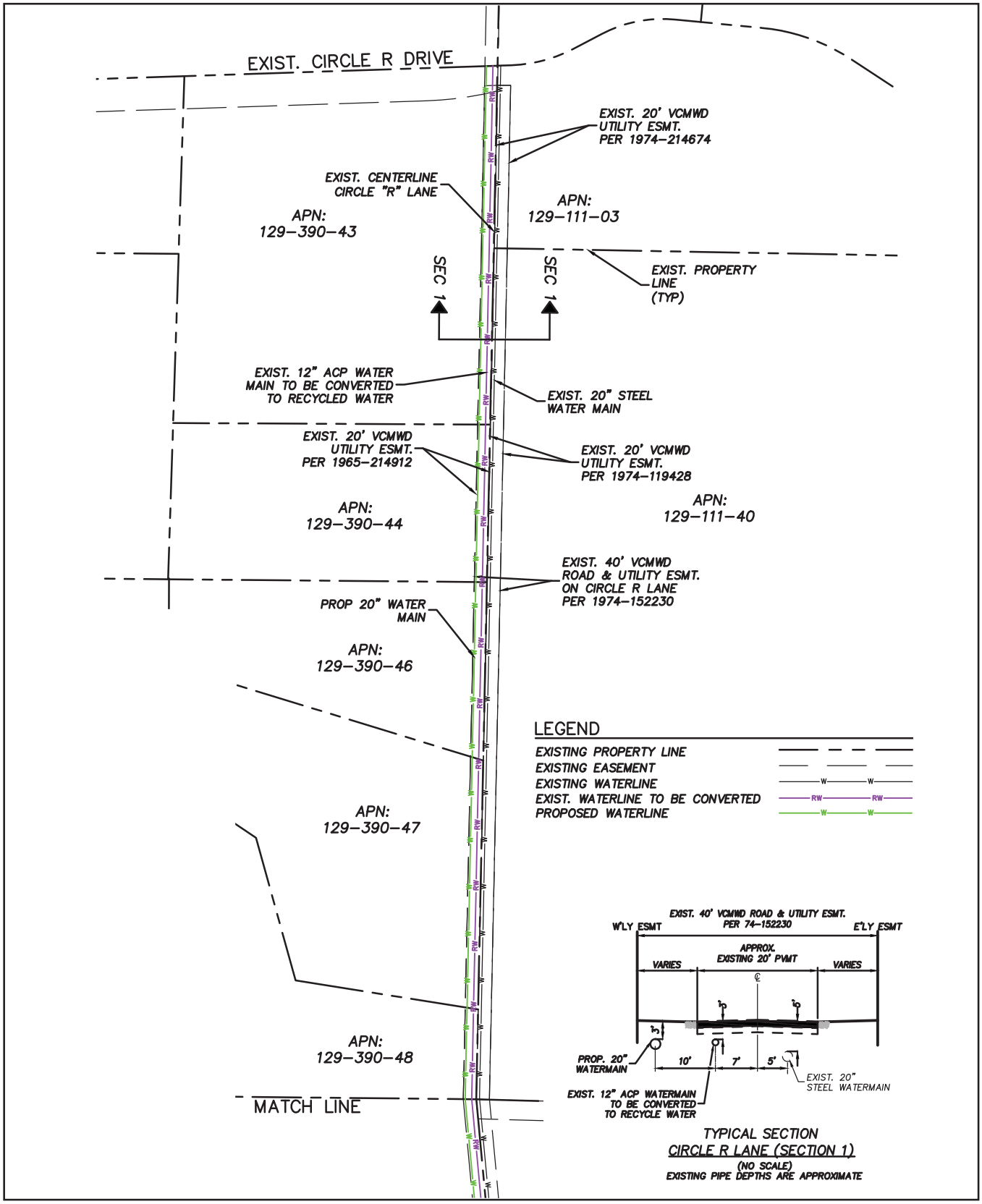

FIGURE 3.1-7c-1

Circle "R" Lane Utility Cross Section

RECON

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Map Source: Landmark Consulting, 2014

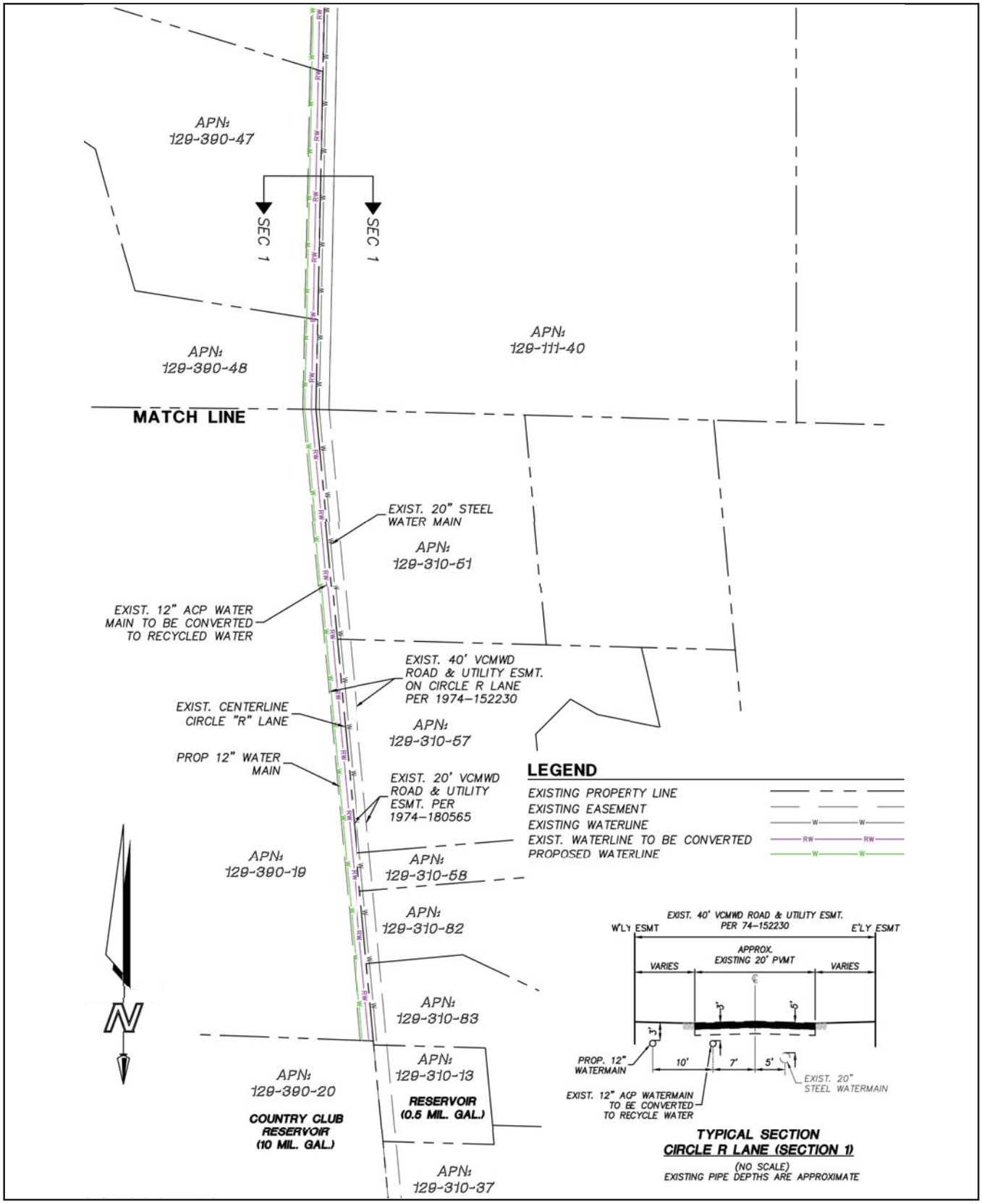

FIGURE 3.1-7c-2

Circle “R” Lane Utility Cross Section

RECON

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Map Source: Dexter Wilson Engineering, 2014

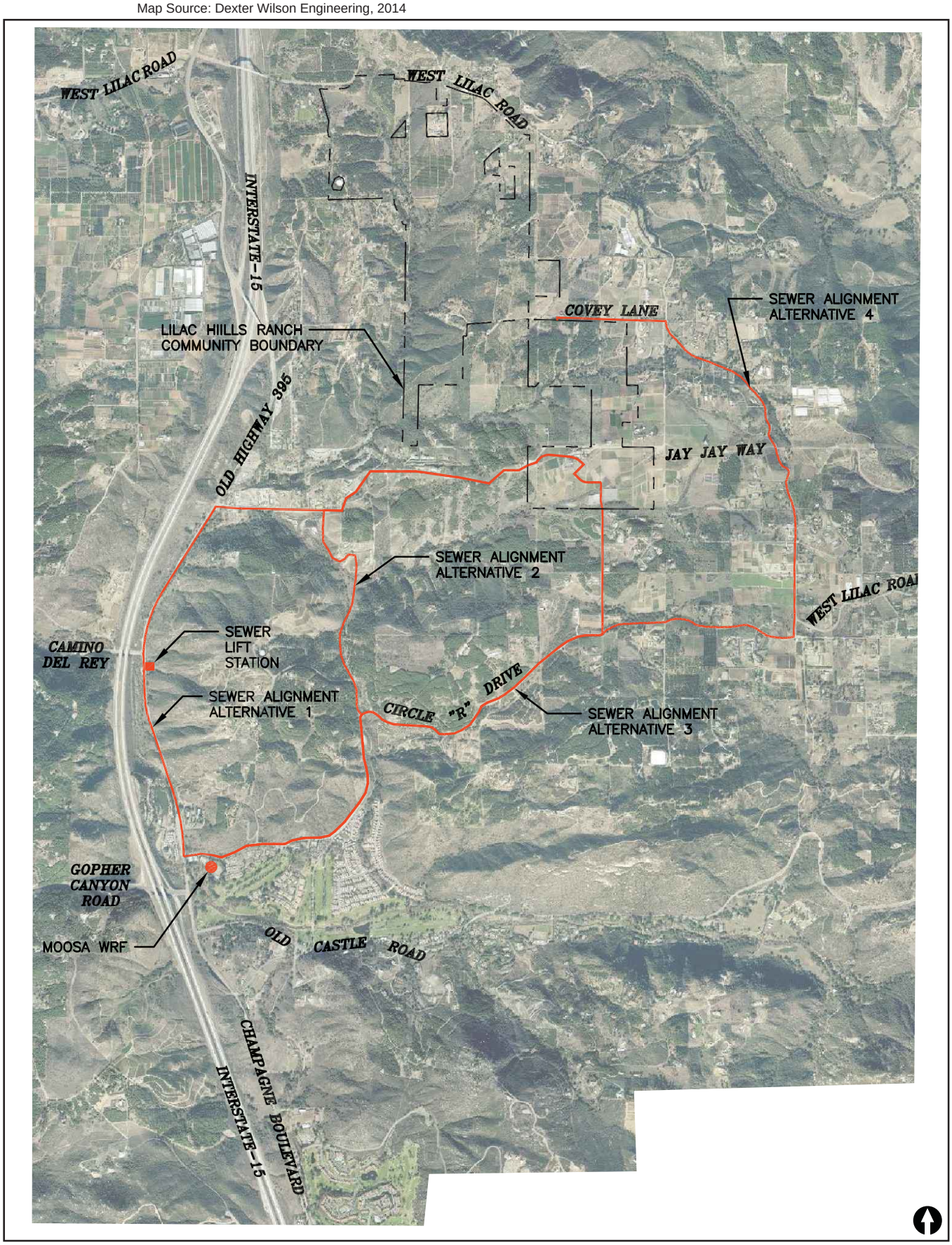

FIGURE 3.1-8

Off-site Sewer Collection System

RECON

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