3.11 Public Services and Utilities

3.11.1 Introduction

This section describes the regulatory setting and environmental setting for public services (fire and police protection, schools, and libraries) and public utilities (water, wastewater, stormwater, and solid waste), and analyzes potential impacts that could result from implementation of the proposed project.

As discussed in Chapter 1, Introduction, a Notice of Preparation (NOP) for this Environmental Impact Report (EIR) was initially published in December 2016 based on the original project applications. In 2019, the project applicant submitted revised applications and site plans, increasing the number of residential units from 330 to 540 and increasing the amount of onsite parking. The City issued a revised NOP in May 2020. Six comment letters were received in response to the NOP that addressed public utilities. A number of comments received addressed infrastructure needs such as water and sewer line capacity. One such comment letter was received from the Merced County Local Agency Formation Commission (LAFCO) requesting more information regarding the City's long-term plans for extension of public services into the Rural Residential Center located north of the project site, including planned trunk line capacity for annexation for sewer, water and stormwater facilities, and whether a water supply assessment (WSA) would be required for the project. Additionally, the Merced Irrigation District (MID) requested that the City adopt conditions of approval requiring the Yosemite Lateral canal be placed in an underground pipeline and that the project enter into a Subdivision Drainage Agreement if the Yosemite Lateral would be the recipient of the project's storm drainage. The project's potential effects related to stormwater runoff are addressed in Section 3.8, Hydrology and Water Quality. Both NOPs and the comment letters received in response to them are provided in Appendix A.

References used to prepare this section include the City of Merced General Plan (City of Merced 2012), City of Merced Water Master Plan (City of Merced 2014), City of Merced Wastewater Collection System Master Plan (City of Merced 2017) personal communication with City staff, the City of Merced Public Facilities Financing Plan (Merced 2012), the WSA prepared for the proposed project (Quad Knopf 2020, Appendix L), the project's Storm Drainage Report (Quad Knopf 2018), and information from CalRecycle, the U.S. Environmental Protection Agency (U.S. EPA), and the U.S. Census Bureau.

3.11.2 Environmental Setting

The project site is located within the City's Sphere of Influence and is designated Rural Residential in the City's Merced Vision 2030 General Plan. The project site consists of approximately 68.6

acres. The project proposes to construct a multi-family residential and mixed-use development called The Crossings on approximately 28.4 acres in the western portion of the project site. This area excludes approximately 9.4 acres in the northwestern corner of the site and 30.8 acres in the eastern portion of the site that are proposed to be annexed to the City, but no development is currently proposed. Those areas are referred to throughout this EIR as the Remainder Area. The project proposes to change the General Plan land use designations for The Crossings component of the site from Rural Residential (RR) to Neighborhood Commercial (CN) and High-Medium Density Residential (HMD) and proposes to change the land use designation for the eastern portion of the Remainder Area to Low Density Residential. The approximately 9.4 acres in the northwest corner of the site are currently designated RR. No change to this designation is proposed and this area is proposed to be pre-zoned as Urban-Transition (U-T). The 10 acres in the center of the site, immediately east of The Crossings component of the project, are also proposed to be pre-zoned as U-T while the easternmost approximately 20.8 acres of the site proposed are to be pre-zoned as R-1-10. The portions of the Remainder Area proposed to be pre-zoned U-T would support only continued operation of the existing land uses and new agricultural uses; the portions of the Remainder Area proposed to be pre-zoned R-1-10 would allow development of single-family residences on minimum 10,000-square-foot lots. As discussed below, most of the public services and utility services at the project site are provided through Merced County. With the proposed annexation of the site to the City, most public and utility services would then be provided to the site through the City.

Water Supply

The City's sole source of water supply is groundwater. The City's system consists of 22 active groundwater wells, and 340 miles of distribution pipeline, as well as other related equipment, such as hydrants, meters, valves, fluoridation and chlorination systems, pumps, motors, , supplying approximately seven billion gallons of water annually (City of Merced 2016).

The City's water system has historically expanded to keep pace with population growth. Water production increased by approximately 2 percent per year, from approximately 16,500 acre-feet per year (AFY) in 1990 to 25,899 AFY in 2012, consistent with the 2 percent annual population growth rate over the same period (City of Merced 2014). The service area population (which includes UC Merced) is projected to grow by approximately 94 percent from 87,575 people in 2012 to 169,585 people by 2030, as shown in Table 3.11-1 below. This represents an average growth rate of approximately 3.7 percent per year, (City of Merced 2015). Additionally, in 2012, the average water usage was 23.4 million gallons per day (mgd).The City's projected 2030 population and associated water use is shown in Table 3.11-1.

Table 3.11-1
Water Use Projections by Year

	2012	2030
Population	87,575	169,585
Projected Annual Demand (AFY)	23,661	44,596
Average Day (mgd)	23.4	40.3
Neighborhood Commercial District (AFY)	1.8	1.7
Village Residential (AFY)	0.5	0.5

Source: City of Merced 2015

Water Infrastructure

In the project area, two 16-inch water mains run along East Yosemite Avenue and Gardner Avenue. The 16-inch water main on East Yosemite Avenue is approximately 20 feet south of the centerline and is looped with a 12-inch line going south on Parsons Avenue, a 16-inch line going south on McKee Road, and a 12-inch line going north on Paulson Road. The 16-inch main on Gardner Avenue is approximately 8 feet east of centerline and is looped with a 12-inch line going west on Dunn Road (connecting with the 12-inch line on Paulson Road). On the project site, water is currently supplied by an onsite well (Nelson Enviro 2016).

Wastewater

Wastewater collection and treatment for the Merced area is provided by the City of Merced. Wastewater sources in the City of Merced include residential customers, commercial users, industrial users and public uses (such as City administrative offices and public service facilities, libraries, parks, schools and airports). A majority of the wastewater generated within the service area originates from residential customers.

The wastewater collection and conveyance system is subject to infiltration and inflow (I/I) of stormwater and groundwater which enters the collection system through different mechanisms. Infiltration enters the collection system from subsurface sources such as defective pipes, pipe joints, connections or leaky manholes. Infiltration can occur during periods of wet weather when soil becomes saturated and shallow groundwater becomes elevated or during dry weather if local conditions are such that groundwater is sufficiently high. Inflow is a term used to describe non-wastewater sources which are more direct connections, such as leaky manhole lids that allow storm runoff to enter the collection system.

City Wastewater Treatment Plant

The City Wastewater Treatment Plant (WWTP) is located southwest of the City, about two miles south of the airport. It is periodically expanded and upgraded to meet the needs of the City's growing population and new industry (City of Merced 2012). The project site would be served by the City's wastewater infrastructure if the project is approved and the site is annexed into the City. The WWTP currently provides secondary level treatment and disinfection of wastewater and most of its treated effluent is discharged to Hartley Slough.

The City WWTP has a design capacity of 12 mgd and in 2017 the average dry weather flows were 8 mgd (City of Merced 2017). The WWTP is planned to be expanded to treat 20 mgd by buildout in 2024, which is sufficient to meet the demands from development of the City's Specific Urban Development Plan (SUDP) area and UC Merced campus planned wastewater loads that would be generated at that time (City of Merced 2017). The design capacity of 20 mgd could support a population of 150,000 (City of Merced 2012). The capacity improvements would be installed in phases corresponding to continued population growth and development in the Merced SUDP area and the UC Merced campus (City of Merced 2006). The City WWTP is permitted under National Pollution Discharge Elimination System (NPDES) permit No. CA0079219 [California Regional Water Quality Control Board (RWQCB) 2014].

Wastewater Infrastructure

Wastewater generated within the City is collected in a series of pipelines which the City owns, operates, and maintains. The system includes over 400 miles of gravity sewers ranging in size from 6 to 48 inches in diameter.

The existing City sewer trunk system consists of three primary branches, which convey flows from three distinct sewer sub-sheds. These include:

1. The 48-inch trunk sewer "Interceptor." The Interceptor dates from the 1980s and replaced a pump station and portions of the West Avenue Trunk. The Interceptor conveys flow from the northern portion of the City's system.
2. The West Avenue Trunk serving the southwestern portion of the City.
3. The Gerard Trunk serving the southern portion of the City system, east of the West Avenue Trunk sewer shed. The Gerard Trunk intersects with the West Avenue Trunk and continues as a 42-inch gravity trunk to the City's WWTP.

Near the proposed project, an existing 18-inch gravity sewer line in East Yosemite Avenue (20 feet north of centerline) flows west from Gardner Avenue to G Street. On the project site, sewage

is currently handled with onsite septic systems (Nelson Enviro 2016). The Crossings portion of the project site is primarily agricultural land with only a small area along East Yosemite Avenue that contains four buildings currently served by an existing septic system. The existing development within the Remainder Area, which includes a church, a private school, nine single-family residences, and agricultural land, is also served by individual septic systems.

The existing North Merced sewer system has two primary locations of Level of Service failures (City of Merced 2017):

- 1,042 feet of 21-inch diameter sewer along West Olive Avenue from R Street to Meadows Avenue. The sewer is predicted to have minor surcharge (<0.1 feet).
- 1,900 feet of 24-inch diameter sewer and 400 feet of 21-inch diameter sewer along Highway 59, from West Olive Avenue (discharge of the Highway 59 Pump Station) to approximately 600 feet north of Holiday Mobile Estates.

Current peak wet weather flows in the system are approximately 23.4 mgd. In recent years, peak flows into the WWTP have been measured around 14 mgd while average dry weather flows are around 8 mgd (City of Merced 2017).

The Wastewater Collection System Master Plan identifies capacity under an Interim Conditions scenario, which assesses impacts to existing sewers from full buildout of areas that are considered likely to develop prior to construction of new trunk sewers. The interim condition includes properties entitled to develop, largely within the North Merced area. These areas are defined by the North Merced Sewer Assessment District (NMSAD) and properties identified by the City on the Tentative Subdivision Activity Map (TSAM) as of July 2017, as well as full build-out of the UC Merced campus as envisioned in the UC Merced and University Community Project EIS/EIR (UC Merced 2009). Under this scenario, segments of the Yosemite Avenue trunk are predicted be at or over capacity when the projects entitled to connect to that facility are built. Similarly, portions of the G Street trunk north of Black Rascal Creek and the 42-inch Interceptor along Devonwood Drive and Austin Avenue are predicted to be at or over capacity. These segments would serve the proposed project. Additionally, the portion of the Highway 59 trunk downstream of the pump station located north of Fehren's Creek is predicted to be over capacity along the entire length of the alignment southward to the intersection with the 42-inch Interceptor. (City of Merced 2017)

The City has selected a preferred approach to upgrading the City's sewer infrastructure to serve the entire SUDP at current build-out flow estimates. Servicing the North Merced area would occur via a large new trunk starting in the vicinity of the intersection of Cardella Road and Lake Road, north of the project site, running east to west along Cardella Road, then south along Thornton

Road to a pump station just north of Black Rascal Creek. A force main discharging from the new pump station north of Sante Fe Drive would extend to just south of State Route 140, then transition to a new 60-inch gravity trunk from that point south to the WWTP. Additionally, flow from the existing Highway 59 Pump Station would be diverted to the new pump station along Thornton Road. South Merced would be serviced via a new trunk running east to west along East Mission Avenue which would intersect with a new trunk sewer running north to south west of Highway 59. This trunk would then turn west on Reilly Road and continue westward to the WWTP (City of Merced 2017).

Schools

The public school system in Merced is served by four districts: Merced City School District (elementary and middle schools), Merced Union High School District, Weaver Union School District (serving a small area in the southeastern part of the city with elementary schools), and McSwain Union Elementary School District (serving a small area in the southwestern portion of the Area of Interest). The Merced City School District (MCSD) and Merced Union High School District (MUHSD) would serve the project site. Public school districts operate independently from the City and are supported by their own funding and development fees (City of Merced 2012).

The City of Merced General Plan states that as the city grows, new schools will need to be built to serve its growing population. To accommodate such growth, the school districts periodically prepare development fee justification studies which show student generation rates for various types of development (City of Merced 2012). Both MCSD and MUHSD adopted Development Fee Justification Studies in May 2020. Because the school districts are not unified (meaning that elementary and middle schools are in one district and high schools are in a separate district), the development fees must be split between the two districts. The MCSD Development Fee Justification Study identifies that MCSD would receive two-thirds of the Level 1 fees ($2.72 per square foot for residential development and $0.44 for commercial/industrial development) and the MUHSD would receive one-third of the fees ($1.36 per square foot for residential development and $0.22 for commercial/industrial development) (MCSD 2020). The study also notes that the increasing pace of new residential construction observed between 2015 and 2019, in which an average of 96 single-family dwelling units and 19 multi-family dwelling units were constructed each year, “reflects a new housing market recovery in the Merced area after the significant financial impacts of the housing market collapse that began in 2008. Much of the housing market recovery appears to be related to the ongoing expansion of the UC Merced campus and the related need for housing for staff and students.”

The MCSD operates 14 elementary schools and four middle schools. The closest schools to the project site are Peterson Elementary, Chenoweth Elementary, and Cruickshank Middle (all less

than a mile from the project site). According to the MCSD My School Locator (MCSD 2021), Ada Givens Elementary School, which is located approximately 1.9 miles away from the proposed project site, would principally serve the kindergarten through sixth grade students living at the project site, while Cruikshank Middle School would serve the seventh and eighth grade students living at the project site. Enrollment for the 2019-2020 school year at Ada Givens Elementary School was 607 students (Ed-Data 2020), which is less than the school's maximum capacity of 672 students as identified in the MCSD 2014 Long Range Facilities Master Plan. For the 2019-2020 school year, Cruickshank Middle School had an enrollment of 597 students.

The MUHSD operates nine high schools. The closest schools to the project site are Merced High (1.5 miles from the project site) and El Capitan High (approximately 2.5 miles from the project site). According to the MUHSD School Locator, El Capitan High would serve the high school students living at the project site (MUHSD 2021). In the 2019-2020 school year El Capitan High had an enrollment of 1,702 students. The MUHSD Development Fee Justification Study (MUHSD 2020) states that El Capitan High School can accommodate 2,158 students.

Fire Protection and Emergency Medical Services

The project site currently lies within the Merced County Fire District. The nearest station is the Franklin/Beachwood/McSwain Fire Station 61, located approximately 6 miles from the project site.

The proposed project requests that the project site be annexed to the City, which would bring the site into the service area of the City of Merced Fire Department (MFD). Fire Station 55 is the closest fire station to the project site. It is located at 3520 N. Parsons Avenue, less than one mile from the project site. The City of Merced Fire Department staff consists of 63 public safety members and 3 support personnel. The operations personnel are divided between three shifts/platoons consisting of 19 personnel staffing five engines and one truck company, responding to emergency calls from five strategically located fire stations within the City, 24 hours per day. In 2020, the department responded to 11,230 calls. In 2013 and 2014, the department responded to an average of 17 calls per day, with an average response time of approximately 5 minutes (City of Merced 2021).

Law Enforcement

The Merced County Sheriff's Department provides general law enforcement services to the project area and project site. The nearest station, the Merced Main Station, is located at 700 West 22nd Street, approximately 2.5 miles from the project site.

With proposed annexation to the City of Merced, the proposed project would be served by the City of Merced Police Department. The closest station is located at 611 West 22nd Street, slightly

more than 2 miles from the project site. A south station, located at 470 West 11th Street, also serves the community. The service standard used for planning future police facilities is approximately 1.32 sworn officers per 1,000 population. In 2017, the City employed 87 sworn officers (Eber 2017) for a population estimated in 2015 of 82,436 (US Census 2017). Therefore, the department does not currently meet its service standard goal. The Merced Vision 2030 General Plan Policy P-S6.2 requires the police force to be sufficiently staffed to ensure quick response times to emergency calls (City of Merced 2012).

Library Services

The Merced County Library System provides library service to the region and operates 12 branches throughout the county. The Merced main branch is located at 2100 O St, about 2.5 miles from the project site. The Merced main branch is 44,050 square feet and in 2015, served the city's population of 82,436 (Merced County Library System 2014).

Parks and Recreation Facilities

The City owns and operates 24 parks on 328.6 acres (3 Community Parks, 7 Neighborhood Parks, 10 Mini Parks, 4 Linear parks, and 5 other sites). The City uses a ratio of 5 acres per 1,000 population to ensure there is sufficient parkland to meet the needs of City residents (City of Merced 2012).

Solid Waste

The City of Merced Department of Public Works provides trash and recycling services to properties within city limits. City waste goes to the Highway 59 Landfill; this site also serves most of eastern Merced County. Solid waste in other areas of the County is disposed of at the Billy Wright Landfill in Los Banos. Both of these regional landfills are owned and operated by the Merced County Regional Waste Management Authority (MCRWMA). The MCRWMA is a joint-powers authority comprised of the Cities of Atwater, Dos Palos, Gustine, Livingston, Los Banos and Merced, and the County of Merced. Additionally, recyclable material can be dropped off at the Billy Wright Landfill and Highway 59 Landfill, as well as the Gustine and Livingston Drop Off facilities (MercedRecycles 2015).

The Highway 59 Landfill (Solid Waste Facilities Permit 24-AA-0001) has a permitted daily capacity of 2,200 tons between 2020 and 2024; this will increase to 2,450 tons per day (tpd) in 2025, 2,700 tpd in 2030, and 3,000 tpd in 2035 (Merced County 2019). However, the actual amount of solid waste received daily has been much lower. Between January 2016 and March 2017, the Highway 59 Landfill received approximately 850 tpd, which corresponds to approximately 302,600 tons

annually. The average daily inflow expected between 2019 and 2024 was estimated to be approximately 1,020 tpd, which corresponds to 363,191 tons per year (MCRWMA 2019).

An EIR (SCH# 2014061081) for a project to modify the Highway 59 Landfill was certified on May 20, 2016. The project would extend the operational life of the landfill to sometime between 2076 and 2080 and would increase the permitted design capacity by 6,857,000 cubic yards. The EIR states that a discrepancy in the design capacity for the landfill incorrectly stated the total capacity as 30,012,352 cubic yards, with a closure date of 2030. The EIR states the actual existing capacity is 36,358,000 cubic yards, with an estimated closure date of 2065 (MCRWMA 2015), whereas the Solid Waste Facility Permit issued by Merced County in 2019 states the existing capacity is 30,012,352 cubic yards with a closure date of 2055.

In 2019, the statewide average disposal rate was 6.7 PPD per capita with a total of approximately 42.2 million tons of solid waste landfilled (CalRecycle 2021a), while the average disposal rate in the Merced County Solid Waste Regional Agency area between 2016 and 2019 was 5.4 PPD per capita (CalRecycle 2021b, CalRecycle 2021c). Further, CalRecycle estimates that 28.9 million tons of material were recycled (through source reduction, recycling, and composting) in 2019, resulting in a statewide recycling rate of 37 percent (CalRecycle 2021a).

3.11.3 Regulatory Setting

Federal Regulations

Wastewater

National Pollution Discharge Elimination System Permit

Discharge of treated wastewater to surface water(s) of the United States, including wetlands, require a NDPES permit. In California, the RWQCB administers the issuance of these federal permits. Detailed information is required to obtain a NDPES permit, including characterization of wastewater sources, treatment and processes, and effluent quality. Whether or not a permit may be issued and the condition of a permit are subject to many factors such as basin plan water quality objectives, impaired water body status of the receiving water, historical flow rates of the receiving water, effluent quality and flow, the air quality State Implementation Plan (SIP), the California Toxics Rule, and established total maximum daily loading rates for various pollutants.

Clean Water Act

The Clean Water Act (CWA; 33 U.S.C. 1251 et seq.), as amended by the Water Quality Act of 1987, is the major legislation governing water quality. The main objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

Numerous agencies have responsibilities for administration and enforcement of the CWA. At the federal level this includes the EPA, the U.S. Army Corps of Engineers, the Bureau of Reclamation, and the major federal land management agencies such as the U.S. Forest Service and the Bureau of Land Management. At the state level, with the exception of tribal lands, the California EPA and its sub-agencies, including the SWRCB, have been delegated primary responsibility for administering and enforcing the CWA in California.

Water Supply

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) is the main federal law that regulates the quality of potable water for the public. The SDWA authorizes the U.S. Environmental Protection Agency (EPA) to establish national health-based standards for drinking water quality. These standards may apply to naturally occurring and human-caused constituents in drinking water. The national standards are established using scientific methods to evaluate health risks and consider available technology and costs to achieve the standards. The National Primary Drinking Water Regulations establish maximum contaminant levels or mandated methods for water treatment to remove contaminants, and requirements for regular water quality testing to make sure standards are achieved. In addition to setting these standards, the EPA provides guidance, assistance, and public information about drinking water, collects drinking water data, and oversees state drinking water programs. States can apply to the EPA for authority to implement SDWA within their jurisdictions by showing that they will adopt standards at least as stringent as the national standards and adequately enforce these standards. California has been granted this authority, and the California Department of Public Health establishes and enforces statewide drinking water standards.

The SDWA was passed by Congress in 1974 and amended in 1986 and 1996. The original focus of the law was on treatment of water supplies as a means of providing safe drinking water. However, the 1996 amendments expanded the focus to recognize protection of water quality at the source. Under this expanded focus, SDWA requires many actions to protect rivers, lakes, reservoirs, springs, and ground water wells that provide sources of drinking water supplies. The 1996 amendments also recognized operator training, funding for water system improvements, and public information as important components of safe drinking water.

State Regulations

Water Supply

California Safe Drinking Water Act

The California Department of Public Health administers the state's SDWA through the Drinking Water Program. This program implements the regulatory authority of the Department of Public Health over public water systems in the state. Public water system operators are required to regularly monitor their drinking water sources and supplies for microbiological, chemical, and radiological contaminants to demonstrate that the water meets the regulatory requirements regarding primary maximum contaminant levels (MCLs) listed in Title 22 of the California Code of Regulations. MCLs have been established for ±80 specific inorganic and organic contaminants and six radiological contaminants. Monitoring is also required for a number of other contaminants and characteristics that deal with the aesthetic properties of drinking water, such as taste, odor, and appearance. These are known as secondary MCLs.

Department of Public Health staff at three Field Operations Branches perform field inspections; issue operating permits; review plans and specifications for new facilities; take enforcement actions for non-compliance with laws and regulations; review water quality monitoring results; and support and promote water system security. The Drinking Water Program also works toward funding infrastructure improvements, conducting source water assessments, and evaluating projects using recycled treated wastewater. The Drinking Water Program is implemented by the Department of Public Health in cooperation with the EPA, the State Water Resources Control Board, RWQCBs, and other state and local agencies, including county health departments, planning departments, and boards of supervisors.

Urban Water Management Planning Act

California Water Code Section 10610 et seq. requires that all public water systems that provide water to more than 3,000 customers or supply more than 3,000 AFY must prepare an Urban Water Management Plan. The California Department of Water Resources provides guidance to urban water suppliers in the preparation and implementation of Urban Water Management Plans. These plans must be updated at least every 5 years. The current Merced Urban Water Management Plan was adopted in 2017; it is discussed in the Local Regulations section.

Senate Bill 610 – Water Supply Assessments

Senate Bill (SB) 610, adopted in 2001, requires analysis of water supplies for projects that meet certain size requirements. For residential projects, the requirements of SB 610 apply to projects consisting of 500 or more new residences.

Model Water Efficient Landscape Ordinance

New development and retrofitted landscape water efficiency standards are governed by the Model Water Efficient Landscape Ordinance (MWELO). In 2015, as required by Executive Order B-29-15 (EO), the California Department of Water Resources (DWR) revised the 2010 MWELO to increase water efficiency standards for new and retrofitted landscapes through encouraging the use of more efficient irrigation systems, graywater usage, and onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf. The current 2015 MWELO was developed in accordance with affected agencies, interested groups, and the public to improve landscape irrigation water savings in accordance with the EO. All agencies must adopt, implement, and enforce the MWELO or a more stringent ordinance.

Wastewater

General Waste Discharge Requirements for Sanitary Sewer Systems

The General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems were adopted by the SWRCB in May 2006. These WDRs require local jurisdictions to develop a sewer system management plan (SSMP) that addresses the necessary operation and emergency response plans to reduce sanitary sewer overflows. The WDRs require that the local jurisdiction approve the SSMP; the City of Merced SSMP was prepared in 2014 (City of Merced 2014). The City also prepared a Wastewater Collection System Master Plan in 2017 (City of Merced 2017).

Waste Discharge requirements included in NPDES permits issued by the Central Valley RWQCB are based on the following guidance documents:

- Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan)
- California Toxics Rule
- Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan)
- California Safe Drinking Water Act Title 22 requirements
- Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan)

Schools

California Education Code – Section 17620 and Senate Bill 50

The California Senate Bill 50 (SB 50), the School Facilities Act of 1998, and the bond procedures under Proposition 1A of 1998 amended Education Code Section 17620 to regulate school facilities financing and the mitigation of land use through the implementation of fee caps, the removal of development application denial authority from lead agencies, and setting the California Environmental Quality Act standard for full and complete mitigation for school facilities. Prior to enactment of the legislation, a local agency had the authority to deny or require full mitigation for projects that required an amendment to a General Plan and/or a zone change. State law now prohibits a local agency from either denying approval of a land use project because of inadequate school facilities, or imposing school impact mitigation measures other than the designated fees provided for in the Government Code. Effective January 2006, if a statewide bond measure fails, SB 50 would again permit a City or County to deny a development approval that requires a legislative act on the basis of the inadequacy of school facilities.

As amended by SB 50, Education Code Section 17620 authorizes school districts to levy a fee against new development within the district to fund the construction, reconstruction, or modernization of school facilities. The district must demonstrate that the need for school construction or reconstruction results from development and that the fee does not exceed the cost of construction or reconstruction necessary to meet this need.

California Education Code – Sections 35500 and 35700

School district reorganizations are governed by Sections 35500 and 35700 of the California Education Code. District boundary reorganization may be initiated by “petition” by a developer or group of citizens, as well as by the majority of a school district governing body. A developer may initiate proceedings for a reorganization of a school district boundary for an uninhabited area. The more common form of school district boundary reorganization is through a petition of a majority vote of the governing body of one or more school districts that have jurisdiction in the area proposed to be reorganized.

Parks

Quimby Act

In 1975, the Quimby Act (California Government Code Section 66477, as amended in 1982) granted cities and counties authority to pass ordinances requiring developers to set aside land, donate conservation easements, or pay fees for park improvements through in-lieu fees. The goal

of the Quimby Act was to require developers to help mitigate the impacts of their developments. Special districts must work with cities, and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services to the affected community. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities.

Fire Protection

California Code of Regulations

Effective January 1, 2005, California Government Code Section 51182 and Public Resources Code Section 4291 were modified with respect to fire risk reduction measures required to be enforced by local agencies and CAL FIRE for occupied dwellings or structures. These measures require the following:

- Maintaining a fire break made by removing and clearing away, for a distance of not less than 100 feet on each side of a dwelling or structure, or to the property line whichever is nearer, all flammable vegetation or other combustible growth. This does not apply to single specimen trees, ornamental shrubbery, or similar plants that are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any dwelling or structure.
- Maintaining additional fire protection or firebreaks made by removing all brush, flammable vegetation, or combustible growth that is located within 100 feet from an occupied dwelling or occupied structure or to the property line, or at a greater distance if required by State law, or local ordinance, rule, or regulation. Grass and other vegetation located more than 100 feet from a dwelling or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion.
- Removal of that portion of any tree that extends within 10 feet of the outlet of any chimney or stovepipe.
- Maintaining any tree adjacent to or overhanging any building free of dead or dying wood.
- Maintaining the roof of any structure free of leaves, needles, or other dead vegetative material.
- Providing and maintaining at all times a screen over the outlet of every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel. The screen shall be constructed and installed in accordance with the California Building Standards Code.

- Prior to constructing a new dwelling or structure that will be occupied or rebuilding an occupied dwelling or occupied structure damaged by a fire, the construction or rebuilding of which requires a building permit, the owner shall obtain a certification from the local building official that the dwelling or structure, as proposed to be built, complies with all applicable State and local building standards.

Solid Waste

California Integrated Solid Waste Management Act – Assembly Bill 939 (AB 939) and Senate Bill 1016

AB 939, passed in 1989, mandated a focus on the conservation of natural resources. Cities and counties were required to create comprehensive source reduction, recycling, and composting programs and to prepare an Integrated Solid Waste Management Plan. The goal of these programs is to reduce the amount of waste sent to landfills by 50 percent.

SB 1016, enacted in 2007, updated the Integrated Solid Waste Management Act by changing the process for bi-annual review of a jurisdiction's source reduction and recycling element, and by replacing the 50-percent diversion rate with a per capita disposal rate.

The focus of AB 939 was a major change, shifting the emphasis from landfill disposal toward waste reduction, recycling and composting whenever possible. This approach conserves natural resources and saves energy, decreases pollution, and provides new jobs in the waste industry.

AB 939 established the following priorities for waste management:

- Waste reduction
- Recycling and composting
- Controlled combustion of waste to generate electricity
- Landfilling

Senate Bill 1383

SB 1383, adopted in 2016, established methane emissions reduction targets for various sectors of California's economy in an effort to reduce emissions of short-lived climate pollutants, which make a considerable contribution to greenhouse gas emissions and associated climate change effects. Decomposing food waste in landfills is a substantial contributor to methane emissions. Thus, as part of achieving the methane emissions reduction targets, starting January 1, 2022, the State requires jurisdictions to provide collection service to all residential and commercial generators to divert organic waste (including food waste, green waste, food-soiled paper, and

other organic materials, as defined) from landfill disposal. The State also require that jurisdictions conduct education and outreach about organics recycling to all residents, businesses (including those that generate edible food that can be donated) haulers, solid waste facilities, and local food banks and other food recovery organizations.

The MCRWMA has prepared a draft SB 1383 Action Plan that details recommended steps for each of the jurisdictions within the MCRWMA to comply with SB 1383. This draft plan notes that City of Merced residents in single-family and multi-family dwellings and commercial land uses are offered refuse, recycling, and green waste collection. As noted above, refuse collected in the City of Merced is disposed of at the Highway 59 Landfill; green waste collected in the City is also composted at the Highway 59 Landfill composting facility. Further, source-separated food waste is being collected from the commercial sector but is not currently being processed as such because there are no facilities permitted for composting food waste. However, MCRWMA is developing plans to expand the Highway 59 Landfill composting site to accept comingled organic waste which could then receive food waste from the City of Merced (MCRWMA 2021).

The MCRWMA's Draft SB 1383 Action Plan recommends that the City implement a three-container collection system under which residents and commercial land uses would separate their solid waste into trash, recycling, and composting (MCRWMA 2021).

Local Regulations

City of Merced Vision 2030 General Plan

Public Facilities

Policy P-1.1 Provide adequate public infrastructure and municipal services to meet the needs of future development.

Policy P-1.2 Utilize existing infrastructure and public service capacities to the maximum extent possible and provide for the logical, timely and economically efficient extension of municipal infrastructure and services where necessary.

Policy P1.1 Provide adequate public infrastructure and municipal services to meet the needs of future development.

Implementing Actions:

1.1.a: Through development review and long range planning efforts, ensure that utilities are adequately sized to accommodate the proposed development and, if

applicable, allow for extensions for future developments, consistent with master plans.

1.1.d: Construct the storm water drainage, water and sewer systems in accordance with adopted master plans.

Policy P-1.2 Utilize existing infrastructure and public service capacities to the maximum extent possible and provide for the logical, timely and economically efficient extension of municipal infrastructure and services where necessary.

Policy P-1.3 Require new development to provide or pay for its fair share of municipal public facility and infrastructure improvements.

Implementing Actions:

1.3.a: Prepare and adopt adequate fee schedules commensurate with the cost of planned improvements and services, with annual review and update.

1.3.c: All new development shall contribute its fair share of the cost of on-site and off-site public infrastructure and municipal services as appropriate.

1.3.d: The City may require developments to install off-site facilities, which also benefit other properties.

1.3.e: Master Plans, Community Plans, General Plan amendments, pre-zoning, and annexation proposals, through the Development Agreement process, shall ensure that infrastructure development and public facilities and municipal services are consistent with overall local public agency plans, and that the local public agencies can reasonably provide and/or extend services within the proposed development time frame of implementation.

Public Safety

Policy S-4.1 Promote the Concept of Fire Protection Master Planning with Fire Safety Goals, Missions, and Supporting Objectives for the Community.

Implementing Actions:

4.1.a: Provide additional fire station locations as expansion of the City occurs in order to maintain a response time objective of 4 to 6 minutes citywide 90 percent of the time, within the financial constraints of the City.

Policy S-6.2 Provide Services and Personnel Necessary to Maintain Community Order and Public Safety.

Implementing Actions:

6.2a: Maintain a police force sufficiently staffed and deployed to ensure quick response times to emergency calls, within the financial constraints of the City.

Policy P-2.1 Maintain and enhance public protection facilities, equipment, and personnel to the maximum extent feasible within the resource constraints of the City to serve the City's needs.

Implementing Actions:

2.1.a: Periodically review existing and potential station facilities, equipment and staffing levels in light of protection service needs.

2.1.b: Determine that new development is adequately served by fire and police protection services.

2.1.c: Fire station sites should be selected based on the distribution of land uses and population projected when the area is fully developed.

2.1.h: Assure that new development utilizes modern public protection concepts in their design and development.

Water

Policy P-3.1 Ensure that adequate water supply can be provided within the City's service area, concurrent with service expansion and population growth.

Policy P-3.1 Ensure that adequate water supply can be provided within the City's service area, concurrent with service expansion and population growth.

Policy P-3.2 In cooperation with the County and the Merced Irrigation District, work to stabilize the region's aquifer.

Wastewater

Policy P-4.1 Provide adequate wastewater collection, treatment and disposal capacity for existing and projected future needs.

Policy P-4.1 Provide adequate wastewater collection, treatment and disposal capacity for existing and projected future needs.

Policy P-4.2 Consider the use of reclaimed water to reduce non-potable water demands whenever practical.

Solid Waste

Policy P-6.1 Establish programs to recover recyclable materials and energy from solid wastes generated within the City.

Policy P-6.2 Minimize the potential impacts of waste collection, transportation and disposal facilities upon the residents of Merced.

Implementing Actions:

6.2.b: Cooperate with Merced County Regional Waste Management Authority to implement recommendations for source reduction programs which have the least environmental and economic impacts on the City and its residents.

Schools

Policy P-7.1 Cooperate with Merced area school districts to provide elementary, intermediate and high school sites that are centrally located to the populations they serve and adequate to serve community growth.

Library

Policy P-8.3 Work with Others to Study Innovative Ways of Delivering Library Services at the Neighborhood Level to Promote Community Education and Provide a Focus for Community Activity and Cultural Development.

Implementing Actions:

8.3.b Work with the County of Merced to define an efficient means of maintaining and delivering library services within the Merced urban area. In early 1997, the City and County adopted a property tax sharing agreement in which the County will receive a share of the tax increment from Redevelopment Project Area #2 specifically for library purposes. The County could receive up to $8 million from this source through the year 2014. The City will continue to work with the County to explore other options for maintaining library services for Merced residents.

Parks and Open Space

Policy OS-3.1 Provide High-Quality Park and Open Space Facilities to Serve the Needs of a Growing Population

Implementing Actions:

3.1.a Continue efforts to acquire new park sites within future growth areas in advance of development to meet the recreation open space needs of an expanding population.

Overall, a total of five (5) acres of parkland should be provided per 1,000 residents in the City, of which 1.5 acres should be in community park and 3.5 acres should be in various forms of neighborhood parks, including village greens, school parks and other neighborhood parks. "Greenway" trails should provide bicycle and pedestrian access throughout the City and its growth areas.

3.1.c Continue to implement the City's 2004 Parks and Open Space Master Plan and any subsequent updates.

City of Merced Sewer System Master Plan and Wastewater Collection System Master Plan

The Sewer Master Plan addresses wastewater collection system capacity, identifies necessary improvements to eliminate system deficiencies and provides a plan for locating and sizing trunk sewers to service areas within the existing City Limits, as well as the balance of areas within the Specific Urban Development Plan (SUDP) boundary contained in the City of Merced Vision 2030 General Plan (Vision 2030 General Plan).

Integrated Regional Water Management Plan

The Merced Integrated Regional Water Management program (MIRWMP) is a collaborative effort to identify water management issues, needs, objectives, actions, and priorities to meet the long-term water needs of the Merced Region, which is the area of Merced County east of the San Joaquin River. The City of Merced, County of Merced, and the Merced Irrigation District joined together to lead the program, which is funded by a grant from the California Department of Water Resources under Proposition 50. The plan describes the water management needs and objectives for the Merced region and lists more than 70 projects to address water supply, water quality, groundwater and wastewater management, flood control, conservation, natural resources, and recreation. The 2018 MIRWMP Update was finalized in February 2019.

Urban Water Management Plan

The City of Merced UWMP, last updated in 2017, identifies the amount of groundwater available to the City and the existing and projected amounts of water demand in the City. It identifies that the City's water supply comes from two sources: 79 percent from groundwater in the Merced Subbasin and 21 percent from recycled water. Year 2035 projections of water supplies include exchanges and transfers with MID, but groundwater and recycled water remain the top two sources of water supply. Total water demands are expected to increase from 22,741 AF per year (AFY) in 2015 to 37,829 AFY in 2035. The UWMP demonstrates that the City would be able to meet water demand during normal, dry, and multiple-dry years through the year 2035 (City of Merced 2017).

The UWMP recognizes that the Merced Subbasin experiences overdraft conditions. It also found that the rate of groundwater extraction was reduced between 2013 and 2017 in response to drought conditions and is expected not to rebound to pre-drought levels because water metering had been implemented throughout the city and water conservation measures would remain in effect regardless of any increases in precipitation over time (City of Merced 2017).

The project site is located within the Planning Area for the City's current UWMP and the UWMP considers the ability of the City to meet future water demands of the projected population within the City, including the SOI/SUDP, determined by the Merced County Association of Governments.

Municipal Code 18.40, Parkland

Pursuant to the authority granted by Section 66477 of the Government Code of the state. At the time of approval of a tentative map or parcel map, the director of recreation and parks shall determine pursuant to this chapter the land required for dedication or in-lieu fee payment. As a condition of approval of a final subdivision map or parcel map, the subdivider shall dedicate land, pay a fee in lieu thereof, or both, at the option of the city, for neighborhood and community park or recreational purposes at the time and according to the standards and formula contained in this code. It is found and determined that the public interest, convenience, health, welfare, and safety require that five acres of property for each one thousand persons residing within this city be devoted to neighborhood and community park and recreation purposes.

Municipal Code 17.48, Flood Damage Prevention

The City's Flood Damage Prevention Ordinance restricts developments in floodplain areas unless special construction requirements have been met and includes drainage standards for construction.

Chapter 17.62, Public Facilities Impact Fees

To implement the goals and objectives of the City of Merced's General Plan and to mitigate the impacts caused by future development in Merced, certain public facilities must be or have been required to be constructed, and/or compensation measures must be or have been required to be taken to offset resources lost due to the future development. The City Council has determined that public facilities impact fees are needed to finance these public facilities, and/or compensation measures, and to pay for each development's fair share of the construction costs of these improvements, and/or the costs of the compensation measures. In establishing the fees, the City Council has found the fees to be consistent with its General Plan.

A public facilities impact fee is established on issuance of building permits for development in the City of Merced to pay for municipally owned public facilities, including, but not limited to, fire stations, police stations, community recreation facilities, traffic-related improvements, and bikeways facilities.

3.11.4 Impacts

Methods of Analysis

This section evaluates project impacts on existing public services and utilities and service systems that would serve the project site. For public services and utility and service systems, the impact analysis is based on consideration of the increase in demand for those services and utilities that would be generated by the proposed project compared to the thresholds of significance listed below. The analysis includes consideration of whether existing service systems are adequate to accommodate the proposed project's demand and whether the proposed project would require modifications to existing facilities or construction of new facilities.

Water

The analysis of impacts to water supply was based on water demand generated by the proposed project compared to the thresholds of significance listed below. The expected water demand for the proposed project was determined in the WSA based on typical water demand factors for the project region of 65 gallons of water per day per capita for residential uses and 40 gallons per day per employee, the City's average population per household of 3.2 people, and the estimated project employment generation of 147 employees. The WSA also notes that as the proposed project is located approximately 2 miles from UC Merced, it is likely that some of the residents would be students, which consume substantially less water, with an average per capita consumption of 39 gallons per day (Quad Knopf 2020). Thus, the projected water demand is conservative.

The WSA also calculated the water demand for Irrigation of the 10.3 acres of landscaping (the non-impervious surface on the site, non- hard surfaced area) has been calculated to require 24 AFY, which would be in conformance with the Model Water Efficient Landscape Ordinance's (MELO).

The total annual project water usage is summarized in Table 3.11-2:

Table 3.11-2
The Crossings Water Demand

Source	Water Usage
Residential/Commercial	133 acre ft/yr
Employee Water Usage	4 acre ft/yr
Landscape Irrigation	24 acre ft/yr
Total	**161 acre ft/yr**

Source: Appendix L

The WSA also notes that the project site is currently in agricultural production and that intensive agricultural typically uses 2.5 to 4.0 acre-feet of water per acre.

Wastewater

The analysis of impacts to wastewater treatment services is based on a wastewater treatment demand generated by the proposed project compared to the thresholds of significance listed below. Wastewater demand for the proposed project was quantified based on the planned land uses and wastewater flow generation rates specified in the City's *Sewer Master Plan* (City of Merced 2017). The project site is currently served by individual septic systems and thus does not contribute any wastewater to the City's wastewater collection and treatment system. As shown in Table 3.11-3, development of The Crossings component of the project is estimated to generate 149,235 gpd (0.149 mgd) for the 28.4-acre site.

Table 3.11-3
The Crossings Wastewater Generation

Proposed Development	Parcel Acres	Land Use		Flow Factor		Average Dry Weather Flows (gpd)[1]
		Quantity	*Units*	*Value*	*Units*	
Dwelling Units		570	Du	257	gpd/du	146,490
Commercial[2]	1.52			1,500	gpd/acre	2,280
Clubhouse[3]	0.31			1,500	gpd/acre	465
Totals						**149,235**

Notes:
1 gpd = gallons per day
2 66,000 sf (one story) = 1.52 acres
3 13,700 sf (one story) = 0.31 acres; Assuming Public General Use wastewater generation rate from City's Sewer Master Plan (City of Merced 2017)City of Merced 2017

Schools

The number of students generated by the proposed project is estimated by multiplying the student generation rates for residential development in the MCSD and MUHSD (used in their 2020 Development Fee Justification Studies) by the number of units projected (MCSD 2020, MUHSD 2020). Based on the 570 proposed multi-family units, 66,000 square feet of neighborhood commercial land uses, and the associated student generation rates, the proposed project would generate approximately 117 students in Transitional Kindergarten (TK) through 8th grade (TK-8) and 46 high school students. However, this is a conservative estimate given that the unit count of 570 includes 18 extended stay units, which are less likely to support permanent residents. Additionally, it is likely that a number of future occupants would be college students, which could lower the expected generation of K-8 and high school students.

Table 3.11-4
Student Generation Rates

Grade Level	Single Family Units	Multiple Family Units	Neighborhood Shopping Center (per 1,000 square feet)
TK-6	0.351	0.149	0.143
7-8	0.095	0.039	
9-12	0.223	0.072	0.081

Source: MCSD 2020, MUHSD 2020

Solid Waste

The analysis of impacts to landfill capacity is based on the amount of solid waste that would be generated by the proposed project compared to the thresholds of significance listed below. Solid waste generation was calculated for the project site based on the County's demand rate for solid waste of 5.4 pounds per resident per day (CalRecycle 2021c) and US Census data showing that the City has an average household size of 3.2 persons (US Census 2020). With the proposed 552 multi-family units and 18 extended stay units, the project would support a residential population of 1,824 residents. The project's total solid waste generation during construction and operation is calculated in Tables 3.11-5 and 3.11-6.

Table 3.11-5
Proposed Project Solid Waste Generation (Construction)

Proposed Use	Size	Demand Factor	Solid Waste Generation (lbs)	Solid Waste Generation (tons)
Residential	684,980 sf	4.38 lbs/sf	3,000,212.4	1,500.11
Commercial/ Retail	66,000 sf	3.89 lbs/sf	256,740	128.37
Total				**1,628.48**

Source: EPA 2003

Table 3.11-6
Proposed Project Solid Waste Generation (Operations)

Proposed Use	Size	Demand Factor	Solid Waste Generation (lbs/day)	Solid Waste Generation (lbs/year)	Solid Waste Generation (tons/year)
Residential	1,824 residents	5.4 PPD	9,850	3,595,250	1,798
Commercial/ Retail	66,000 sf/147 employees	18.6 PPD	2,734	683,550[1]	342
Total					**2,140**

Note: 1 - Assumes employees are present 250 days per year (5 days per week for 50 weeks)
Sources: US Census 2019, CalRecycle 2021b, CalRecycle 2021c

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, the City's General Plan, and professional judgment, a significant impact would occur if development of the proposed project would do any of the following:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, and other public facilities.
- Require or result in the relocation or construction of new or expanded water, wastewater treatment, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects.
- Require development of new water supplies to ensure sufficient available supply to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, or that does not comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

As noted in Section 3.11.1, Introduction, the project's potential effects related to stormwater runoff and storm drainage systems are addressed in Section 3.8, Hydrology and Water Quality.

Impacts and Mitigation Measures

Impact 3.11-1: The project would increase demand for public services and utilities but would not require provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, and other public facilities. This would be a *less-than-significant* impact.

The Crossings

Fire Protection and Emergency Medical Services

Upon annexation, the City of Merced Fire Department would serve the project site. Fire Station 55 is the closest fire station to the project site, located at 3520 N. Parsons Avenue, less than one mile from the project site. Policy S-4.1 in the City of Merced 2030 General Plan requires sufficient fire station locations as expansion of the City occurs in order to maintain a response time of 4 to 6 minutes citywide 90 percent of the time. In 2020, the department responded to 11,230 calls. The Merced Fire Department has an Insurance Services Office (ISO) rating of 2. The ISO rating scale is from 1 to 10 with 1 being the highest (best) rating. Because of the close proximity of the nearest fire station to the project site, and the existing ISO rating for the Merced Fire Department, it is anticipated that the City General Plan requirements for fire protection would continue to be met. No new fire protection facilities would be needed. Additionally, as is typical for most three-story buildings in Merced, the project's apartment buildings will include interior fire sprinklers and a fire booster pump for the fire sprinkler systems. Impacts associated with fire protection services would be **less than significant**.

Police Protection

Upon annexation, the City of Merced Police Department would serve the project site. The closest station is located at 611 W. 22nd Street, slightly more than 2 miles from the project site. The Merced Vision 2030 General Plan Policy S6.2 requires the police force to be sufficiently staffed to ensure quick response times to emergency calls (City of Merced 2012). The City's service standard used for planning future police facilities is approximately 1.32 sworn officers per 1,000 population (City of Merced 2012). The City employed 87 sworn officers (Eber 2017) for a population estimated in 2019 of 83,676 (US Census 2019), a decrease from a police force of 111 officers in 2009 (City of Merced 2012). The proposed project would add approximately 1,824 residents to the city's population which would require the equivalent of 2.4 new sworn officers. Funding for staffing emergency services is obtained through taxes and other local government

funding that the project would contribute to, not through developer fees. The need for 2.4 new sworn officers would not require any expansion of existing or construction of new police department facilities. Though the project would add to the need for police staff, the addition of population would not require the addition of any new or expanded facilities and thus there would not be any environmental effects related to construction of such facilities. Therefore, environmental impacts associated with police protection services would be **less than significant**.

Schools

The proposed project would provide for new housing, which could be occupied by families with grade-school age children. Upon annexation, the MCSD would serve TK-8 students living at the project site and the MUHSD would serve high school students living at the project site. According to the MCSD School Boundaries Map (MCSD 2020), Ada Givens Elementary School located approximately 1.9 miles away from the proposed project site would principally serve the TK through sixth grade students, while Cruikshank Middle School would serve the seventh and eighth grade students. According to the MUHSD School Locator, El Capitan High would serve the high school students living at the project site (MUHSD 2020).

As described in the Methods of Analysis section, the number of students generated by the proposed project is estimated by multiplying the student generation rates for residential and commercial development in the MCSD and MUHSD Districts by the proposed number of units and commercial square footage. Based on the 570 proposed units and 66,000 square feet of commercial space, the proposed project would generate about 117 TK-8 students (92 K-6 students and 254 7th-8th grade students) and 46 high school students. However, this is a conservative estimate given that the unit count of 570 includes 18 extended stay units, which are not expected to house permanent residents. Additionally, given the proximity of the site to the UC Merced campus, it is reasonably expected that a portion of future occupants would be college students, which would lower the expected generation of TK-8 and high school students.

As part of the MCSD 2014 Long Range Facilities Master Plan, there are plans to expand capacity to 672 students at Ada Givens Elementary School. For the 2019-2020 school year, 607 students were enrolled, which is 65 fewer students than the planned capacity. The proposed project would generate approximately 92 TK-6 students, which would result in enrollment that is over-capacity by 26 students. Per the MCSD 2014 Long Range Facilities Master Plan, there is no need for expanded capacity for Cruickshank Middle School. Additionally, El Capitan High School had an enrollment of 1,702 students for the 2019-2020 school year, which is less than its designed student capacity of 2,158 (MUHSD 2020).

Pursuant to SB 50, the project applicant would be required to pay school impact fees. This payment is considered full mitigation for any impacts to school services that would result from a project. Currently, the shared school development fees for the MCSD and MUHSD is $4.08 per square foot of new residential development and $0.66 for commercial development (MCSD 2020). Payment of the school impact fees would provide funding for new school construction, improvements, and expansion to existing schools. Payment of the required school impact fees would ensure satisfaction of the Proposition 1A/SB 50 statutory requirements and the impact would be **less than significant**.

Parks

The City owns and operates 24 parks on 380 acres (3 Community Parks, 7 Neighborhood Parks, 10 Mini Parks, 4 Linear parks, and 5 other sites (City of Merced 2012). Under Municipal Code Section 18.40, the City requires developers to comply with a ratio of providing 5 acres per 1,000 population to develop parkland or pay an in-lieu fee. In 2019, the city's population totaled 83,676. Given this population, the city should have 418 acres of parks to meet the ratio. The project does not include any parkland but would include network of pedestrian paths and outdoor space that could be used for passive recreation. The project also includes a private clubhouse that could include a gymnasium facility. Central plazas created would be provided between the buildings clusters, for recreation and other passive activities. An outdoor plaza is proposed central to the retail portion to be used for evening events and outdoor activities, such as music events, craft fairs, and a farmers' market. Based on the City's average household size of 3.2 people, the project is assumed to generate about 1,824 new residents. To meet General Plan Policy OS-3.1, the proposed project would need to include 9.12 acres of parks for the anticipated additional 1,824 residents. In lieu of dedicating sufficient parkland, the developer can pay the appropriate fee, as provided in Municipal Code Section 18.40. Compliance with the Municipal Code would ensure that this impact would be **less than significant**.

Libraries

The Merced County Library System provides library service to the region. The Merced main branch is located at 2100 O St, about 2.5 miles from the project site. This branch is 44,050 square feet and in 2019, served the city's population of 83,676. The Merced County Library System does not maintain a service ratio. However, library planning standards frequently use a range from 0.4 to 0.5 square feet per capita. Using the conservative high end of this standard, the existing library size is sufficient to serve the population with a current ratio of 0.53. Even with the additional 1,824 residents anticipated under the proposed project, the existing library size would be sufficient with a ratio of 0.52. Therefore, no new or expanded library facilities would be needed. Impacts to libraries would be **less than significant**.

Remainder Area

The approximately 22 acres of the Remainder Area located in the eastern portion of the project site are developed with a church, private school, and three rural residential properties. . The existing development is currently served by the county sheriff and county fire department, the City of Merced library system, and MCSD and MUHSD. The proposed project does not include any new development or alterations to the remaining 40 acres. However, the portions of the Remainder Area that are proposed to be zoned R-1-10 could support single-family residential lots with a minimum size of 10,000 square feet. The portion of the Remainder Area zoned U-T would only allow new agricultural development unless further rezoning is approved. Once annexed into the City, the existing church, existing private school as well as the three existing residences would create a minor increase in demand on the city's police and fire protection services, which could be further increased if additional single-family residential development occurs. The vacant land within the Remainder Area that is proposed to be zoned R-1-10 could support approximately 29 new single-family residences, generating a new population within the City of 93 people. This new population would not exceed the population projections for the City, which are based on planned development within the SUDP, including the Remainder Area. The potential increased population in the Remainder Area plus the existing residential population would correlate to a demand for the equivalent of 0.16 of a new sworn police officer. The potential increased population would corelate to a demand for 37.2 square feet of library space and 0.7 acres of parks. The potential 29 new single-family residences would generate 10 new TK-6 students, 3 new grade 7 and 8 students, and 6 new high school students.

Public facility impact fees, school impact fees, and parkland dedication and/or in-lieu fees would be required to be paid at the time that building permits for any new residences within the Remainder Area are issued. The increased demand for sworn police officers and library space would not require expansion or construction of police facilities. Thus, there would be no need for new or physically altered governmental facilities and **less than significant impacts** would occur regarding public services: fire protection, police protection, schools, parks, and other public facilities.

Mitigation Measures

No mitigation measures are required.

Impact 3.11-2: The proposed project would not exceed existing wastewater capacity to serve the project's demand in addition to existing commitments and would not result in either the relocation or construction of new or expanded wastewater treatment facilities. this impact is *less than significant.*

The Crossings

Wastewater Treatment Facilities

The City's WWTP is located in the southwest part of Merced and provides treatment for all wastewater in the Merced urban area. It has periodically undergone upgrades and expansions to meet the needs of the City's growing population. The plant's current capacity is 12 mgd. The WWTP is permitted to expand in increments of 4 mgd to 16 mgd and then 20 mgd by 2025 (City of Merced 2006).

Based on the City's wastewater generation rates, The Crossings component of the proposed project would generate an average of 149,235 gpd, or 0.149 mgd, as shown in Table 3.11-4. The WWTP currently treats an average of 7.7 mgd (Elwin 2017). Therefore, the additional 0.149 mgd combined with a current average of 7.7 mgd would not exceed the plant's permitted average dry weather flow effluent limit of 12 mgd.

The constituents in wastewater flows from the proposed project to the WWTP would be typical of residential and commercial uses, similar to flows from other residential and commercial development in the vicinity, and would not contain new or substantially different chemical constituents that would be anticipated to cause permitted effluent limitations for chemical parameters to be exceeded.

Wastewater Conveyance Facilities

The proposed project would connect to existing sewer infrastructure to convey waste to the WWTP. The proposed project would construct runs of 6" and 8" sewer lines on the project site. An existing 18" gravity sewer line lies south of the project site in East Yosemite Avenue (20 feet north of centerline) and flows west from Gardner Avenue to G Street. The project proposes to connect to this line at the terminal manhole at the intersection of Gardner Avenue and East Yosemite Avenue. Flow monitoring completed in December 2019 shows that this line is currently carrying flows that equal approximately 60 percent of its maximum capacity, thus, there is sufficient capacity in this line sufficient to accommodate the approximately 150,000 gallons per day of wastewater that would be generated by the project at full build out.

As described in the Environmental Setting section, the existing North Merced sewer system has two Level of Service failures along W. Olive Avenue and along Highway 59 where the hydraulic system can experience bottleneck. Wastewater from the project site would not flow through either of those segments to reach the WWTP and would not impact those existing bottlenecks. Therefore, no new or expanded wastewater conveyance facilities would be required.

Conclusion

Because the existing sewer line within East Yosemite Avenue and the WWTP have adequate capacity to serve the project and the project would not introduce any wastewater constituents that would require modified or new treatment facilities or procedures, no new or expanded conveyance or treatment facilities would be required and this impact would be **less than significant**.

Remainder Area

The proposed project does not include any development or alterations to the remaining 40 acres, and therefore not generate the need for any new wastewater conveyance of treatment. However, as discussed in Impact 3.11-1, the areas within the Remainder Area that are proposed to be zoned R-1-10 could be developed with single-family housing. The vacant land within the Remainder Area that is proposed to be zoned R-1-10 could support approximately 29 new single-family residences, generating a new population within the City of 93 people. Further, while the existing residences are expected to continue to rely on their individual septic systems, if additional residential development occurs within the Remainder Area, it is possible that existing residents would choose to connect to the City's wastewater collection and treatment system. The potential increased population in the Remainder Area plus the existing residential population would generate approximately 31,300 gallons of wastewater per day. There is sufficient capacity in the existing sewer line in East Yosemite Avenue and at the City's WWTP to accommodate this additional wastewater without requiring modified or new treatment facilities or procedures and this impact would be **less than significant.**

Mitigation Measures

No mitigation measures are required.

Impact 3.11-3: The proposed project would not require or result in the relocation or construction of new or expanded water treatment facilities, the construction of which could cause significant environmental effects, and the City would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. This would be a *less-than-significant* impact.

The Crossings

The City of Merced's water service area includes the City as well as UC Merced. The estimated 2019 population of the served community is 83,676 people; the buildout (2035) population within existing city boundaries is estimated to be 110,000 plus 32,000 UC Merced on-campus students. The 1,824 residents that could reside within the project site as a result of this project would not result in an exceedance of the City's population projections.

The City of Merced has prepared analyses in its UWMP to address the sufficiency of its water supply in normal, dry and multiple-dry years. The UWMP includes water conservation measures that the City would enforce during drought years to enable maintenance of the zero-impact conclusions of its supply and demand. Per the UWMP, the City would be able to meet water demand during normal, dry, and multiple-dry years through the year 2035, including with the additional population that could reside within the project site. The WSA for the project found that it would generate a demand for 161 AFY of water. This is approximately 0.63% of the City's 2020 projected groundwater supply of 25,486 AFY, and approximately 0.59% of the City's projected 2025 groundwater supply of 27,408 AFY (City of Merced 2017).

As stated in the WSA, the City's pumped water supply and distribution system have historically proven reliable, with continued effective operation and maintenance of the system. District engineering design standards are in place that meet or exceed American Water Works Association Standards, ensuring that system reliability does not diminish as it is expanded. Funds to maintain and expand the system to meet the continued growth in water demand are collected through State and federal grants, water rates and development fees. The adequacy of both pumped water supply and water distribution were also demonstrated during a recent five-year drought period and during the recent record single-dry year in that period. Thus, impacts would be **less than significant**.

<u>Water Conveyance</u>

The two 16-inch water mains running along East Yosemite Avenue and Gardner Avenue would adequately supply the anticipated flow requirements for fire, domestic, and landscape irrigation systems. A 12-inch onsite line is proposed to tie into this 16-inch water main in two locations and

be looped through the project with a 12-inch backflow prevention device at each point of connection with the 16-inch main. Smaller mains and individual service lines to the various buildings will be fed from the 12-inch on site loop where appropriate. The number, location, and spacing of onsite fire hydrants will be determined during the design phase of the project in accordance with City and code requirements.

Conclusion

Because there is sufficient capacity in the existing water main in East Yosemite Avenue and the City's water treatment system to serve the project, and because the project's demand for water supply would be consistent with the City's projected water supply under the UWMP and the Merced Subbasin Groundwater Management Plan, the project would not require construction of new or expanded water conveyance or treatment facilities and this impact would be **less than significant**.

Remainder Area

The proposed project does not include any development or alterations to the remaining 40 acres, and therefore not generate the need for any new water supplies, treatment, or conveyance. However, as discussed in Impact 3.11-1, the areas within the Remainder Area that are proposed to be zoned R-1-10 could be developed with single-family housing. The vacant land within the Remainder Area that is proposed to be zoned R-1-10 could support approximately 29 new single-family residences, generating a new population within the City of 93 people. The potential increased population in the Remainder Area would generate a demand for approximately 7,905 gpd, which is equivalent to 0.02 AFY. This demand for water supply would be consistent with the City's projected water supply under the UWMP and the Merced Subbasin Groundwater Management Plan, and there is sufficient capacity in the existing water main in East Yosemite Avenue and the City's water treatment system to serve this potential future development. Thus development of the Remainder Area would not require increases in the City's water supply or construction of new or expanded water conveyance or treatment facilities and this impact would be **less than significant.**

Mitigation Measures

No mitigation measures are required.

Impact 3.11-4: The proposed project would not generate solid waste that would exceed the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals, and would not generate any type of waste not typically associated with residential and commercial land uses. This would be a less-than-significant impact.

The Crossings

As discussed in Section 3.11.2, Environmental Setting, solid waste generated in the project area would be transferred to the Highway 59 Landfill in Merced County, approximately 6 miles north of the City of Merced. The proposed project would be required to comply with all federal, state, and local statutes and regulations related to solid waste during its construction and operation. These statutes and regulations include those discussed in Section 3.11.3, Regulatory Setting. This would ensure the City can continue to comply with state-required solid waste diversion requirements.

The Highway 59 Landfill is permitted to accept up to 2,200 tons of refuse per day between 2020 and 2025, increasing to 2,700 TPD in 2030. The facility currently has an expected closure year of 2055 but MCRWMA is currently working towards implementing the Highway 59 Landfill Valley Fill Project, which would increase capacity at the landfill and extend the anticipated closure year to 2076. The facility was estimated to receive an average daily inflow between 2019 and 2024 of approximately 1,020 tpd, which corresponds to 363,191 tons per year (MCRWMA 2019).

The proposed project would generate solid waste associated with construction activities as well as during project operation. It is estimated that project construction would generate a total of approximately 1,629 tons of solid waste, as shown in Table 3.11-5. This would be generated over the course of the approximately 27-month construction period, but daily amounts of solid waste would vary. Overall, project construction would generate less than 800 tons of solid waste per year and thus would not exceed the daily maximum disposal rate or the overall landfill capacity.

During operation, the project would generate approximately 1,798 tons of residential solid waste and approximately 342 tons of commercial solid waste per year, totaling about 2,140 tons per year (5.9 tons per day), as shown in Table 3.11-6. Solid waste pick-up service to the site would be provided weekly for residents and may occur more frequently for commercial land uses depending on the specific needs of the commercial businesses and their contracts with a solid waste collection provider. However, if all waste generated within the site were picked up weekly for transport to the landfill, the project would contribute approximately 41 tons of solid waste to the daily waste received at the landfill once per week. This would be approximately 1.8 percent of the landfill's permitted maximum daily refuse acceptance of 2,200 tons per day. Thus, project

operation would not exceed the daily maximum disposal rate and would not shorten the landfill's expected lifetime.

Additionally, the proposed project would comply with all federal, State and local statues and regulations related to solid waste and recycling requirements during construction activities as well as during operation of the proposed project and would not generate hazardous wastes that are not typically associated with residential and commercial land uses, resulting in no impact on waste disposal requirements.

Therefore, the Highway 59 Landfill would have sufficient capacity to accommodate the proposed project and to accommodate the types of waste generated during construction and operation and this impact would be **less than significant**.

Remainder Area

As discussed above, no development within the Remainder Area is currently proposed, however the areas proposed to be zoned R-1-10 could support single-family residences. Any future development within the Remainder Area would be required to comply with all federal, state, and local statutes and regulations related to solid waste, as discussed in Section 3.11.3, during construction and operation, which would ensure the County can continue to comply with state-required solid waste diversion requirements. If 29 new residences were developed in the Remainder Area, they would be expected to support 93 new residents. Based on the solid waste generation rates provided in Table 3.11-5 and 3.11-6, construction of 29 new single-family residences with an assumed size of 2,000 square feet each would generate 127 tons of solid waste, and the 93 new residents would generate 91.7 tons of solid waste per year, or 1.8 tons per week. The construction waste would be generated over several weeks or months, but if it were generated in a single week it would represent approximately 5 percent of the landfill's permitted maximum daily refuse acceptance. The waste generated during a single week of project operation would be less than would be approximately 0.08 percent of the landfill's permitted maximum daily refuse acceptance of 2,200 tons per day. Thus, project operation would not exceed the daily maximum disposal rate and would not shorten the landfill's expected lifetime. This potential future development within the Remainder Area would not have an adverse effect on the landfill capacity or lifetime and thus the impact would remain **less than significant.**

Mitigation Measures

No mitigation measures are required.

3.11.5 Cumulative Impacts

The cumulative impact analysis includes projected buildout (including the City's Sphere of Influence and the SUDP) under the City of Merced Vision 2030 General Plan. In addition to buildout of the General Plan, the cumulative context for wastewater treatment, solid waste, and energy includes buildout of the specific service area for each utility provided including recently approved and reasonably foreseeable development within the boundaries of Merced County's solid waste service area.

Impact 3.11-5: The proposed project could contribute to a cumulative increase in demand for police and fire protection services, parks, and other government facilities but would not result in the need for new or physically altered facilities. This would be a less-than-significant impact.

Fire Protection and Emergency Medical Services

Implementation of the proposed project would contribute toward a slight cumulative increase in demand for fire protection and emergency services within the City of Merced. Action 4.1a under the City's General Plan requires the City to provide additional fire station locations as expansion of the City occurs in order to maintain desired response times of 4 to 6 minutes. With implementation of City goals and policies that ensure availability of adequate services for buildout, the increase in demand for fire protection and emergency services would be **less than significant** Therefore, the proposed project would not contribute to an existing cumulative impact.

Police

Implementation of the proposed project would contribute toward a slight cumulative increase in demand for police services within the City of Merced. According to the 2030 General Plan Policy S-6.2, the City must provide services and personnel necessary to maintain public safety. While there would be an increase in demand for police protection services for the 1,824 residents estimated under the proposed project, with implementation of City goals and policies that ensure availability of adequate services for buildout, cumulative impacts to police protection would be **less than significant**. Therefore, the proposed project would not contribute to an existing cumulative impact.

Parks

Development of the proposed project could result in an increased demand for park and recreation facilities. The City owns and operates 380 acres of parks. The City requires developers to comply with a ratio of 5 acres per 1,000 population to develop parkland or pay an in-lieu fee, as written in

Municipal Code 18.40 (City of Merced 2012). With a 2019 population of 83,676, the City is not meeting its goal of 5 acres per 1,000 population. With payment of the in-lieu fee as required by the Municipal Code, each development project within the City would contribute a fair share amount towards development of parks and thus there would not be a significant cumulative impact to which the project could contribute.

Libraries

Development of the proposed project could result in a slightly increased demand for library services. The additional 1,824 residents from the proposed project would increase the City's 2019 population by 2.2 percent. The existing Merced Main Branch, with 44,050 square feet, is the closest library to the project site. Using common library planning ratios, libraries should maintain 0.4 to 0.5 square feet per capita. The Merced main branch has a current service ratio of 0.52 and could therefore accommodate a larger population. Additionally, Policy P-8.3 requires the City to work with the County to maintain and deliver library services. With implementation of City goals and policies that ensure availability of adequate services for buildout, cumulative impacts to library services would be **less than significant**. Therefore, the proposed project would not contribute to an existing cumulative impact.

Public facility impact fees, school impact fees, and parkland dedication and/or in-lieu fees would be required to be paid at the time that building permits for any new residences within the Remainder Area are issued. The increased demand for sworn police officers and library space would not require expansion or construction of police facilities. Thus, there would be no need for new or physically altered governmental facilities and **less than significant impacts** would occur regarding public services: fire protection, police protection, schools, parks, and other public facilities.

Mitigation Measures

No mitigation measures are required.

Impact 3.11-6: The proposed project would contribute to a cumulative increase in demand on wastewater treatment facilities, which could result in inadequate capacity and require either the relocation or construction of new or expansion of existing wastewater treatment facilities. This impact would be *less than significant.*

Wastewater Treatment Facilities

The City WWTP is permitted under National Pollution Discharge Elimination System (NPDES) permit No. CA0079219 (CA RWQCB 2014). This permit allows the WWTP to treat 12 mgd currently, 16 mgd upon its first expansion, and 20 mgd upon its second expansion. The City planned the expansions to served planned population growth and development in the City Specific Urban Development Plan (SUDP) area and adjacent UC-Merced Campus Long-Range Development Plan (LRDP) area. The combined wastewater volume to be generated from planned land uses within the SUDP and UC-Merced campus planning area equals about 19.35 mgd (City of Merced 2006). Assuming that full development of the SUDP and LRDP occur, the project's contribution of 0.149 mgd combined with the total planned wastewater volume of 19.35 mgd would not exceed the plant's permitted capacity of 20 mgd at buildout. The project's incremental contribution to the existing cumulative impact would not be cumulatively considerable.

The project would not require construction of new wastewater treatment plants or expansions to existing facilities. Therefore, the project's contribution would not be considerable, and the cumulative impact is considered **less than significant**.

Wastewater Conveyance Facilities

As described in Section 3.11.2, Environmental Setting, the Sewer Master Plan identifies capacity of existing lines during an Interim Conditions scenario in which some approved projects are built, but prior to any City sewer upgrades. Wastewater from the proposed project would travel west along the Yosemite Avenue trunk, south along the G Street trunk, west along the West Olive Drive trunk to a force main that delivers the flow to the Highway 59 pump station. From there it would flow south along the West Avenue trunk to the 48-inch interceptor. During Interim Conditions, many pieces of the system would be over capacity. Segments of the Yosemite Avenue trunk are predicted be at or over capacity when the projects entitled to connect to that facility are built. Specifically, in the cumulative condition, the existing 18-inch sewer line in East Yosemite Avenue is projected to reach 90 percent of its capacity, which exceeds the City's standard of maintaining sewer lines with 70 percent available capacity. Similarly, portions of the G Street trunk north of Black Rascal Creek are predicted to be at or over capacity, as well as segments along West Avenue. (City of Merced 2017) As these lines are predicted to exceed capacity with the

development of already approved and planned projects, the proposed project's contribution would be a significant cumulative impact.

The City is currently updating its Sewer Master Plan, which would identify necessary improvements to wastewater infrastructure. As described in the Draft Sewer Master Plan, the City has selected an approach to upgrades that would serve the entire SUDP at current build-out flow estimates. To serve the North Merced area, the City would construct a large new trunk starting in the vicinity of the intersection of Cardella Road and Lake Road, running east to west along Cardella Road, then south along Thornton Road to a pump station just north of Black Rascal Creek. A force main discharging from the new pump station north of Sante Fe Drive would extend to just south of CA 140, then transition to a new 60-inch gravity trunk from that point south to the WWTP. Additionally, flow from the existing Highway 59 Pump Station would be diverted to the new pump station along Thornton Road, eliminating the long-term need to upgrade the existing forcemain and sewer along Highway 59 south of W Olive Drive. The City's upgrades would be phased according to the City's buildout needs (City of Merced 2017). Completion of the project would be required in order for the system to have adequate capacity for the project's wastewater to not contribute to cumulative impacts. However, the project site is located within the North Merced Sewer Improvement Assessment District Fund and thus the project developer would be required to pay sewer connection fees determined by the City's Department of Utilities and specified in the North Merced Sewer Improvement Assessment District Fund. These fees would be used by the City to fund improvements to the wastewater conveyance and treatment infrastructure sufficient to ensure that adequate wastewater service is provided to all areas of the City and thus the project's contribution to cumulative impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 3.11-7: The proposed project would contribute to a cumulative increase in demand on water treatment facilities but would not require relocation or construction of new or expanded water treatment facilities or expansion of existing facilities; and the City would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. This would be a *less-than-significant* impact.

As discussed in Impact 3.11-3, the City has prepared analyses in its UWMP to address the sufficiency of its water supply in normal, dry and multiple-dry years. Per the UWMP, the City would be able to meet water demand during normal, dry, and multiple-dry years through the year 2035,

including the demand associated with population growth in the City consistent with the Vision 2030 General Plan.

As stated in the WSA, the City's pumped water supply and distribution system have historically proven reliable and district engineering design standards are in place that meet or exceed American Water Works Association Standards, ensuring that system reliability does not diminish as it is expanded. Funds to maintain and expand the system to meet the continued growth in water demand are collected through State and federal grants, water rates and development fees. Further project engineering analysis will evaluate whether any modifications in the distribution system are required to satisfy project buildout, water delivery volumes, and pressures. The City will finance any required wells and distribution system modifications with development impact fees, State or federal grants, or rate adjustments.

Thus the cumulative impact associated with water supply would remain less than significant and there would not be a significant cumulative impact to which the project could contribute.

Mitigation Measures

No mitigation measures are required.

Impact 3.11-8: The proposed project could contribute to a cumulative increase in solid waste in excess of State of local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. This would be a less-than-significant impact.

As described in Impact 3.11-4, the Highway 59 Landfill currently has an expected closure year of 2055 but that would be extended to 2076 with implementation of the approved Valley Fill Project, which will increase the landfill capacity by 6,857,000 cubic yards (a 19 percent increase) without expanding the facility boundary. Thus, the MCRWMA has planned for ongoing development within the service boundary of the Highway 59 Landfill. Buildout of the City of Merced General Plan as well as the General Plans for the cities of Livingston and Atwater and for Merced County would generate an increase in the daily and annual volume of solid waste disposed of at this landfill but would not exceed the landfill's daily tonnage limits or overall capacity. Thus, there would not be a significant cumulative impact to which this project could contribute.

Mitigation Measures

No mitigation measures are required.

3.11.6 References Cited

California Regional Water Quality Control Board. 2014. Water Discharge Requirements for the City of Merced Wastewater Treatment Facility. http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/merced/r5-2014-0096_npdes.pdf.

CalRecycle. 2021a. *2019 State of Disposal in California*. February 12, 2021. https://www2.calrecycle.ca.gov/Publications/Details/1697.

CalRecycle. 2021b. Countywide, Regionwide, and Statewide Jurisdiction Diversion / Disposal Progress Report. https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DiversionDisposal

CalRecycle. 2021c. *Jurisdiction Per Capita Disposal Trends.* https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports

CalRecycle. 2021d. *Facility/Site Summary Details: Highway 59 Disposal Site*. https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/1863.

City of Merced. 2006. *City of Merced Wastewater Treatment Plant Expansion Project Draft EIR.* https://www.cityofmerced.org/civicax/filebank/blobdload.aspx?BlobID=4780

City of Merced. 2012. *Merced Vision 2030 General Plan*. January 3, 2012. https://www.cityofmerced.org/departments/development-services/planning-division/merced-vision-2030-general-plan

City of Merced. 2014. *Water Master Plan*. Prepared by AECOM on behalf of the City of Merced. January 2014. https://www.cityofmerced.org/home/showpublisheddocument/7546/637066969872270000

City of Merced. 2014. *Sewer System Master Plan*. Prepared by Stantec on behalf of the City of Merced. December 16, 2014. https://www.cityofmerced.org/Home/ShowDocument?id=8404

City of Merced. 2016. *Water System Division Information*. Accessed: January 11, 2017. https://www.cityofmerced.org/depts/pw/water_division/.

City of Merced. 2017. *Wastewater Collection System Master Plan*. Prepared by Stantec on behalf of the City of Merced. December 15, 2017.

https://www.cityofmerced.org/home/showpublisheddocument/8632/637354170547800000

City of Merced. 2021. *Merced Fire Department.* 2021. Accessed May 8, 2021 https://www.cityofmerced.org/departments/fire

County of Merced Department of Public Health, Division of Environmental Health. 2019. *Solid Waste Facility Permit, Facility Number 24-AA-0001.* February 27, 2019.

Merced Integrated Water Management Authority. 2019. *2018 Merced Integrated Regional Water Management Plan Update.* Prepared by Woodard & Curran on behalf of the Merced Integrated Water Management Authority. February 2019

Merced County Library System. 2014. *Plan of Service 2014-2017*. https://www.co.merced.ca.us/DocumentCenter/Home/View/6829.

Merced County Regional Waste Management Authority (MCRWMA). 2015. *Draft Environmental Impact Report for the Highway 59 Landfill Valley Fill Project*. Prepared by Ascent on behalf of MCRWMA. https://www.mcagov.org/233/Valley-Fill-Project

MCRWMA. 2019. *Joint Technical Document Highway 59 Landfill, Merced County, California – Amendment No. 2.* Prepared by Tetra Tech BAS on behalf of MCRWMA, amended from original preparation by EMCON/OWT Solid Waste Services September 2000. January 2019.

MCRWMA. 2021. *Draft SB 1383 Action Plan.* Prepared by HF&H Consultants on behalf of MCRWMA. February 24, 2021. http://mcrwma.org/DocumentCenter/View/252/Item-7a1--MCRWMA-Action-Plan-by-HF_H--Attachment-1

Merced Recycles. 2015. *Recycling Information for Residents*. Accessed January 10, 2017. http://www.mercedrecycles.com/residents.html.

Nelson Enviro, LLC. 2016. *Phase I Environmental Assessment*. Prepared for Quad Knopf, Inc.

U.S. Census. 2019. *QuickFacts Merced City, California.* https://www.census.gov/quickfacts/fact/table/mercedcitycalifornia,US/HSD310219

U.S. EPA. 2003. *Estimating 2003 Building-Related Construction and Demolition Materials Amounts.* Accessed January 10, 2007. https://www.epa.gov/sites/production/files/2015-11/documents/cd-meas.pdf.

Personal Communications

Mike Miller, Tax Services Manager. City of Merced. 2017. 209-385-6800. Telephone conversation on January 11, 2017.

Ken Elwin, Public Works Director. 2017. City of Merced. Emailed January 13, 2017.