3.12 Utilities and Service Systems

This section addresses water and wastewater services required for Project development, as well as service providers and facilities needed to meet the demands. The utilities and services evaluated in this section are water supply, wastewater/sewer service, storm drainage, and gas and electric. A completed Project Facility Availability – Sewer form has been received from San Diego County Sanitation District, and a completed Project Facility Availability – Water form has been received from Rincon MWD. These forms are included in *Appendix N*, and the information within them is also summarized below. The potential impacts of the Project related to stormwater are evaluated in detail in the Stormwater Quality Management Plan (SWQMP) and Hydrology Study for the Questhaven Project, both prepared by Excel Engineering. Copies of the two reports are provided as *Appendix I* and *Appendix J*, respectively, to this EIR. An NOP for the Project was released for public review on September 1, 2022 and an EIR Scoping Meeting was held on September 20, 2022. One comment letter related to utilities and service systems was received. Vallecitos Water District (received September 8, 2022) noted that the Project would require annexation into the district for water and sewer service.

3.12.1 Existing Conditions

3.12.1.1 Water Supply

Olivenhain Municipal Water District

Olivenhain Municipal Water District (MWD) provides water service to the Project area. Olivenhain MWD's service area covers 48 square miles in northern San Diego County, with approximately 87,000 residents, over 29,000 water service connections, over 6,100 sewer connections, over 400 recycled water connections, and over 450 miles of distribution pipeline. Olivenhain Municipal Water District is a member of the San Diego County Water Authority (SDWCA), and purchases all of its water supply from SDCWA. SDCWA in turn purchases its water from Metropolitan Water District (MWD).

Olivenhain MWD prepared an Urban Water Management Plan (UWMP) in 2020 (adopted in June 2021) in compliance with state law, to restructure its then-existing 2015 UWMP in order to comply with the California Department of Water Resources' review process. The 2020 UWMP contains a comparison of projected supply and demands within the district's existing boundaries through the year 2045. Projected potable water resources to meet planned demand primarily would be supplied with imported water purchased from SDCWA. Olivenhain MWD currently supplies approximately 17,100 acre-feet of water per year to serve customer demands.

The Metropolitan Water District of Southern California

Metropolitan Water District of Southern California (Metropolitan) is a consortium of 26 cities and water districts that provides imported water to nearly 21.2 million people in its 38,155-square-mile service area, which includes parts of Los Angeles, Orange, San Diego, Riverside, San Bernardino, and Ventura counties. Metropolitan's primary purpose is to provide a supplemental supply of water for domestic and municipal uses at wholesale rates to its member public agencies. From 2010 through 2019, Metropolitan's provided 40% to 50% of the water needs in its service area from the Colorado

River via the Colorado River Aqueduct (CRA), and from the Sacramento-San Joaquin River Watershed via the State Water Project (SWP). Approximately 50% of the region's water supplies come from resources separately controlled or operated by local water agencies (i.e., water extracted from local groundwater basins; recycling, groundwater recovery, and seawater desalination; surface water, and the Los Angeles Aqueduct). Based on Metropolitan's 2021 UWMP, Metropolitan has supply capabilities sufficient to meet expected demands from 2025 through 2045 under a single dry-year condition and a period of drought lasting five consecutive water years, as well as in a normal water year hydrologic condition. (MWD, 2021)

San Diego County Water Authority

The San Diego County Water Authority (SDCWA) is an independent public agency that serves as a wholesale water supplier to its 24 member agencies. The SDCWA is San Diego County's predominant source of water, supplying from 75% to 95% of the region's needs to the member agencies that purchase water for retail distribution in the SDCWA service territories. The population within the Water Authority's service area was approximately 3.3 million people in 2020 and is projected to increase to approximately 3.8 million people by 2045. In fiscal year 2020, total water demand in the SDCWA's service area was 463,128 AFY, of which 92% was for municipal and industrial (M&I) use and 8% was for agricultural water use. By 2045, the Water Authority's total water demands are projected to reach 630,771 AFY. This projection accounts for planned future water conservation savings. (SDCWA, 2021).

Historically, SDCWA relied solely on imported water supplies purchased from the Metropolitan, but SDCWA has pursued strategies over the last two decades to diversify San Diego's regional water supply portfolio and reduce the region's dependence on water deliveries from Metropolitan. In addition to water deliveries from Metropolitan, SDCWA currently receives water from the Imperial Irrigation District (IID) (through a water conservation and transfer agreement), the Carlsbad Desalination Plant, and dry year carryover storage supplies (in-regional surface water storage and out-of-region groundwater storage in the Central Valley.) The 2020 UWMP presents the SDCWA's water reliability assessments from 2025 through 2045. Each assessment compares total projected water supply and demands over the next 20 years in five-year increments under normal water year, single dry-year, and multiple dry-year scenarios. The reliability assessment results demonstrate that, even when making conservative assumptions about the availability of dry year supplies from Metropolitan, the San Diego region's water resource mix is drought resilient. (SDCWA, 2021)

3.12.1.2 Wastewater Management

Vallecitos Water District (VWD) provides wastewater service to the Project area. The service area covers approximately 45 square miles in northern San Diego County, with approximately 108,000 residents. VWD provides water, wastewater, and reclamation services to San Marcos; parts of Carlsbad, Escondido, Vista and other unincorporated areas in north San Diego County. The Project would be required to be annexed into the Vallecitos Water District through a future annexation process that would be reviewed and approved by (LAFCO). Wastewater is treated at the Meadowlark Water Reclamation Facility located in Carlsbad, which has a 5.25-million-gallon capacity and recycles up to

74 percent of the wastewater generated in the VWD boundary. Following water treatment, the wastewater processed at Meadowlark is used again for irrigation purposes in the Carlsbad and Encinitas area. Wastewater that is not recycled at the Meadowlark Facility is treated at the Encina Water Pollution Control Facility, which is partially owned by VWD.

3.12.1.3 Storm Drainage

The Project site is in the Carlsbad Hydrologic Unit and is bisected by the boundary line between the Batiquitos subarea of the San Marcos hydrologic area (904.51), and the San Elijo subarea of the Escondido Creek hydrologic area (904.61). The northern portion of the site is tributary to San Marcos Creek, and the southern portion of the site is tributary to Escondido Creek. A map showing the Project location with respect to the hydrologic basin areas can be found in Attachment 2 of Technical Appendix J. (Excel Engineering, 2021)

3.12.1.4 Gas and Electricity

Electric service is necessary for residential developments. Electricity is used to provide power for lighting and many appliances in homes. San Diego Gas and Electric (SDG&E) would be the electric service provider for the Project. The Project site is currently undeveloped and there is no on-site natural gas or electrical infrastructure currently serving the Project area. SDG&E would also be the provider for natural gas; however, as discussed in further detail below, the Project would not require natural gas service.

The project site is bisected by a 150’ wide SDG&E easement shown on proposed TM 5643 as Lots P, Q, and S. The SDG&E easement corridor is improved with 230 kV overhead electric transmission lines supported by steel towers accessed by dirt roads and work pads maintained by SDG&E. The proposed project includes grading, private street crossings, landscaping, and erosion control measures within the SDG&E easement corridor. Prior to grading or construction of improvements within the SDG&E easement corridor, project grading and improvement plans must pass a conflict check by SDG&E to ensure the improvements are compatible with SDG&E facilities and operations. Moreover, these improvements must first be approved by the California Public Utilities Commission through an advice letter process pursuant to Section 851 of the California Public Utilities Code. The SDG&E easement contains large high voltage power lines that would remain in place with implementation of the Project. The easement area is identified as an SDG&E easement and fire buffer open space on TM 5643. Maintenace of the SDG&E easement would be the responsibility of the HOA.

3.12.1.5 Regulatory Setting

Urban Water Management Planning Act

In 1983, the Legislature enacted the UWMP Act (California Water Code sections 10610 through 10656), which requires every urban water supplier that provides water to 3,000 or more customers, or more than 3,000 acre-feet of water annually, to make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its customers during normal, dry, and multiple-dry years. The UWMP is required for a water supplier to be eligible for the State Department of Water

Resources' (DWR) grants, loans, and drought assistance. The UWMP provides information on water use, water resources, recycled water, water quality, reliability planning, demand management measures, best management practices, and water shortage contingency planning for a specified service area or territory.

Senate Bill 221

Senate Bill 221, codified in the California 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 a sufficient water supply. The term "sufficient water supply" is defined in Senate Bill 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 also includes the requirement that sufficient water supplies encompass not only the proposed subdivision, but also existing and planned future uses, including agricultural and industrial uses.

San Diego County General Plan Policies

The San Diego County General Plan includes a Land Use Element that contains policies regarding water supply and wastewater. These policies are analyzed in the Section 3.1.5 of this EIR.

3.12.2 Analysis of Project Effects and Determinations as to Significance

3.12.2.1 Water Supply

Guidelines for the Determination of Significance

For the purposes of this EIR, a significant water supply impact will occur if the Project:

- Requires or results in the construction or expansion of water supply, storage, or treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Has insufficient water supplies available to serve the project from existing entitlements and resources so that new or expanded entitlements are needed.

Guidelines Source

The above identified significance guidelines are based on CEQA Guidelines Appendix G.

Analysis

Water Facilities

The Project would receive water service by expanding Olivenhain MWD's existing water system. Figure 1-8, *Water Plan*, illustrates the existing and proposed water facilities on-site or in the vicinity of the Project site. The Project includes construction on an 8-inch water main within proposed Streets "A", "B", and "C" that would connect to an existing 18-inch water main located to the west of San Elijo Road near Fallsview Road. Improvements to the water system would occur within the existing San Elijo Road right-of-way and on the Project site. The Project would not result in the need for new off-site water systems aside from the point of connection to the existing water system and would not require substantial alterations to the existing facilities that would result in adverse physical impacts. Impacts would be less than significant.

Water Supply

Olivenhain MWD's current potable water supply is dependent on the SDCWA as the wholesale water supplier. The Project does not exceed the specified size threshold of 500 residential units or equivalent, and thus, preparation of a Water Supply Assessment (WSA) per SB 610 is not required. The following assessment of water supply for the Project is based on the Olivenhain MWD 2020 UWMP.

Water service would be provided to the Project site by Olivenhain MWD. A completed Project Facility Available – Water form was received for the Project (Appendix O). The form notes that the Project is in the district and facilities to serve the Project are reasonably expected to be available within the next five years based on the capital facility plans of the district. The form also notes that the district will submit conditions at a later date, and provided a letter discussing conditions for water service to be provided.

Furthermore, the Project is consistent with the General Plan designation for the Project site; thus, Olivenhain MWD and SDCWA have included the anticipated supply and demand requirements for the Project in their water supply and demand projections detailed in their 2020 UWMPs.

Water Code Section 10635 requires that every urban water supplier assess the reliability of its water services during normal, dry and multiple dry water years. Based on the Olivenhain MWD 2020 UWMP, if Metropolitan Water District, SDCWA, and Olivenhain MWD supplies are developed as planned, no shortages are anticipated within the Olivenhain MWD service area in a normal year through 2045. Regionally, SDCWA's water supply and demand assessment contained in their 2020 UWMP compared the total projected water use with expected water supply in normal, dry, and multiple dry years. The normal water year assessment showed no water shortages through 2045. Single and multiple dry year assessments showed some years over the next 20 years where management actions, such as additional conservation due to drought, would be required to maintain supply. Overall, the assessment projected water reliability through the next 25 years to correspond with population growth forecasted by SANDAG.

Table 3.12-1, *Olivenhain MWD Projected Demand Summary*, presents a supply summary for normal-year conditions from the 2020 UWMP. Potable water supply obtained from SDCWA from 2025 to 2040 is projected to decline from 17,410 acre-feet/year (afy) to 16,310 afy. Recycled water purchases from are projected to increase from 2,693 in 2025 to 2,855 in 2040. Total supplies are estimated to decrease slightly from 20,103 afy in 2025 to 19,165 in 2040. The estimates are based on data and projections contained in the most recent Regional Growth Forecast prepared by SANDAG, and considered new development, reductions due to additional conservation efficiencies, and the potential effects of climate change.

The potable water demands in Table 3.12-1 reflect per capita demands that decrease over time from 400 gpd per person 2000 to 206 gpd per person in 2020. Per capita potable water use is expected to continue to decline due to demographic changes, recycled water conversions in parks, and conservation efficiencies.

The Project would be consistent with the 2022 Title 24 Energy Code (which went into effect January 1, 2023). The 2022 CALGreen Building Code targets reduction of both potable water use and wastewater generation by 20 percent. The Project incorporates measures such as a drought-tolerant landscaping plan; high efficiency drip irrigation systems; weather-based smart irrigation control systems, and use of reclaimed water for outdoor irrigation. In addition, the Project commits to installation of low-flow water fixtures, including low-flow bathroom fixtures. The estimated water demand of the Project is 43,054 gpd (206 gpd per capita x 206 residents = 43,054 gpd). The total average potable water demand of 43,054 gpd estimated for the Project is equivalent to approximately 48.3 afy, which represents 0.2 percent of Olivenhain MWD's projected potable water supply from SDCWA.

The Project would have sufficient water supplies available to serve the Project from existing entitlements and resources so that new or expanded entitlements are needed. Impacts would be less than significant.

3.12.2.2 Wastewater

Guidelines for the Determination of Significance

For the purposes of this EIR, a significant wastewater impact will occur if the Project:

- Requires or results in the construction or expansion of wastewater collection or treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Exceeds wastewater treatment requirements of the applicable RWQCB; or
- Results in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Guidelines Source

The above identified significance guidelines are based on CEQA Guidelines Appendix G.

Analysis

Wastewater Facilities

The Project would receive wastewater service by expanding VWD's existing wastewater system following a future annexation process that would be reviewed and approved through LAFCO. Figure 1-7, *Sewer Plan*, illustrates the existing and proposed water facilities on-site or in the vicinity of the Project site. The Project includes construction on an 8-inch sewer main that would connect to an existing sewer main located in San Elijo Road. Improvements to the wastewater system would occur within the existing San Elijo Road right-of-way and on the Project site. The Project would not result in the need for new off-site wastewater systems aside from the point of connection to the existing wastewater system and would not require substantial alterations to the existing facilities that would result in adverse physical impacts. Impacts would be less than significant.

Wastewater Treatment Requirements

The design criteria used to determine the Project's proposed wastewater flow are in accordance with the San Diego County Code of Regulatory Ordinances, Section 94.1.001, et seq., which adopts the California Plumbing Code, to meet and comply with all federal and state policies regarding the regulation of wastewater discharges and treatment, including all applicable federal and state laws required by the Clean Water Act of 1977 and subsequent amendments and general pretreatment regulations. In addition, as discussed in Section 3.7, *Hydrology and Water Quality*, the Project would be in compliance with all NPDES discharge criteria and permitting requirements. Therefore, impacts would be less than significant.

Wastewater Treatment Capacity

Wastewater service would be provided to the Project site by VWD following a future annexation process that would be reviewed and approved through LAFCO. A completed Project Facility Available – Sewer form was received for the Project (Appendix O). The form notes that the Project is in the district and facilities to serve the Project are reasonably expected to be available within the next five years based on the capital facility plans of the district. The form also notes that a sewer study would be required prior to submittal of implementation plans.

Using the VWD sewer generation rate of 3,300 gpd/ac and the Project's proposed 18.27 acres of residential uses, the Project would generate approximately 60,291 gallons of wastewater per day. Wastewater generated by the Project would be treated at the Meadowlark Water Reclamation Facility or at the Encina Water Pollution Control Facility, which is partially owned by VWD. The Meadowlark Water Reclamation Facility has a capacity of 5 million gallons per day (MGD), with a wet weather treatment capacity of 8 MGD and average daily flow of 3.5 MGD. VWD's capacity at the Encina

Water Pollution Control Facility is 10.5 MGD, with an average daily flow of 3 MGD. It is expected that both the Meadowlark Water Reclamation Facility and Encina Water Pollution Control Facility would be able to adequately treat wastewater flows from the Project, and therefore new wastewater treatment facilities would not be needed.

The Project would have sufficient wastewater treatment capacity available to serve the Project. Impacts would be less than significant.

3.12.2.3 Storm Drainage

Guidelines for the Determination of Significance

For the purposes of this EIR, a significant storm drainage impact will occur if the proposed project does the following:

- Requires or results in the construction or expansion of storm drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Guidelines Source

The above identified significance guideline is based on CEQA Guidelines Appendix G.

Analysis

Development of the Project would require improvements to the current drainage system. These improvements are shown in Figure 1-5, *Preliminary Drainage Plan,* and discussed in Section 3.7, *Hydrology and Water Quality*, and are summarized below.

All runoff from the Project site currently drains to two hydrologic subareas of the Carlsbad Hydrologic Unit. The Project would accommodate 100-year storm event peak flows. Storm water runoff would be conveyed through the Project site via separate storm drain systems. The site is graded such that the distribution of discharge from the Project site to remain balanced as much as possible. The area of the Project to the southwest would remain open space and would be directed to flow separately from the flow from the developed portions of the site until discharging to the respective point of connection. The developed portions of the site would all be directed to a stormwater treatment facility. Multiple treatment facilities would be located on-site. The parts of the site that serve as access to the building lots, and the lots themselves would be directed to combination of biofiltration and flow detention facilities. The remainder of the Project on the westerly access road, would be treated with Green Street methods (tree wells) sized to meet pollutant treatment and hydromodification goals.

As presented in Table 3.7-1, *Summary of Peak 100 Year Runoff*, development of the Project site would internally divert the developed area drainage to discharge into the culverts located under San Elijo Road. Drainage of the open space area in the southwestern portion of the site would be directed to flow

separately from the developed portions of the site. In addition, minor alterations to the drainage pattern may result from development of the Project site through the conversion of natural surfaces to impervious surfaces and through activities such as grading, excavation, and construction activities. However, the Project would not result in a change in the overall drainage area draining into the Carlsbad Hydrologic Unit. Implementation of the Project would result in a decrease in the 100-year peak flow runoff.

Construction of these storm drain improvements would have the potential to create environmental impacts. However, construction of such facilities has been analyzed as part of the development footprint of the Project and the environmental impacts of such construction have been analyzed throughout this EIR (i.e., biological resources, cultural resources). Therefore, impacts related to construction of the storm drain facilities would not have any additional impacts beyond those identified in other chapters of this EIR. Impacts would be less than significant.

3.12.2.4 Gas and Electric

Guidelines for the Determination of Significance

For the purposes of this EIR, a significant impact to gas and electric services will occur if the Project:

- Would require or result in the construction of new gas and electric facilities or the expansion of existing facilities, the construction of which would cause significant environmental effects.

Guidelines Source

The above identified significance guidelines are based on CEQA Guidelines Appendix G.

Analysis

To provide gas and electrical service to the Project development, it would be necessary to extend new facilities into the Project site. However, it should be noted that the Project is designed to only require electrical service and gas connections would not be needed. Therefore, the analysis below only evaluates the need for electric facilities to serve the Project.

The infrastructure required to provide electrical service would consist of underground electrical conduits that would be located within planned sidewalks or within other utility rights-of-way. Also required for electrical service would be electric vaults, switches, fuse cabinets, and transformers. Some of these necessary components would be aboveground features and located behind sidewalks, as is typical in residential developments. Electrical services for the Project would connect into existing service infrastructure in San Elijo Road. No new substation is anticipated to be needed for the Project and no other service infrastructure outside of areas designated on Project development plans for grading and construction would be impacted by extension of electrical infrastructure.

The placement of the infrastructure in areas already planned for disturbance, either for Project street rights-of-way or for installation of other utilities such as water and sewer pipelines or telecommunication lines, would avoid environmental impacts specific to the provision of electric and gas service. The planned Project rights-of-way and roadway alignments have been analyzed for potential environmental effects in this EIR and any impacts, (i.e., biological resources, cultural resources) are discussed in the appropriate topic section. The placement of electric infrastructure within these areas analyzed and planned for disturbance would not result in any additional environmental effects than what has been described in other chapters of this EIR. Impacts would be less than significant.

3.12.3 Cumulative Impact Analysis

3.12.3.1 Water

The geographic scope for cumulative water supply impacts is the service area of the SDCWA. As described above, the 2020 UWMPs prepared by SDCWA and Olivenhain MWD were based on SANDAG forecasts that incorporated population projections for the projects in the area, including the Project, in their water planning estimates. The SDCWA 2020 UWMP provided water demand forecasts based on the projected population growth in the area and, based on its water supply reliability assessment, concluded that if water supplies are developed as planned, no water shortages are anticipated within the SDCWA service area under average, single-dry, and multiple-dry years through 2045. The SDCWA 2020 UWMP also addressed additional storage and desalination programs being pursued by SDCWA to further supplement supplies, and to address the potential risk of water shortages. The Olivenhain MWD 2020 UWMP conducted a similar water demand and supply assessment within its service area. Olivenhain MWD's assessment also included the Project's water demand. As discussed above, an adequate water supply from SDCWA has been identified for its member agencies, including Olivenhain MWD, and the Project would not require expansion of existing facilities other than the extension of water mains to connect to the existing infrastructure. Therefore, the Project is not anticipated to contribute to a cumulatively considerable impact on water supply. As described above, the provision of water service to the Project would not create new or additional environmental impacts beyond those that are identified in other sections of this EIR. Similarly, any potential cumulative impacts related to construction of new water facilities has been addressed in other sections of this EIR and no additional impacts or mitigation measures have been identified in this section.

3.12.3.2 Wastewater

A collection system with the appropriate capacity for the Project would be constructed as part of the Project. All other cumulative developments that would generate sewage would be required to provide adequate wastewater collection and treatment facilities. Therefore, the Project's contribution to cumulative impacts on wastewater treatment services would be less than significant.

3.12.3.3 Storm Drainage

Improvements to the drainage system for the Project would occur within the Project's drainage basins and would not affect drainage at a cumulative level. The cumulative effect of construction that would

impact environmental resources has been analyzed throughout this EIR. Other projects in the area would also be required to construct drainage improvements in compliance with the environmental reviews that were conducted for the individual impacts of each project. Similar to the direct analysis presented in this section, any potential cumulative impact related to construction of new storm drainage improvements has been addressed in other sections of this EIR and no additional impacts or mitigation measures have been identified in this section.

3.12.3.4 Gas and Electric

As shown in Table 1-3, there are eight cumulative projects occurring in the Project area. Many of these projects are residential, commercial, or institutional and would require gas and electric services. Though the environmental impacts specific to the provision of gas or electrical service to each of the projects is not known, it is typical that, similar to the Project, the required infrastructure is placed within public or utility rights-of-way, which would be disturbed by other project construction activities. As described above, the provision of gas and electric service to the Project would not create new or additional environmental impacts beyond those that are identified in other sections of this EIR. Similarly, any potential cumulative impacts related to construction of new gas and electrical facilities has been addressed in other sections of this EIR and no additional impacts or mitigation measures have been identified in this section.

3.12.4 Significance of Impacts Prior to Mitigation

As discussed above, the Project would not result in less than significant direct and cumulatively considerable impacts to utilities and service systems.

3.12.5 Conclusion

As discussed above, the Project would have no significant direct, indirect, or cumulatively considerable impacts to water supply, wastewater, storm drainage, and gas and electricity usage. Therefore, implementation of the Project would result in less-than-significant impacts to utilities and service systems.

Table 3.12-1 Olivenhain MWD Projected Demand Summary

	2020	2025	2030	2035	2040
Potable Water, Raw, Other Non-Potable	17,100	17,410	16,940	16,640	16,310
Recycled Water Demand	2,482	2,693	2,819	2,834	2,855
Optional Deduction of Recycled Water Put Into Long-Term Storage[1]	0	0	0	0	0
TOTAL WATER USE	**19,582**	**20,103**	**19,779**	**19,474**	**19,615**

[1] Long-term storage means water that is placed into groundwater or surface storage that is not removed from storage in the same year. Supplier may deduct recycled water placed in long-term storage from their reported demand.
Source: (MWD, 2021)