

5.16.2 WASTEWATER COLLECTION AND TREATMENT

This section of the Draft Environmental Impact Report (Draft EIR) addresses the potential for the proposed Section 31 Specific Plan Project (“Specific Plan Project” or “Project”) to impact wastewater and stormwater drainage systems operated and maintained by the Coachella Valley Water District (CVWD) and the local storm drain system maintained by the City of Rancho (City) Public Works Department. Please see **Section 9.0** for a glossary of terms, definitions, and acronyms used in this Draft EIR.

A. ENVIRONMENTAL SETTING

1. Existing Conditions

Wastewater Service System

The Project Site is located in the City of Rancho Mirage within the service boundary of CVWD for wastewater conveyance and treatment. Five water reclamation plants (WRPs) provide, receive, and treat wastewater within the CVWD service area. Most of the communities within the CVWD service area receive sanitation service from one of these plants. Of the five WRPs, three are equipped to treat wastewater to meet the State of California (State) standards for non-potable water for irrigation purposes. The vast majority of the City utilizes the wastewater system, but there are a few remaining areas that rely on septic tanks for wastewater disposal. . WRP-10 consists of an activated sludge treatment plant, a tertiary wastewater treatment plant, lined holding basin, 6 storage basins, and 21 infiltration basins. The combined secondary wastewater treatment design capacity of the WRP is 18 million gallons per day (mgd). This plant treats an annual average flow of 10.8 mgd (12,000 AFY) from the activated sludge plant.

Approximately 60 percent of the plant’s effluent undergoes tertiary treatment for reuse and is delivered to customers through an existing recycled water distribution system. The remaining secondary effluent is piped to a holding basin and or the six storage basins, and then to the 21 infiltration basins for final disposal. Most secondary effluent receives tertiary treatment and is used for irrigation of local golf courses. Growth in wastewater flows to WRP-10 is expected to increase to 17,000 AFY without additional conservation.

Storm Drainage System

Within the Coachella Valley, flood control infrastructure is maintained by CVWD and the Riverside County Flood Control and Water Conservation District. Within CVWD's boundaries there are 16 stormwater protection channels; the entire system includes approximately 135 miles of channels built along the natural alignment of dry creeks that flow from the surrounding mountains into the Whitewater River.

Within the City, local off-street storm drain systems are maintained by the Public Works Department. The Project Site currently contains two small, engineered earthen basins on the northern boundary along Gerald Ford Drive, and four stormwater inlets via curb cuts on the eastern boundary along Monterey Avenue. These basins and storm drain inlets are designed to accept surface stormwater flows from the east-bound lanes of Gerald Ford Drive and the south-bound lanes of Monterey Avenue and deposit runoff to percolate on the Project Site.

2. Regulatory Setting

Federal

Clean Water Act

The federal Clean Water Act (CWA) Section 401 regulates the discharges of pollutants into “waters of the US” from any point or non-point source.

In 1972, the CWA was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The CWA focused on tracking point sources, primarily from wastewater treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The CWA was amended again in 1987 to provide a framework for regulating municipal and industrial stormwater discharges. In November 1990, the US Environmental Protection Agency (US EPA) published final regulations that establish application requirements for specific categories of industries, including construction projects that encompass greater than or equal to 5 acres of land. The Phase II Rule became final in December 1999, thus expanding regulated construction sites to those greater than or equal to 1 acre. The regulations require that stormwater and non-stormwater runoff associated with construction activity which discharges either directly to surface waters or indirectly through municipal separate storm sewer systems (MS4s) must be regulated by an NPDES permit.

In the State of California, the program is administered by the local Regional Water Quality Control Board (RWQCB).

State

California Water Quality Laws

Under State law, the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) are responsible for implementing the federal CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act), discussed below.¹

The Project Site is located within the purview of the Colorado River RWQCB (Region 7).

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the principal State program for water quality control.² The Porter-Cologne Water Quality Control Act also authorized the SWRCB to implement the provisions of the federal Clean Water Act. The act divided the State into nine RWQCB areas. Each RWQCB implements and enforces provisions of the Porter-Cologne Act and the CWA subject to policy guidance and review by the SWRCB. The Porter-Cologne Act requires each RWQCB to develop a Basin Plan for all areas within its region. The Basin Plan is the basis for each RWQCB's regulatory programs.

State Water Quality Control Board Order No. 2006-0003-DWQ

Order No. 2006-0003-DWQ was adopted by the State Water Resources Control Board on May 2, 2006. This order provides federal and State agencies, municipalities, counties, districts, and other public entities waste discharge requirements for sanitary sewer systems.

California Water Code, Title 22

The California Water Code requires the Department of Health Services (DHS) to establish water reclamation criteria. In 1975, the DHS prepared Title 22 to fulfill this requirement. Title 22 regulates production and use of recycled water in California by establishing three categories of recycled water:

- primary effluent, which typically includes grit removal and initial sedimentation or settling tanks;
- adequately disinfected, oxidized effluent (secondary effluent), which typically involves aeration and additional settling basins; and
- adequately disinfected, oxidized, coagulated, clarified, filtered effluent (tertiary effluent), which typically involves filtration and chlorination.

1 California Water Code, (1969, as amended), Porter-Cologne Water Quality Control Act.

2 California Water Code, Sections 13000 et seq., Porter-Cologne Act.

In addition to defining recycled water uses, Title 22 also defines requirements for sampling and analysis of effluent and requires specific design requirements for plants.

Regional and Local

Riverside County General Plan

The Riverside County General Plan seeks to protect, conserve, and maintain the quality of the water resources within the County. The eastern portion of Riverside County relies on water from the Colorado River, Northern California, and local groundwater. The Riverside County General Plan provides various policies promoting adequate water supply, water quality, water conservation, and groundwater recharge within the County boundaries. Some policies include promoting the use of recycled water for landscape irrigation, the use of water-efficient technologies, using wastewater treatment facilities, minimizing pollutant discharge into storm drainage systems, natural drainages and aquifers, and ensuring that adequate aquifer water recharge areas are preserved and protected.

Coachella Valley Water District

CVWD is the wastewater (sanitation) service provider for a good part of the Coachella Valley. CVWD provides domestic water, wastewater (sanitation), non-potable water (recycled wastewater and Colorado River water), irrigation/drainage, and stormwater and groundwater management services to a major portion of the Coachella Valley. CVWD service area is approximately 1,000 square miles, mostly within the central and eastern Coachella Valley in Riverside County, but also extends into Imperial and San Diego counties. CVWD is governed and regulated under the Regional Board and is subject to its policies and regulations regarding proper wastewater disposal techniques.

Sanitary Sewer Management Plan

The Sanitary Sewer Management Plan (SSMP) describes the management of CVWD's sewer collection system and minimizes the number of sanitary sewer overflows. The SSMP is required by the State Water Resources Control Board Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR 2006-0003) enacted May 2, 2006. The purpose of WDR 2006-0003 is to reduce sanitary sewer overflows. CVWD's sanitary sewer overflows is not unusual or above average compared to other agencies in the State.

The SSMP will provide for a properly managed, operated and maintained sanitary sewer system. All portions of CVWD's wastewater collection systems will be managed, operated and maintained to provide adequate capacity to convey the peak wastewater flows, to minimize the frequency of Sanitary Sewer Overflows (SSOs), mitigate the impacts that are associated with any SSO that may occur, meet all

applicable regulatory notifications and reporting requirements, provide exceptional customer service to the residents and businesses served.

The SSMP is organized in ten chapters that covers items such as operation and maintenance programs, design and performance provisions, Overflow Emergency Response Plan, Fats, Oils and Grease (FOG) Control Plan, System Evaluation and Capacity Assurance Plan, monitoring, measurement and program modification, audits, and communications programs.

CVWD Standards and Guidelines

CVWD developed standards and design guidelines, which include the CVWD Development Design Manual (DDM). The DDM provides comprehensive procedural and technical requirements for the planning, design, and construction of CVWD service infrastructure required for new development. CVWD Sanitation and Irrigation and Drainage Rules and Regulations are incorporated into the DDM, and they provide general provisions and standards for the development of wastewater systems in CVWD. CVWD Standard Specifications for the Construction of Sanitary Sewer Systems^{are} also incorporated into the DDM; these provide specification standards for the development of new wastewater systems within the CVWD service area. Additionally, construction methods, materials and disposal of products would also be subject to current standards established by the South Coast Air Quality Management District, Regional Water Quality Control Board and any other local, State, or federal agencies having authority in their respective jurisdictions.

CVWD Sanitation Fees

CVWD Ordinance No. 1373 requires new developments to pay for capital construction costs for new sanitation facilities through the Sanitation Capacity Rate (SCR). Wastewater flows are calculated on a case-by-case basis and are expressed in terms relative to the discharge of an EDU. The SCR was created as a funding mechanism for the construction of wastewater collection system and wastewater treatment infrastructure.

Rancho Mirage 2017 General Plan Update

The Rancho Mirage 2017 General Plan Update Public Services and Facilities Element addresses water, sewer and utility facilities that are utilized by the City. The purpose of the Public Services and Facilities Element is to establish City policy that provides for a coordinated system of the services to adequately serve Rancho Mirage at full buildout. The Element also identifies standards for infrastructure relative to population or land use intensity and identifies courses of action and programs that provide the means to implement the goals and policies of the element.

The Element lists goals, policies and programs regarding public utilities in the City. Goals include the conservation of the quality and quantity of the water basin by working with CVWD and the Regional Water Quality Control Board; the installation of a City-wide sewer system that serves all residences and businesses; lower electricity rates; and placing all utility lines underground.

Rancho Mirage General Plan Update Addendum to the Final EIR

The Rancho Mirage General Plan Update Addendum to the Final Environmental Impact Report (EIR) analyzes the environmental effect of the 2017 General Plan Update using relevant provisions of the CEQA Guidelines. The analysis compares the previous 2005 General Plan to the 2017 General Plan Update and arrives at the overall conclusion that the General Plan Update would not result in any new significant impacts beyond those previously identified in the 2005 EIR. Specifically, the implementation of the 2017 General Plan Update, including future development within the City limits is not anticipated to severely impact utilities, including wastewater, stormwater drainage facilities, water supply, and solid waste within the City.

According to the Rancho Mirage General Plan Update Addendum to the Final EIR, WRP-10, located in Palm Desert, serves the City of Rancho Mirage and has sufficient treatment capacity to accommodate maximum development facilitated by the General Plan. Nearly 6.3 billion gallons of wastewater is treated yearly, with the capacity to increase its wastewater treatment as the Coachella Valley's population grows. The Addendum to the Final EIR states that the General Plan Update would not facilitate growth or development beyond what could occur or otherwise adversely affect local wastewater facilities.

The City of Rancho Mirage Public Works Department maintains the existing stormwater drainage facilities in the City. Most of the City is connected to existing stormwater drainage channels, however, new development would require infrastructure to connect to existing drainages. The new infrastructure will be reviewed by the City of Rancho Mirage and would be required to comply with existing requirements in effect. The Addendum to the Final EIR concludes that in regard to the City-wide drainage system, development within the City is not anticipated to adversely affect local storm drains and would not result in any new or increased severity wastewater facility impacts.

City of Rancho Mirage Municipal Code

New construction within the City of Rancho Mirage (City) is subject to Title 3, Chapter 28 and Title 13, Chapter 13.05, Section 13.05.010 of the Rancho Mirage Municipal Code (RMMC), which set policies, respectively, for the requirement of an imposed license tax on new construction to support the increased demand for public services and infrastructure improvements related to local drainage facilities, as well as provisions for sufficient on-site stormwater retention.

B. ENVIRONMENTAL IMPACTS

1. Thresholds of Significance

In order to assist in determining whether the Project would have a significant effect on the environment, the City utilized the following CEQA Guidelines thresholds related to wastewater service and storm drain facilities:

Threshold 5.16.2-1: **Would the project require or result in the relocation or construction of new or expanded wastewater treatment, or storm water drainage facilities, the construction or relocation of which could cause significant environmental effects?**

Threshold 5.16.2-2: **Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?**

2. Methodology

Analysis was conducted using wastewater flows provided in the CVWD Waster Management Plan and the CVWD Development Design Manual. These flows were used to determine the amount of wastewater that would be generated by the Project. A preliminary hydrology report was used to determine the retention volume needed to accept 100 percent of the stormwater runoff within the Project Site of the 100-year storm event.

3. Project Design Features

The following Project Design Feature (PDF) is incorporated into the Project and would reduce the potential sewer and stormwater impacts of the Project. This feature was taken into account in the analysis of potential impacts. Further, implementation of PDFs 5.16.1-1 through 5.16.1-4 and Mitigation Measures **MM 5.16.1-1** through **MM 5.16.1-5** found in **Section 5.16.1: Water Services and Supply**, and **PDFs 5.9-1** through **5.9-13** and **MM 5.9-2** found in **Section 5.9: Hydrology and Water Quality** would also serve to lessen impacts related to this topic area.

PDF 5.16.2-1: All connections of the Project's sewer lines to the existing 24-inch sewer lines beneath Country Club Drive shall be consistent with the design standards of the Coachella Valley Water District (CVWD) Development Design Manual.

4. Project Impacts

Threshold 5.16.2-1: *Would the project result in the relocation or construction of new or expanded wastewater treatment or storm water drainage facilities, the construction or relocation of which could cause significant environmental impacts?*

Residential Community

CVWD's peak flow factor of 200 gallons per day per equivalent dwelling unit (EDU) and peak hour wet weather flow factor of 2.4 for WRP-10 were used to determine the wastewater generation for the Project. Based on the number of EDUs determined for the Project, it is expected to generate 1.09 mgd of wastewater, as identified in **Table 5.16.2-1: Wastewater Generation of the Project**.

**Table 5.16.2-1
Wastewater Generation of the Project**

Building Type	Equivalent Dwelling Units (EDUs)	Rate (gpd)	Peak Flow Factor (WRP-10)	Daily Wastewater (mgd)
Residential Uses	1,932	200	2.4	0.93
Commercial Uses ^a	119 ^b	200	2.4	0.06
Hotel Rooms	200 ^c	200	2.4	0.10
Total				1.09

Sources: *Water Supply Assessment and Water Supply Verification for the Proposed Section 31 Specific Plan, MSA Consulting, Inc. July 2019 (see Appendix K); Coachella Valley Water District, Development Design Manual, Table 6.2: Sewage Flow Criteria, August 2018.*

Note: $EDUs \times Rate (gpd) \times Peak Flow Factor = Daily Wastewater (gpd)$. $Daily Wastewater (gpd) / 1,000,000 = Daily Wastewater (mgd)$.

^a Commercial uses include a combined 365,000 square feet of office (including hotel-related commercial), restaurant, supermarket, and Beach Club uses for purposes of a conservative analysis.

^b $85,479.5 \text{ gpd (water demand)} / 720 \text{ gpd (CVWD average daily demand per EDU)} = 119 \text{ EDUs}$.

^c $400 \text{ rooms} \times 0.5 \text{ (CVWD EDU determination factor)} = 200 \text{ EDUs}$.

WRP-10's existing secondary wastewater treatment capacity is 18 mgd. The annual average daily flow is 10.8 mgd from the activated sludge plant. The Project's wastewater flow would increase the existing average annual flow to 11.89 mgd. This increase is within WRP-10's treatment capacity. Approximately 60 percent of the wastewater received at this plant receives tertiary treatment for reuse. This water is then used for golf course irrigation. The Project's net estimated daily wastewater generation would remain under the maximum 18 mgd. A 15-inch polymerizing vinyl chloride (PVC) sewer main would connect the

onsite system at Frank Sinatra Drive to an existing 24-inch sewer main along Country Club Drive located one mile to the south via Vista Del Sol. CVWD has indicated that this 24-inch main has more than enough available capacity to accommodate the Project.³ Internal loop connections would then be made through a series of 8-, 10-, and 12-inch sewer mains within interior private streets to serve the Project Site. CVWD's existing 24-inch sewer main along Country Club Drive is adequately sized to accommodate additional wastewater flows as a result of the Project.

Construction impacts associated with the installation of the on-site and off-site connections are expected to be confined to trenching and related construction activities would be temporary and limited. All improvements related to wastewater service would be completed in accordance with City and CVWD standards which would preclude any interruptions in existing service of the surrounding properties. As stated in **Section 3.0: Project Description**, the Project would involve off-site sewer infrastructure improvements, including a 15-inch sewer main from the point of connection on Frank Sinatra Drive to a proposed line in Vista Del Sol, an off-site perpendicular roadway approximately 0.4 miles west of Monterey Avenue. The proposed sewer main on Vista Del Sol would connect to an existing 24-inch sewer main on Country Club Drive. Additionally, sewer stub connections would be installed to every lot, house, or building along Vista Del Sol at the time of the sewer line extension. As such, the sewer line facility would be adequately sized for these future connections. Construction of the sewer extension would be limited to the public right-of-way along Vista Del Sol and be limited to trenching and related temporary construction activities, as well as related roadway improvements to Vista Del Sol. Upon implementation of the Project, a portion of the wastewater generated by uses north of the Project Site in Section 30 would be accepted and pass through the Project's proposed sanitary sewer system. All flows would terminate at CVWD's Wastewater Reclamation Plant 10 (WRP-10) in the City of Palm Desert.

Therefore, existing wastewater treatment facilities would have sufficient capacities to accommodate wastewater generated by the Project. The Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities. Less than significant impacts related to wastewater are expected.

Storm Drain Facilities

The development of the Project will require the construction of onsite Stormwater facilities designed in accordance with the Municipal Separate Storm Sewer System (MS4) within the Whitewater River Watershed (Order No. R7-2013-0011 and NPDES No. CAS617002). The Project property is currently vacant with scattered vegetation. The Project Site currently contains two small, engineered earthen basins on the

3 Phone conversation with Armando Rodriguez, CVWD Sanitation and Non-Potable Engineering Manager, May 22, 2018.

northern boundary along Gerald Ford Drive, and four stormwater inlets via curb cuts on the eastern boundary along Monterey Avenue. These earthen basins are designed to handle primarily offsite street flows. The Project is designed to incorporate a storm water drainage system, as discussed in **Section 5.9: Hydrology and Water Quality**. A majority of the above ground retention areas located throughout the Project Site would be a maximum of 5 feet deep with slopes of five to one, unless erosion control methods are implemented, serving a dual purpose as a retention area and usable open space for future residents. Subsurface retention may also be utilized to capture and infiltrate onsite runoff. The volume resulting from the onsite runoff will be percolated on-site, contributing to groundwater recharge. Project implementation would increase the amount of surface runoff due to the increased impervious area; however, retention facilities throughout the Project Site are designed to have sufficient storage to retain the flood volume from a 100-year storm event, thus meeting the hydrologic requirement established by the City.

Project runoff storage volumes were calculated using the conceptual land use planning areas proposed for the Project. For the Town Center Planning Area (Town Center), a 90 percent impervious cover was assumed. Planning Area 1 (PA 1) was assumed to have a 50 percent pervious cover, which includes the self-contained lagoon. Planning Area 2 and 3 (PA 2 and PA 3) were assumed a 65 percent pervious cover, including the proposed streets. All onsite stormwater runoff would be collected within the Project boundaries in compliance with the Rancho Mirage Municipal Code. Therefore, impacts would be less than significant.

Threshold 5.16.2-2: Would the project result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the providers existing commitments?

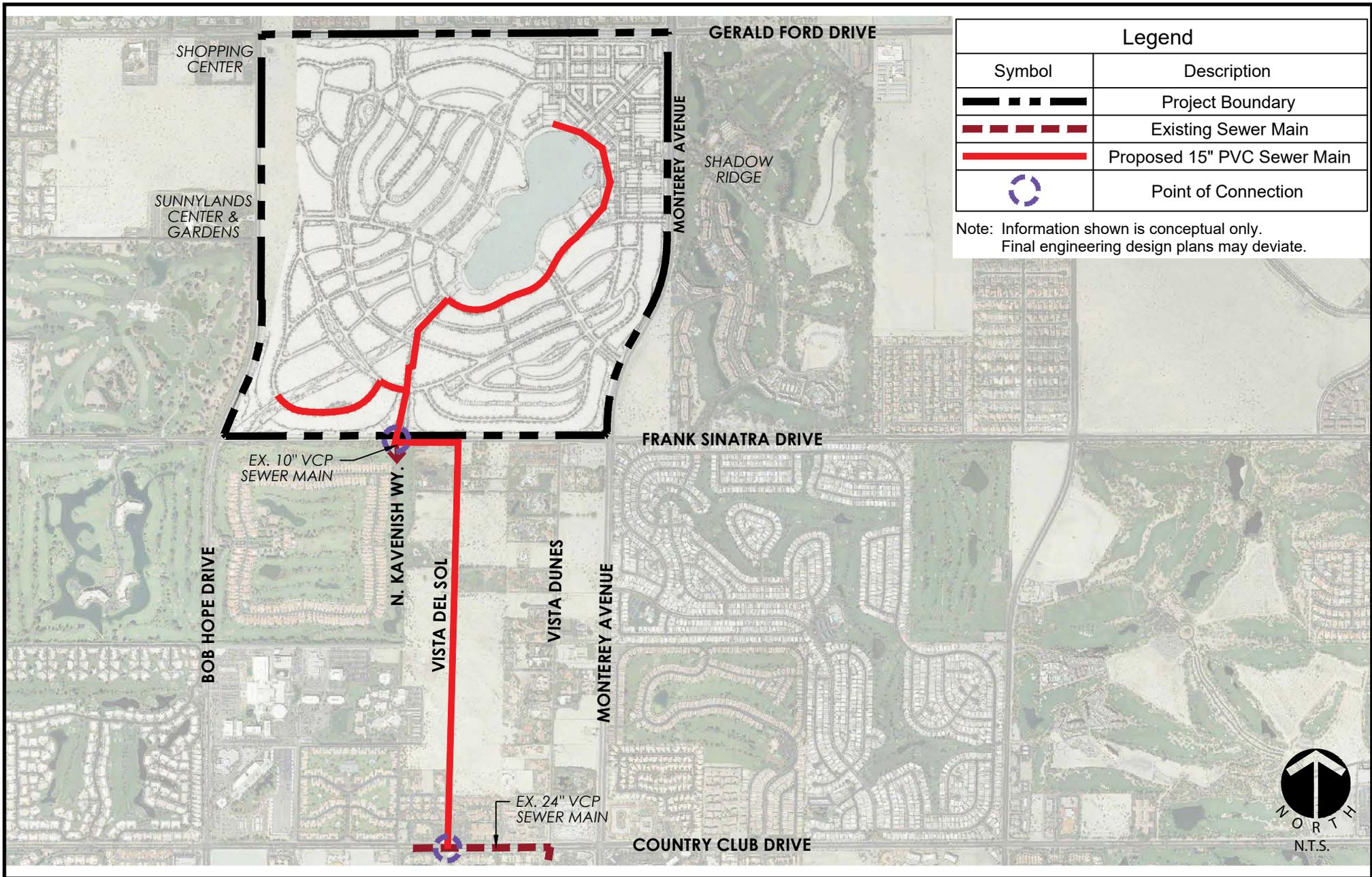
The Project has been designed to accommodate gravity sewer throughout the site. A 15-inch polymerizing vinyl chloride (PVC) sewer main would connect the onsite system at Frank Sinatra Drive to an existing 24-inch sewer main along Country Club Drive located one mile to the south via Vista Del Sol. As mentioned previously, CVWD has indicated that this 24-inch main has more than enough available capacity to accommodate the Project. Internal loop connections would then be made through a series of 8-, 10-, and 12-inch sewer mains within interior private streets to serve the Project Site. The Project's wastewater flow would increase the existing average annual flow from 10.8 mgd to 11.89 mgd. An additional 15-inch sewer main would need to be extended from the Project Site south along Vista Del Sol for approximately 1 mile to serve the Project Site. This 15-inch main would connect to the existing 24-inch main south of the site along Country Club Drive, as shown in **Figure 5.16.2-1: Conceptual Master Sewer Plan**.

While the Project would increase the existing annual wastewater flow to WRP-10, this increase is within WRP-10's treatment capacity. Approximately 60 percent of the wastewater received at this plant receives tertiary treatment for reuse. This water is then used for golf course irrigation. The Project's net estimated daily wastewater generation would remain under the maximum 18 mgd. Development of the sewer lines would be consistent with CVWD standards as identified in PDF 5.16.2-1. Impacts would be less than significant.

5. Cumulative Impacts

The Project would result in an increase to wastewater flows. However, the CVWD 2010 Urban Water Management Plan projects wastewater of WRP-10 to 17,400 AFY (15.53 mgd) in year 2045. As such, the Project's net wastewater generation of 1.09 mgd would account for approximately 23 percent of the cumulative growth.⁴ Cumulative impacts related to wastewater conveyance and/or treatment would occur when new development would require the use of the same existing facilities as the Project. A cumulative increase in wastewater flow could cause significant impacts to the existing off-site conveyance

4 15.53 mgd – 10.8 mgd = 4.73 mgd. 1.09 / 4.73 = 0.23



Legend	
Symbol	Description
	Project Boundary
	Existing Sewer Main
	Proposed 15" PVC Sewer Main
	Point of Connection

Note: Information shown is conceptual only.
Final engineering design plans may deviate.



SOURCE: Hart Howerton - 2019, MSA Consulting Inc. - 2019

FIGURE 5.16.2-1



204-001-018

Conceptual Master Sewer Plan

systems and to WRP-10. The CVWD 2015 UWMP identifies the projected increase in total wastewater flows to all treatment plants in the service area.⁵ These projected increases in wastewater flows would require expansion of water treatment facilities. Proposed projects within the City and other local jurisdictions would be required to undergo environmental review to determine if:

1. the existing CVWD wastewater infrastructure system would have adequate capacity to provide service to the related projects; and
2. the related project would need to develop a wastewater infrastructure conveyance system or wastewater treatment plants within that project's boundaries to provide adequate service to its inhabitants.

The Project would link up to existing sewer lines in the vicinity of the Project Site. As previously mentioned, the existing 24-inch sewer line has existing capacity to accommodate the Project. Additionally, all new development in the City and nearby municipalities would be required to complete an environmental analysis per CEQA, which would analyze and disclose any potentially significant impacts on wastewater and/or stormwater services.

The Project would not result in cumulative impacts to storm drainage facilities, and impacts would be less than significant. Cumulative impacts related to stormwater drainage facilities would occur when new development would require the use of the same existing facilities as the Project. As discussed in **Section 5.9: Hydrology and Water Quality**, the Grand Oasis lagoon would have the potential to accept some direct rainwater; however, it would not function as a retention area during storm events. Stormwater retention facilities planned throughout the Project Site are designed to accept flows via topographical features and have sufficient storage to retain the flood volume from a 100-year storm event, thus meeting the hydrologic requirement established by the City. New development would be required to adequately retain and convey stormwater runoff such that flooding does not occur. Compliance with local standards and specifications would result in less than significant cumulative impacts. Accordingly, cumulative impacts related to wastewater and stormwater would be less than significant.

C. MITIGATION MEASURES

No mitigation measures are required.

5 CVWD, 2015 Urban Management Plan, Table 6-12 Water Supplies – Projected.

D. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project level and cumulative impacts with regard to wastewater and stormwater would be less than significant. Therefore, no mitigation measures are required.