

5.19 WASTEWATER COLLECTION

5.19.1 INTRODUCTION

Purpose

The County of Los Angeles Department of Regional Planning Environmental Checklist Form, which has been prepared pursuant to the California Environmental Quality Act (CEQA), requires that wastewater collection issues be evaluated as part of the environmental documentation process. The impacts of the proposed development on the Project site are analyzed at a project-level of detail; direct and indirect impacts are addressed for each threshold criterion for both the on-site and off-site Project features. Growth-inducing impacts and cumulative impacts related to wastewater are described in Sections 6.0 and 7.0, respectively. Potential odor and other air quality impacts from operation of the wastewater treatment system are addressed in Section 5.11, Air Resources.

Summary

As discussed further in Section 4.0, Project Description, the Project will include wastewater treatment and recycled water distribution facilities to minimize potable water demand. Two wastewater reclamation facilities (WRFs) would be constructed to provide solids handling, biogas reuse, and recycled water treated to unrestricted reuse standards under Title 22 of the *California Code of Regulations*. One WRF would be located west of the West Branch of the California Aqueduct (WRF West) and one would be located east of the Aqueduct (WRF East). As discussed in Section 5.18, Water Resources, recycled water will be used for outdoor irrigation and indoor wastewater and cooling in the proposed business park. At full buildout, recycled water will meet approximately 40 percent of total Project's water demand.

The WRFs are proposed in locations that allow for wastewater to generally flow by gravity for treatment. Pump stations would be required to serve areas that cannot flow by gravity. Seasonal storage ponds would be provided at the WRF East site to temporarily store recycled water during periods of lower demand (e.g., during winter) for use during high demand periods (e.g., during summer). Feasible and applicable wastewater treatment facility mosquito and health vector best management practices recommended by the California Department of Public Health will be implemented for the ponds (CDPH 2012). As discussed in Section 5.18, the Project's water facilities will be owned and operated by a Project Water Purveyor that will be regulated by the California Public Utilities Commission (CPUC) or formed as a Community Services District, a statutory water district, or other entity with the appropriate capacity to own, operate, and maintain the Project's water system. The Project Water Purveyor or an alternate qualified public utility district would provide wastewater services, including the operation and maintenance of the WRFs and recycled water system. The WRFs will be required to obtain Waste Discharge Requirements and other approvals issued by the Lahontan Regional Water Quality Control Board (RWQCB) and comply with the State Water Resources Control Board's (SWRCB's) Recycled Water Use Policy.

Section 3.5 of the *Centennial Specific Plan* includes a Wastewater Management Plan (see also Project Design Features [PDFs] 19-1 through 19-3). The Wastewater Management Plan

requirements and PDFs 19-1 through 19-3 have been incorporated in mitigation measures (MMs) 19-3, 19-4 and 19-5. MM 19-1 ensures payment of all applicable fees associated with establishing the Project Water Purveyor, or an alternate qualified public utility district, as the operator of the WRFs. MM 19-2 requires that the Project either be annexed into an existing qualified public utility district (e.g. Golden Valley Municipal Water District) or that a new public utility district (e.g. Project Water Purveyor) has been created to serve the Project. The Project Water Purveyor or alternate qualified public utility district shall be responsible for the design, construction, and operation of the wastewater facilities, and shall ensure compliance with all applicable standards and regulations. MM 19-3 requires the Project Applicant/Developer to prepare a Facilities Report, a Pump Station Feasibility Report, and a Sewer Area Study consistent with County policies and requirements. These measures ensure that potential impacts related to wastewater treatment requirements and wastewater capacity will be less than significant.

Section Format

As described in Section 5.0, Environmental Setting, Impacts, and Mitigation, and in accordance with State CEQA Guidelines Article 9 (Contents of Environmental Impact Reports), each topical environmental analysis includes a description of the existing setting; identification of thresholds of significance; analysis of Project effects and identification of significant impacts; identification of mitigation measures, if required, to reduce significant impacts; and level of significance after mitigation. This information is presented in the following format (Please refer to Section 2.0, Introduction, and Section 5.0, Environmental Setting, Impacts, and Mitigation, for descriptions of each of these topics):

- Introduction
 - Purpose
 - Summary
 - Section Format
 - References
- Relevant Plans, Policies, and Regulations
- Environmental Setting
- Project Design Features
- Threshold Criteria
- Environmental Impacts—A separate analysis is provided for each of the following categories of potential impacts:
 - On-Site Impacts
 - Off-Site Impacts
- Mitigation Measures
- Level of Significance After Mitigation
- References

References

All references cited for preparation of this analysis are listed in Section 5.19.9. The primary technical references for this section are listed below.

1. Psomas. 2017a (February). *Potable Water, Wastewater and Recycled Water Demands and System Plan*. Santa Ana, CA: PSOMAS (Appendix 5.19-A).
2. Psomas. 2017b (April). *Wastewater Treatment Report, Centennial Project*. Santa Ana, CA: PSOMAS (Appendix 5.19-B).
3. Kennedy/Jenks Consultants. 2017 (April). Peer Review of the Wastewater Treatment Report for the Proposed Centennial Specific Plan Development. Pasadena, CA: Kennedy/Jenks Consultants (Appendix 5.19-C).

5.19.2 RELEVANT PLANS, POLICIES, AND REGULATIONS

Federal

Capacity Assurance, Management, Operation, and Maintenance Program

In January 2001, the U.S. Environmental Protection Agency (USEPA) published a proposed rule intended to clarify and expand permit requirements under the Clean Water Act to further protect public health and the environment from impacts associated with sanitary sewer overflows. The proposed rule is generally referred to as the Capacity Assurance, Management, Operation, and Maintenance Program (CMOM) regulation. The proposed CMOM regulation requires development and implementation of programs intended to meet the performance standard of eliminating sanitary sewer overflows; to provide overflow emergency response plans, system evaluations, and capacity assurance plans; to conduct program audits; and to implement public communication efforts.

State

California Porter-Cologne Act

The Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act)(*California Water Code*, Sections 13000 et. seq.) is California’s primary statute governing water quality and water pollution issues, including discharges from wastewater treatment facilities. The Porter-Cologne Act provides the SWRCB and nine RWQCBs authority to protect water quality and is the primary vehicle for implementing California’s responsibilities under the federal Clean Water Act (CWA). Each RWQCB must formulate and adopt a water quality control plan (commonly referred to as a “basin plan”) for the region within its jurisdiction. The basin plan must conform to the policies set forth in the Porter-Cologne Act and the State water policy established by the SWRCB. Each basin plan establishes beneficial uses for surface and ground water in the region and includes narrative and numeric water quality standards to protect those beneficial uses. Each RWQCB is also authorized to include water discharge prohibitions applicable to particular conditions, areas, or types of waste within its jurisdiction. The Act requires that, unless otherwise authorized by a general or other permit,

reports of waste discharges to regulated “waters of the State” must be provided to each RWQCB. The RWQCB may issue discharge permits under State law in response to a report of waste discharge. These permits are commonly referred to as “waste discharge requirements” (WDRs) and are issued by the RWQCBs for activities within each regional board’s jurisdiction. As discussed in Section 5.2, Hydrology and Flood, all of the proposed Project development areas are within the jurisdiction of the Lahontan RWQCB. No on-site development is proposed for the far western portions of the site that are regulated by the Los Angeles RWQCB.

Wastewater Reclamation Facilities Regulation

Planning, design, construction and operation of wastewater reclamation facilities are regulated under the provisions of Title 22 of the *California Code of Regulations*. The California RWQCBs use the Title 22 criteria and, with input from the California Department of Health Services (DHS), issue WDRs for all wastewater reclamation facilities to ensure that applicable water quality objectives and standards are not exceeded. The Lahontan RWQCB would issue WDRs to both of the WRFs proposed to serve the Project prior to commencing operations.

Recycled Water Policy and Regulations

The State of California has implemented laws that provide for and encourage the use of recycled water. Section 461 of the *California Water Code* states, “It is hereby declared that the primary interest of the people of the state in the conservation of all available water resources requires the maximum reuse of recycled water in the satisfaction of requirements for beneficial uses of water”. The State also encourages Californians to develop water recycling projects to help meet potable water demands and to augment surface and groundwater supplies through the provisions of Sections 13500–13556 of the *California Water Code*.

The regulation of recycled water is vested by State law in the SWRCB’s Division of Drinking Water (DDW). The DDW assumed responsibility for State drinking and recycled water regulation in 2014 when the State legislature transferred these functions from the California Department of Public Health (DPH). Sections 13500–13557 of the *California Water Code* regulate the protection of the potable water supply through the control of cross-connections with potential contaminants, including recycled water. Water quality standards and treatment reliability criteria for recycled water are codified in Title 22 of the *California Code of Regulations* (CCR Title 22). Title 22 establishes quality and/or treatment processes required to use recycled water for non-potable applications. Title 22 also addresses sampling and analysis requirements at a treatment plant; preparation of an engineering report prior to production or use of recycled water; and general treatment design requirements, reliability requirements, and alternative methods of treatment. Permits are issued to each water recycling project by one of the nine RWQCBs. These permits include water quality and public health protections, as detailed in Title 22.

On February 3, 2009, in Resolution No. 2009-0011, the SWRCB adopted a Recycled Water Policy (Policy) (SWRCB 2009). The Policy states, “In the face of an unprecedented water crisis due to the collapse of the Bay-Delta ecosystem, climate change, continuing population

growth combined with a severe drought on the Colorado River and failing levees in the Delta, the SWRCB has adopted a Recycled Water Policy in an effort to move aggressively towards a sustainable water future". The SWRCB Policy also states "we declare our independence from relying on the vagaries of annual precipitation and move towards sustainable management of surface waters and groundwater, together with enhanced water conservation, water reuse and the use of stormwater". The following goals were included in the Policy:

- Increase use of recycled water over 2002 levels by at least one million acre-feet per year (afy) by 2020 and at least two million afy by 2030.
- Increase the use of storm water over use in 2007 by at least 500,000 afy by 2020 and at least one million afy by 2030.
- Increase the amount of water conserved in urban and industrial areas by comparison to 2007 by at least 20 percent by 2020.
- Substitute as much recycled water for potable water as possible by 2030.

The SWRCB Policy provides direction to the RWQCBs regarding appropriate criteria to be used in issuing permits for recycled water projects and is intended to streamline recycled water project permitting while providing the RWQCBs with sufficient authority and flexibility to address site-specific conditions. The Policy encourages other public agencies to consider the benefits of using recycled water in evaluating the impacts of recycled water projects on the environment as required by CEQA. The Policy also acknowledges that the SWRCB shares jurisdiction over the use of recycled water with the RWQCBs and the DPH and recognizes that the DWR and CPUC have important roles in encouraging the use of recycled water. The Policy provides guidance concerning these roles. The Policy also includes incentives for using recycled water.

The Policy notes that (1) some groundwater basins contain salts and nutrients that exceed or threaten to exceed water quality objectives established in the Basin Plans; (2) all salts and nutrients should be managed on a basinwide or watershedwide basis through development of regional or subregional management plans; (3) every groundwater basin/sub-basin in California is to have a consistent, locally driven salt/nutrient management plan developed by water and wastewater entities, together with contributing stakeholders in collaborative processes, including compliance with CEQA and participation by RWQCB staff. The Policy describes the components of these salt and nutrient management plans. Finally, the Policy addresses the control of incidental runoff from landscape irrigation projects, recycled water, groundwater recharge projects, anti-degradation factors, control of emerging constituents, and chemicals of emerging concern.

In 2009, the SWRCB adopted a General Permit for landscape irrigation uses of recycled water to facilitate the California Legislature's intent to promote the use of recycled water (SWRCB Order No. 2009-0006-DWQ). The General Permit streamlines the regulatory process for the irrigation use of disinfected tertiary recycled water produced by a public entity at a municipal wastewater treatment facility. Such uses include parks, greenbelts, and playgrounds; school yards; athletic fields; golf courses; cemeteries; residential landscaping, common areas; commercial and industrial landscaping, (except eating areas); and freeway, highway, and street landscaping.

This Policy was amended on April 25, 2013, to require monitoring for constituents of emerging concern and for reducing the monitoring of priority pollutants in recycled water used for landscape irrigation.

Model Water Efficient Landscape Ordinance

The Water Conservation in Landscaping Act of 2006 (Assembly Bill [AB] 1881) required local agencies, no later January 1, 2010, to adopt the state model water efficient landscape ordinance (MWELO) or an equivalent local ordinance. State MWELO regulations were significantly strengthened in response to a drought executive order issued by the California Governor in 2015 (Executive Order B-29-15). The emergency regulations became effective on June 1, 2015, and require new development projects (including residential, commercial, industrial and institutional projects that require a permit, plan check, or design review) with landscape areas of 500 square feet (sf) or more to do the following:

- Dedicate landscape water meters or submeters for residential landscapes over 5,000 square feet (sf) and non-residential landscapes over 1,000 sf.
- Have pressure regulators and master shut-off valves for irrigation systems.
- Meet the national standard stated in the Ordinance to ensure that only high efficiency sprinklers are installed on all irrigation emission devices.
- Have flow sensors that detect and report high flow conditions due to broken pipes and/or popped sprinkler heads for landscape areas greater than 5,000 sf.
- Increase the minimum width of areas that can be overhead irrigated from 8 feet to 10 feet; areas less than 10 feet wide must be irrigated with subsurface drip or other technology that produces no over spray or runoff.

The maximum amount of water that can be applied to a landscaped area was reduced from 70 percent of the reference evapotranspiration (ET_o) rate to 55 percent for residential landscape projects, and 45 percent of ET_o for non-residential projects. The emergency regulations further restrict the amount of high water use plants and turf that may be used for residential and nonresidential development. The Project's compliance with the MWELO, as amended in 2015, is discussed in Section 5.18, Water Resources.

County

Los Angeles County General Plan and Antelope Valley Area Plan

The *Los Angeles County General Plan* and the *Antelope Valley Area Plan* (AVAP), part of the County General Plan, were updated in 2015 and include goals and policies that address wastewater in the unincorporated County. The AVAP goal and policy applicable to the analysis of wastewater for the Project are listed below. Section 5.8, Land Use, Entitlements, and Planning, presents a more in-depth analysis of the Project's consistency with relevant plans, policies, and regulations.

Goal COS 3: A clean water supply untainted by natural and man-made pollutants and contaminants.

Policy COS 3.2: Restrict the use of septic systems in areas adjacent to aqueducts and waterways to prevent wastewater intrusion into the water supply.

Wastewater Treatment Plant Operations

As discussed in Section 5.18, Water Resources, the Project's water facilities will be owned and operated by a Project Water Purveyor that will be regulated by the CPUC or formed as a Community Services District, a statutory water district, or other entity with the appropriate capacity to own, operate, and maintain the Project's water system. The Project Water Purveyor or an alternate qualified public utility district would also provide wastewater services, including the operation and maintenance of the WRFs and recycled water system and be funded through a rate-payer system and fees. Until the Project Water Purveyor or an alternate qualified public utility district is established, the Project Applicant/Developer will be responsible for all Project-related wastewater and recycled water services. The design, permitting, financing, and construction of all wastewater treatment, collection, and distribution infrastructure will be provided by the Project Applicant/Developer.

5.19.3 ENVIRONMENTAL SETTING

Due to the rural nature of existing land uses on and immediately surrounding the Project site, wastewater treatment for existing development is provided by septic tanks. There are currently no connections to an existing municipal wastewater system within the Project site or in adjacent areas. No wastewater treatment providers that could provide service for the proposed development are located or planned in the vicinity of the Project site. The nearest municipal wastewater management agency is the Sanitation Districts of Los Angeles County (LACSD), which serves approximately 5.6 million people in 78 cities and unincorporated areas within the County. The LACSD operates 11 wastewater reclamation plants (WRPs), which treat approximately 510 million gallons per day (mgd) of wastewater. The following 4 WRPs are located within 50 miles of the Project site (LACSD 2017):

- The Valencia WRP, located approximately 32 miles south of the Project site, which provides primary, secondary, and tertiary wastewater treatment and has a capacity of 21.6 mgd.
- The Saugus WRP, located approximately 35 miles south of the Project site, which provides primary, secondary, and tertiary wastewater treatment and has a capacity of 6.5 mgd.
- The Lancaster WRP, located approximately 41 miles east of the Project site, which provides tertiary wastewater treatment and has a capacity of 18 mgd.
- The Palmdale WRP, located approximately 43 miles east of the Project site, which provides primary, secondary, and tertiary wastewater treatment and has a capacity of 12 mgd.

5.19.4 PROJECT DESIGN FEATURES

- PDF 19-1** The Project will implement the Wastewater Management Plan, as discussed in Section 3.5 of the *Centennial Specific Plan*, and will include two wastewater reclamation facilities (WRFs) to provide on-site treatment of all Project-generated wastewater. Both WRFs will include solids disposal and primary, secondary, and tertiary treatment. The WRFs would be sited in locations that allow for wastewater to generally flow by gravity for treatment to reduce energy demands. Pump stations would be implemented to serve areas that cannot flow by gravity. As described in the Wastewater Management Plan, the WRFs will provide tertiary treatment (California Code of Regulations, Title 22 unrestricted reuse) and will produce recycled water for various outdoor uses, (e.g. landscaping, decorative water features including ponds, waterfalls, artificial streams) and for indoor wastewater and cooling in the business park, subject to all applicable laws and regulations. Biosolids will be hauled to a suitable landfill or used for conversion into fertilizer products. The effluent stream would be disinfected and discharged into the recycled water distribution system or into seasonal storage ponds. The two WRFs will be connected through a recycled water distribution system to balance storage and flow. The WRFs will include equipment to capture and reuse biogas for energy production to be used at the facility. The facilities would be operated and maintained by the Project Water Purveyor or an alternate qualified public utility district.
- PDF 19-2** WRF West will serve the Project area located west of the West Branch of the California Aqueduct and would be located on an approximate 3-acre site and will treat an average flow of approximately 0.34 million gallon per day (mgd). WRF West would be constructed in one phase.
- PDF 19-3** WRF East will serve the Project area located east of the West Branch of the California Aqueduct. The facility would be located in the northeasterly portion of the Project site and will treat an average flow of 4.28 million gallons per day. Lined seasonal recycled water storage ponds will be included in the WRF East design to temporarily store recycled water during times of low demand. Feasible and applicable wastewater treatment facility mosquito and health vector best management practices recommended by the California Department of Public Health will be implemented for the ponds. Waste solids would be hauled to a suitable off-site landfill or converted into fertilizer products. WRF East will also include equipment to capture and reuse biogas for energy production on the Project site. WRF East will be constructed in multiple phases to maximize operational and economic feasibility.

5.19.5 THRESHOLD CRITERIA

The following significance threshold criteria are derived from the County of Los Angeles Environmental Checklist. The Project would result in a significant impact related to wastewater collection if it would:

- Threshold 19-1** Exceed wastewater treatment requirements of either the Los Angeles or Lahontan Regional Water Quality Control Boards.
- Threshold 19-2** Create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

5.19.6 ENVIRONMENTAL IMPACTS

- Threshold 19-1** **Would the project exceed wastewater treatment requirements of either the Los Angeles or Lahontan Regional Water Quality Control Boards?**

On-Site Impacts

As shown in Table 5.18-7 of Section 5.18 Water Resources, and in the Potable Water, Wastewater and Recycled Water Demands and System Plan Report (Appendix 5.19 A), total Project indoor water use at buildout will be approximately 4.48 mgd (5,019 afy), including 3.71 mgd (4,161 afy) for residential indoor demand, 0.74 mgd (829 afy) for schools, commercial, industrial and institutional indoor uses, and 0.03 mgd (29 afy) for other uses, including recreation. In addition to the indoor potable water flows contributing to wastewater flows, buildings in the Business Park land use will implement dual plumbing which will add 0.14 mgd (157 afy) to the wastewater flows for a total of 4.62 mgd (5,176 afy).

To account for losses in the wastewater treatment, recycled water distribution system and evaporation, the recycled water demand estimates include a conservative 10 percent loss between indoor water demand (wastewater flow volumes) and the available recycled water supply. This 10 percent loss is made up of the following components: approximately 2 percent losses through the wastewater treatment process, approximately 3 percent through evaporation losses in the recycled water storage ponds and approximately 5 percent loss through the distribution system. The evaporation losses were calculated on a monthly basis as part of the recycled water balance analysis and considered the recycled water seasonal storage pond area each month as the surface area and depth of storage fluctuated. Consequently, the supply of tertiary treated recycled water at buildout will be approximately 4.16 mgd or 4,658 afy.

Treatment of all wastewater generated on the Project site would occur at two permanent on-site WRFs and would consist of primary, secondary, and tertiary treatment processes using biological oxidation and solids handling techniques. Approximately 10 percent of Project

development will occur west of the West Branch of the California Aqueduct, and 90 percent will occur to the east of the Aqueduct. The WRF West facilities would be located west of the Aqueduct and would collect and treat wastewater from and produce recycled water for the western portion of the proposed development. The WRF East facilities would be significantly larger in size and would provide wastewater and recycled water service for nearly 90 percent of the proposed development. The locations of the on-site WRFs and related facilities, including the primary wastewater collection pipelines, treatment plant locations, and recycled water storage ponds, are shown on Exhibit 5.19-1, Preliminary Wastewater Collection System.

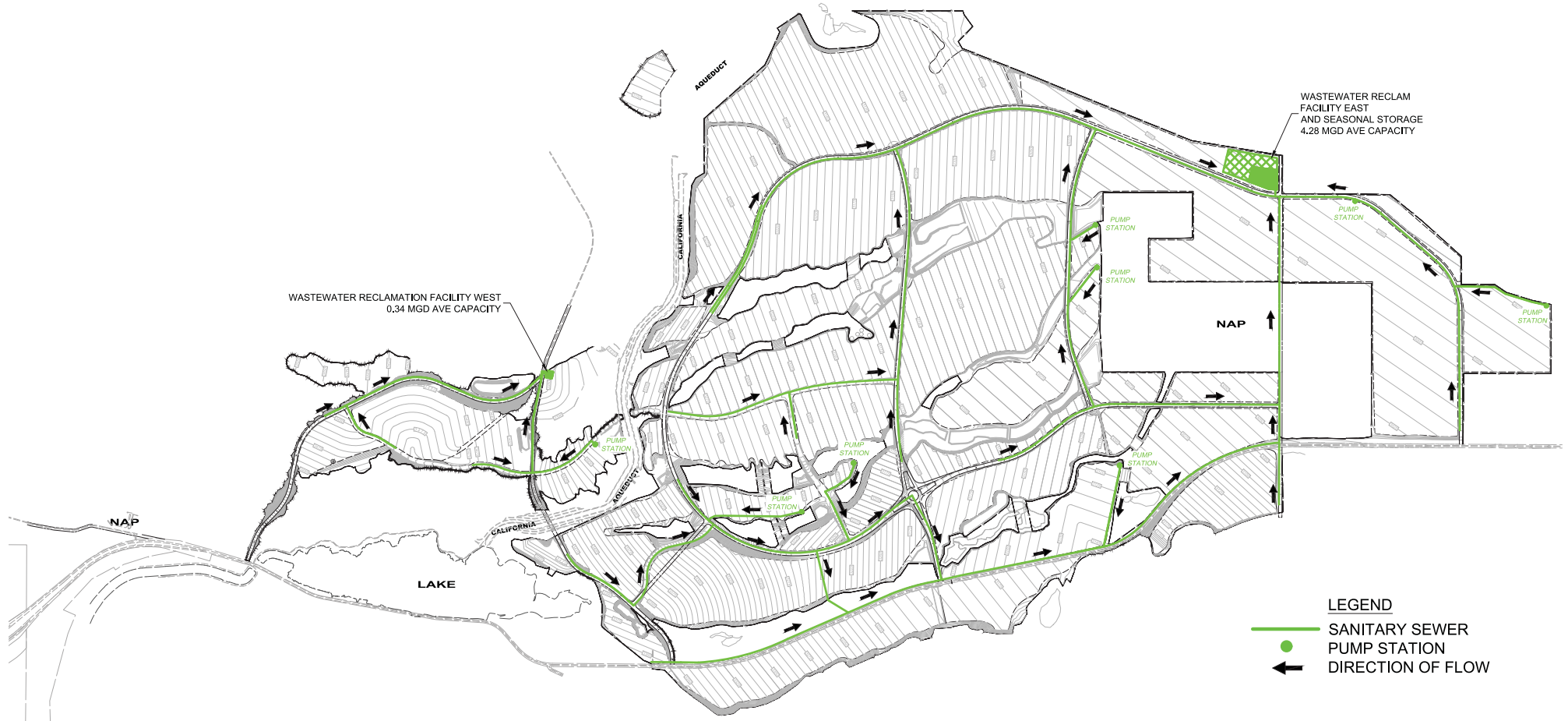
The maximum daily demand for potable water has been conservatively estimated to be 2.0 times the average daily demand. Consistent with this design approach, the WRFs will also have a nominal peak treatment capacity of 2.0 times the average daily flow, or 9.24mgd. The capacity of each treatment unit or element can be more accurately addressed in consultation with the Lahontan Regional Water Quality Control Board during the design process, based on its actual operating parameters which will account for a greater fluctuation in peak dry weather flow that may occur at the smaller WRF West, and general flow peaking resulting from wet weather flows that will occur at each WRF.

Both WRFs are proposed in locations that would allow for wastewater to generally flow by gravity for treatment and are sited in areas that are not adjacent to sensitive land uses. The wastewater collection system also includes locations where small sewer lift stations and force mains will be required. The proposed sewer lift stations will typically consist of a duplex, submersible pump system equipped with aboveground electrical facilities as well as generators to provide stand-by power. Telemetry systems will be included at each lift station and at each WRF to continuously monitor pump station operations and overall WRF flow processes. During the early stages of development, flows to the lift stations will be smaller than the ultimate design flow. The detailed design process for the lift stations and force mains will consider the potential for odor generation during initial low flow conditions and if required, provide odor control systems as part of the final design. Exhibit 5.19-1 depicts the proposed sewer pipeline routes and sewer pump station locations for the Project.

The treatment facilities will consist of primary treatment using grinder pumps and screening in channels, which can be constructed in phases, followed by secondary and tertiary treatment. The wastewater will be treated to meet CCR Title 22 unrestricted reuse standards, which requires biological oxidation clarification and filtration of the treated wastewater. Membrane bioreactor (MBR) wastewater treatment technology will be utilized to meet the recycled water quality objectives. MBR treatment systems have been permitted by the Lahontan RWQCB, including for use in an MBR tertiary treatment plant operated by the LACSD located between Lancaster and Rosamond near the intersection of State Route (SR) 138 and SR-14 (Order No. R6V-2006-0035).

The MBR process combines a biological treatment system followed by membrane filtration. This MBR technology will provide an effluent that exceeds secondary and tertiary Title 22 requirements and meet the discharge requirements set by the Lahontan Regional Water Quality Control Board. Solids handling will be provided by anaerobic digesters to treat the sludge followed by centrifuges or belt filter presses to further reduce the liquid content prior

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Source: Psomas 2017b

Preliminary Wastewater Collection System

Exhibit 5.19-1

Centennial Project



to being hauled to a suitable landfill or for conversion into fertilizer products. Exhibit 5.19-2, Treatment Methods at Project Wastewater Reclamation Facilities (WRF), provides an overview of treatment processes and methods that would be used at each WRF.

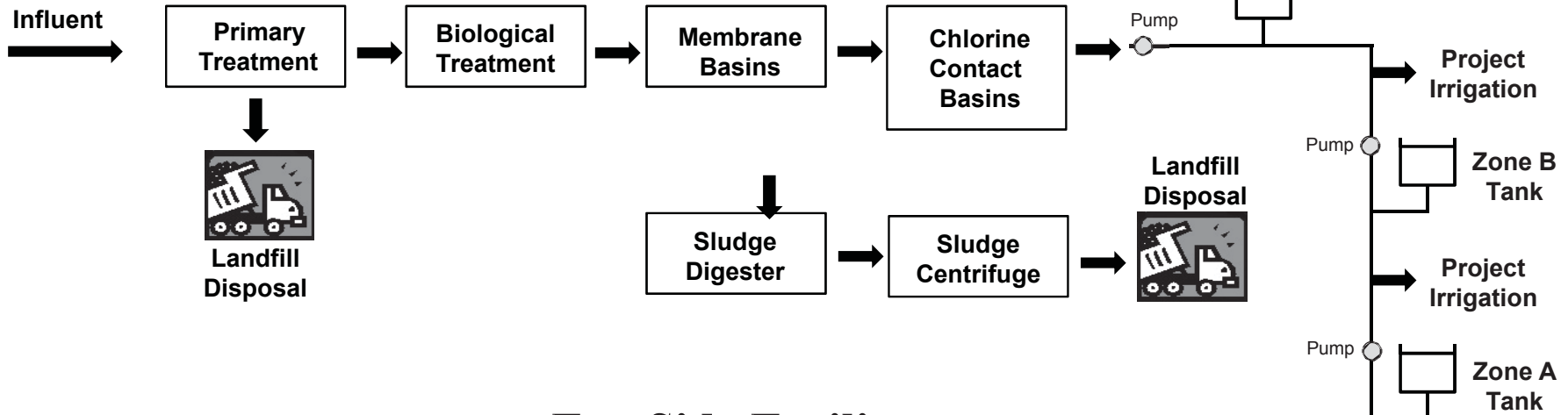
Exhibit 5.19-3, Preliminary Recycled Water, Storage, and Distribution System, depicts the proposed recycled water storage, and distribution system for the Project. All recycled water supplies would be generated by treating on-site wastewater flows at WRF East and WRF West. No supplemental recycled system supplies would be required or utilized by the Project. During most of the year, when there is sufficient demand for irrigation and other recycled water uses, recycled water will be disinfected and pumped from a booster pumping station at the WRF East into the Zone A recycled water distribution system (see Exhibit 5.19-3). In winter months when recycled water irrigation demand is reduced, excess supplies will be discharged to lined, seasonal storage ponds located adjacent to WRF East (see Exhibit 5.19-1). When demand increases in other parts of the year, the stored recycled supplies will be withdrawn from the ponds; polished by filtration and disinfection; and the pumped into the Zone A distribution system.

Recycled water operational storage tanks will be located on the same pads as the domestic water storage tanks, and the pressure zones of each system will have the same hydraulic gradient. This design approach will reduce the number of reservoir sites throughout the Project and will improve facility operation and maintenance. A recycled water booster pump station will be installed at each recycled reservoir site to pump water as required to higher zones and reservoirs. Pressure-reducing valves will be located at key locations within the recycled water system and will move supplies to lower zones; will maintain operating pressures; and will provide greater system reliability (Psomas 2017a).

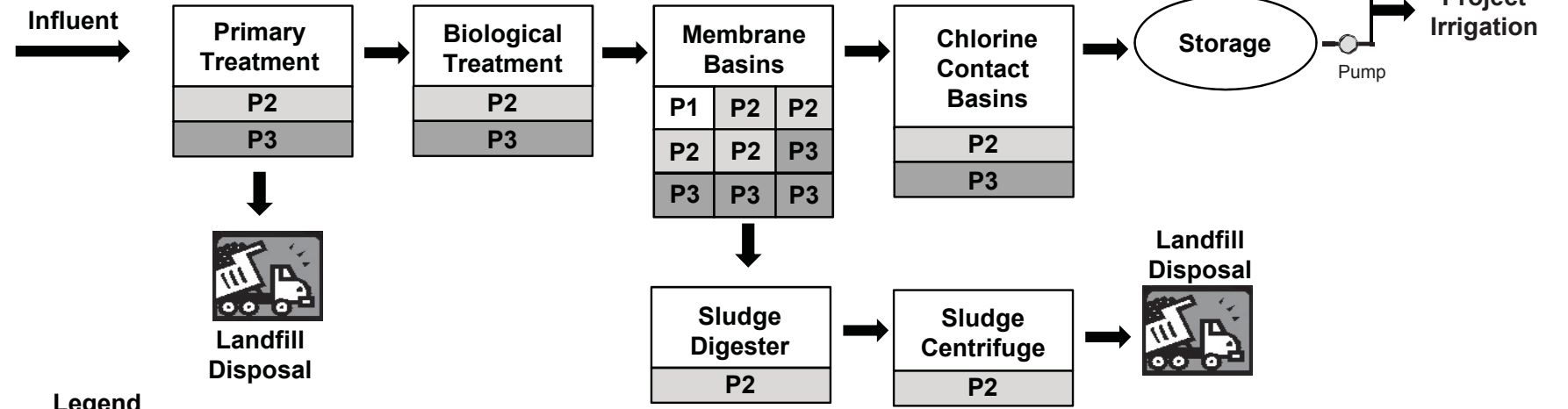
The use of recycled water on the Project site is described in detail in Section 5.18, Water Resources. At full buildout, recycled water will be used for (i) 100 percent of the commercial, business park, institutional, school, hotel, park, and slope outdoor irrigation demand; (ii) 56 percent of the total very low and low density residential lot outdoor irrigation demand (50 percent of the very low and low density landscape lot area); and (iii) wastewater and cooling use within the proposed business park except where prohibited by applicable law for particular types of areas or uses (e.g., employee cafeterias).

As discussed in Section 5.19.2, Title 22 of the *California Code of Regulations* establishes criteria for recycled water, treatment, conveyance, and water quality testing and is administered by the SWRCB Division of Drinking Water. State surface and groundwater quality, including discharge from the WRFs, is further regulated by the Lahontan RWQCB under the Porter Cologne Act. Each of the proposed WRFs will be required to obtain WDRs from the Lahontan RWQCB that include enforceable operational, treatment, conveyance, discharge, water quality and monitoring requirements before wastewater treatment and recycled water operations may commence. The WDRs issued by the Board will be consistent with the RWQCB's wastewater treatment requirements (Psomas 2017b). The proposed WRFs, wastewater treatment system, and recycled water system will not be located on or discharged to portions of the site within the boundaries of the Los Angeles RWQCB. The proposed wastewater system is also consistent with AVAP Goal COS 3 and Policy COS 3.2

West Side Facility



East Side Facility



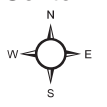
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| Phase 1 (P1) |
| Phase 2 (P2) |
| Phase 3 (P3) |

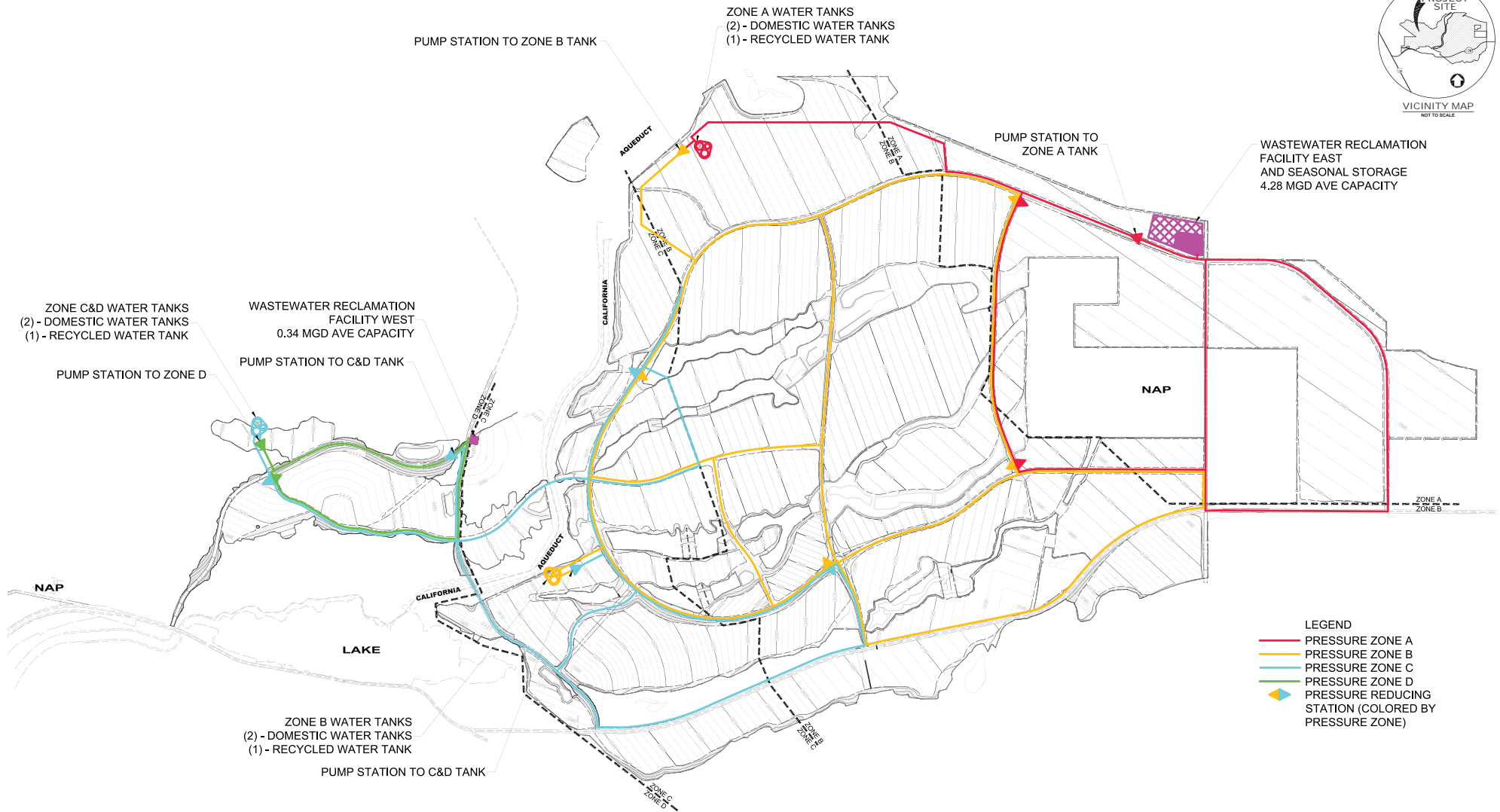
Treatment Methods at Project Water Reclamation Facilities (WRF)

Exhibit 5.19-2

Centennial Project



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- LEGEND**
- PRESSURE ZONE A
 - PRESSURE ZONE B
 - PRESSURE ZONE C
 - PRESSURE ZONE D
 - ◀▶ PRESSURE REDUCING STATION (COLORED BY PRESSURE ZONE)

Preliminary Recycled Water, Storage, and Distribution System

Exhibit 5.19-3

Centennial Project

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because no septic systems will be used by the Project and no wastewater intrusion will occur into the Project and adjacent water supplies.

MMs 19-1 through 19-5 require that the Project either be annexed into an existing qualified public utility district (e.g. Golden Valley Municipal Water District) or that a new public utility district (e.g. Project Water Purveyor) is created. The Project Water Purveyor or alternate qualified public utility district would be responsible for the design, construction, and operation of the on-site WRFs, wastewater conveyance and treatment facilities, and recycled water facilities, and would ensure compliance with all applicable standards and regulations. No wastewater facilities may be operated until WDRs have been issued by the Lahontan RWQCB. With mitigation, potential Project impacts from exceeding the wastewater treatment requirements of the Lahontan RWQCB will be less than significant.

Off-Site Impacts

Both of the proposed WRFs and related conveyance pipelines, pump stations, and seasonal storage ponds that will serve the proposed development areas would be located entirely within the Project site. No wastewater discharges, including recycled water use, will occur off site. Accordingly, implementation of the WRFs would not involve any off-site impacts and would not exceed the wastewater treatment requirements of the Lahontan RWQCB. There would be no impact and no mitigation is required.

The proposed off-site Project features, including intersections with SR-138, utility connections, water wells, and California Aqueduct crossings, would not generate wastewater. Therefore, the wastewater treatment requirements of the Lahontan RWQCB would not be exceeded. There would be no impact and no mitigation is required.

Impact Summary: MMs 19-1 through 19-5 require that the proposed Project's wastewater and recycled water systems comply with all the wastewater treatment and recycling WDRs issued by the Lahontan RWQCB prior to WRF operation. With mitigation, Project implementation would not exceed the wastewater treatment requirements of the Lahontan RWQCB and potential impacts would be less than significant.

Threshold 19-2 **Would the project create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

On-Site Impacts

As discussed, the Project would involve the construction of new wastewater collection, conveyance, and treatment facilities. Potential environmental impacts of a facility's construction on resource categories other than wastewater (e.g., air quality/odors, biological resources, land use) are assessed throughout this Draft EIR in the appropriate topical sections.

As discussed above and in Section 5.18, Water Resources, the Project will reuse all wastewater generated on the site, subject to a loss of 10 percent of the volume of wastewater generated within the site and the amount of recycled water produced for reuse. Approximately 4.62 mgd of wastewater will be produced at Project buildout, which will result in a recycled supply of approximately 4.16 mgd (4,659 afy). As discussed in Section 5.18, Project outdoor irrigation and indoor wastewater and cooling in the proposed business park will utilize the available recycled water supplies, after accounting for system losses. If there is any excess recycled water that accrues on an annual basis, irrigation schedules can be modified slightly to use the excess supply. If recycled water generation does not reach the projected volumes to meet the forecast irrigation demands, then irrigation schedules will be adjusted to reduce demand to meet available supply, as was done in California during the recent drought conditions. The majority of recycled water demand will come from large HOAs, which the Golden Valley Municipal Water District (GVMWD) or other Public Utility District (PUD) can coordinate with to manage supply/demand balance. Additionally, demand and supply will be monitored as Project phasing progresses and appropriate adjustments to landscaping and irrigation systems can be made throughout Project development to maintain acceptable balance. The proposed wastewater treatment and recycled water systems will not create water or wastewater system capacity problems or require the construction of additional water or wastewater treatment facilities.

Off-Site Impacts

All wastewater generated on the site would be conveyed for treatment to the two on-site WRFs using a dedicated, on-site system of gravity-flow sewer lines, pump stations, and trunk sewers. These facilities will be implemented entirely within the Project site. The Project will not connect with or receive service from any off-site wastewater treatment facilities, including the existing LACSD facilities that are closest to the site. The proposed off-site Project facilities, including intersections with SR-138, utility connections, water wells, and California Aqueduct crossings, would not generate wastewater. No potential impacts related to off-site water or wastewater system capacity problems, or the construction of new off-site water or wastewater treatment facilities will occur and no mitigation is required.

Impact Summary: Mitigation Measures (MMs) 19-1 through 19-5 require that the proposed Project's wastewater and recycled water systems be implemented as dedicated on-site facilities with sufficient capacity to convey and treat all on-site wastewater and produce recycled water treated to Tile 22 unrestricted reuse standards. The on-site demand for recycled water will approximate supply at full buildout. The Project will not connect with or receive any wastewater or recycled water supplies

from any off-site provider or source. With mitigation, Project implementation would not create water or wastewater system capacity problems, nor would it result in the construction of new water or wastewater treatment facilities or expansion of existing facilities; potential impacts would be less than significant.

5.19.7 MITIGATION MEASURES

The following mitigation measures are required to ensure that the proposed Project's wastewater treatment and recycled water facility implementation will be consistent with the wastewater treatment requirements of the Lahontan RWQCB; will not create water or wastewater system capacity problems.

- MM 19-1** The Project Applicant/Developer shall provide documentation to the County that it has completed all required procedures and has paid all applicable fees associated with establishing the Project Water Purveyor, or an alternate qualified public utility district, as the operator of the WRFs.
- MM 19-2** The Project Applicant/Developer shall demonstrate that the Project has either been annexed into an existing qualified public utility district (e.g. Golden Valley Municipal Water District) or that a new public utility district (e.g. Project Water Purveyor) has been created to serve the Project. The Project Water Purveyor or alternate qualified public utility district shall be responsible for the design, construction, and operation of the wastewater facilities, and shall ensure compliance with all applicable standards and regulations, including all Lahontan RWQCB and Title 22 requirements of the California Code of Regulations.
- MM 19-3** The Project shall incorporate the Wastewater Management Plan (*Centennial Specific Plan*, Section 3.5), and the Project Applicant/Developer shall prepare a Facilities Report, a Pump Station Feasibility Report, and a Sewer Area Study consistent with County Policies and Requirements.
- MM 19-4** The Project Applicant/Developer shall provide the County with plans and specifications that have been prepared in accordance with the Project Water Purveyor or alternate qualified public utility district requirements and standards that demonstrate that the WRF West shall serve the Project site west of the West Branch of the California Aqueduct. The facility shall be located on an approximate 3-acre site and shall treat an average flow of approximately 0.34 million gallon per day. Biosolids shall be hauled to a suitable landfill or used for conversion into fertilizer products.
- MM 19-5** The Project Applicant/Developer shall provide the County with plans and specifications that have been prepared in accordance with the Project Water Purveyor or alternate qualified public utility district requirements and standards that demonstrate that the WRF East shall serve the Project site east of the West Branch of the California Aqueduct. WRF East will be located near

the northeasterly corner of the Project and shall treat an average flow of 4.28 million gallons per day. Biosolids shall be hauled to a suitable landfill or used for conversion into fertilizer products. Lined seasonal recycled water storage ponds shall be implemented as required to temporarily store recycled water during times of low demand. The ponds shall implement feasible and applicable wastewater treatment facility best management practices for mosquito and health vector recommended in the California Department of Public Health's 2012 *Best Management Practices for Mosquito Control in California: Recommendations of the California Department of Public Health and the Mosquito and Vector Control Association of California*.

5.19.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of MMs 19-1 through 19-5 would reduce potentially significant impacts related to wastewater to levels that are less than significant.

5.19.9 REFERENCES

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