APPENDIX 3.18-A **KNE UTILITIES AND SERVICE SYSTEMS TECHNICAL REPORT**

Los Angeles County
Metropolitan Transportation Authority

UTILITIES AND SERVICE SYSTEMS TECHNICAL REPORT

K LINE NORTHERN EXTENSION

Metro

JULY 2024

K LINE NORTHERN EXTENSION TRANSIT CORRIDOR PROJECT

Utilities and Service Systems Technical Report

Prepared for:

Metro

Los Angeles County
Metropolitan Transportation Authority

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JULY 2024

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ABBREVIATIONS / ACRONYMS

ACRONYM	DEFINITION
AA	Alternatives Analysis
AB	Assembly Bill
AF	acre-feet
AFY	acre-feet per year
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CPUC	California Public Utilities Commission
CRA	Colorado River Aqueduct
CWA	Clean Water Act
CWC	California Water Code
DHS	Department of Health Services
Division 16	Rail Division 16 Maintenance Yard
DWR	California Department of Water Resources
ECAP	Energy Climate Action Plan
EIR	Environmental Impact Report
Expo	Metro E Line
FCC	Federal Communications Commission
FY	fiscal year
GWh	Gigawatt-hour
I-10	Interstate 10

ACRONYM	DEFINITION
IGP	Industrial General Permit
KNE	K Line Northern Extension Corridor Transit Project
kWh	kilowatt hours
LAA	Los Angeles Aqueduct
LACDPW	Los Angeles County Department of Public Works
LACFCD	Los Angeles County Flood Control District
LACSD	Sanitation Districts of Los Angeles County
LADWP	Los Angeles Department of Water and Power
LARWQCB	Los Angeles Regional Water Quality Control Board
LASAN	City of Los Angeles Bureau of Sanitation
LAX	Los Angeles International Airport
LRT	light rail transit
Metro	Los Angeles County Metropolitan Transportation Authority
Metro Board	Metro Board of Directors
MGD	million gallons per day
MS4	Municipal Separate Storm Sewer System
MSF	maintenance and storage facility
MWD	Metropolitan Water District
NHTSA	National Highway Traffic Safety Administration
NPDES	National Pollutant Discharge Elimination System
Project	K Line Northern Extension Project
PV	photovoltaic
RCRA	Resource Conservation and Recovery Act
RSA	Resource Study Area
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCBs	Regional Water Quality Control Boards
SB	Senate Bill

ACRONYM	DEFINITION
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SDWA	Safe Drinking Water Act
SEM	sequential excavation method
SoCalGas	Southern California Gas Company
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TBM	tunnel boring machine
TMDL	total maximum daily load
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
ZEV	zero emission vehicle

CHAPTER 1 INTRODUCTION

1.1 PROJECT OVERVIEW

The Los Angeles County Metropolitan Transportation Authority (Metro) is preparing a Draft Environmental Impact Report (EIR) for the K Line Northern Extension Transit Corridor Project (the Project) (Figure 2-1). The Project would provide a northern extension of the Metro light rail transit (LRT) K Line from the Metro E Line (Expo) to the Metro D Line (Purple) and B Line (Red) heavy rail transit lines. The Project would serve as a critical regional connection, linking the South Bay, the Los Angeles International Airport (LAX) area, South Los Angeles, Inglewood, and Crenshaw corridor to Mid-City, Central Los Angeles, West Hollywood, and Hollywood, allowing for further connections to points north in the San Fernando Valley via the Metro B Line. The Project would also connect major activity centers and areas of high population and employment density.

1.2 TECHNICAL REPORT SUMMARY

This technical report evaluates the Project's environmental impacts as they relate to utilities and service systems. It describes existing conditions, the current applicable regulatory setting, potential impacts from construction and operation of the alignment alternatives, stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. This technical report was conducted in compliance with the California Environmental Quality Act (CEQA) (Sections 21000 et seq.) and the CEQA Guidelines (Section 15000 et seq.), which require state and local agencies to identify the significant environmental impacts of their actions, including significant impacts associated with utilities and service systems, and to avoid or mitigate those impacts, when feasible.

The technical report is organized into eight chapters:

- Chapter 1 – Introduction, provides an overview of the Project and a summary of the technical report's contents.
- Chapter 2 – Project Description, provides a description of the Project's alignment alternatives, stations, design option, and MSF. This section also describes the construction approach for the Project.
- Chapter 3 – Regulatory Framework, discusses applicable federal, state, and local regulatory requirements, including plans and policies relevant to Project jurisdictions.
- Chapter 4 – Methodology and Significance Thresholds, describes the analysis methodologies applied for this Project and provides a summary of CEQA significance thresholds adopted by state and local jurisdictions.
- Chapter 5 – Existing Setting, describes the existing conditions as relevant to the Project alignment alternatives, stations, design option, and MSF.
- Chapter 6 – Impacts and Mitigation Measures, discusses the impact analyses conducted for the Project's alignment alternatives, stations, design option, and MSF, and discusses

applicable mitigation measures. It also discusses any project measures that would be implemented as part of design and construction of the Project.

- Chapter 7 – Cumulative Impacts, discusses the cumulative impacts for the Project's alignment alternatives, stations, design option, and MSF.
- Chapter 8 – References, lists the references used to prepare this technical report.

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CHAPTER 2 PROJECT DESCRIPTION

This section provides information pertinent to the components of the Project as evaluated in the technical report. The Project components for evaluation in this technical report include three light rail alignment alternatives with stations, one design option, and one MSF.

2.1 ALIGNMENT ALTERNATIVES

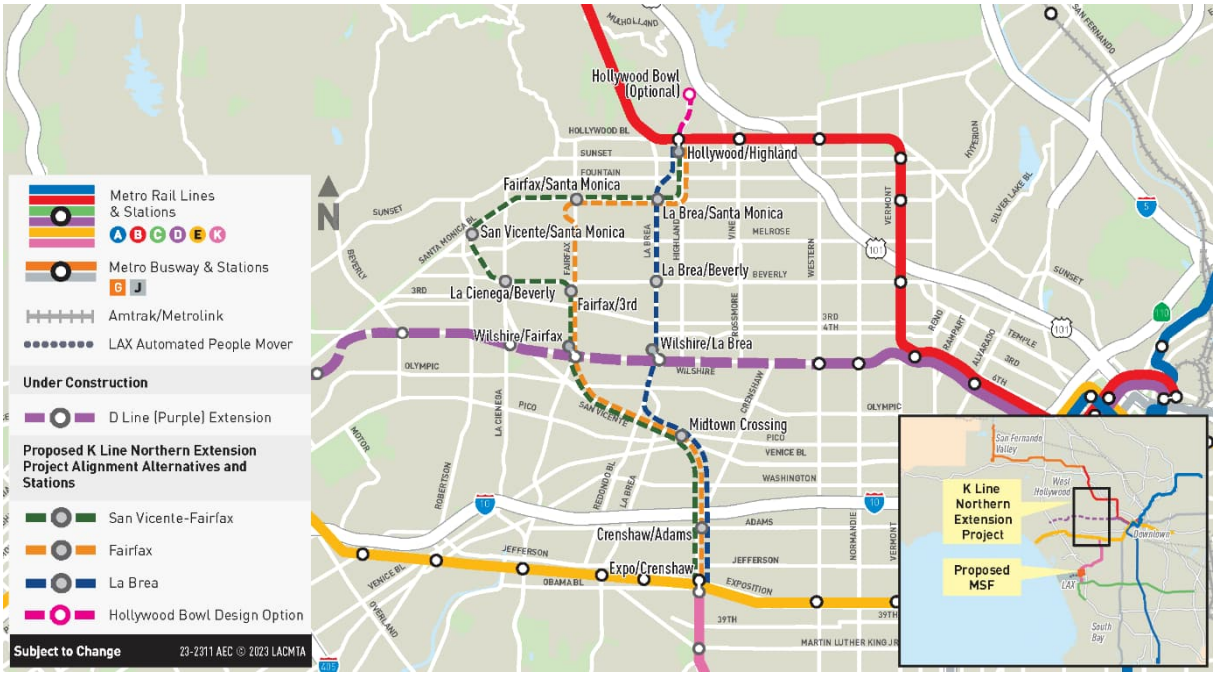
As shown in Figure 2-1, each of the three alignment alternatives would provide a northern extension of the Metro K Line from its current terminus at the Expo/Crenshaw Station to the Metro B Line Hollywood/Highland Station. All three alignment alternatives would operate entirely underground in parallel twin-bore tunnels with some station elements at the surface, including the station entrance and ventilation structures. Due to the project length and pending funding availability, the alignment alternatives would be constructed sequentially in sections.

The alignment alternatives are as follows:

- Alignment Alternative 1: San Vicente–Fairfax. This alignment alternative would travel north from the existing Metro K Line Expo/Crenshaw Station before heading northwest under San Vicente Boulevard, with a connection to the future Metro D Line Wilshire/Fairfax Station. It would continue north under Fairfax Avenue before turning west under Beverly Boulevard to rejoin San Vicente Boulevard. The alignment would then turn east under Santa Monica Boulevard, and then turn north just east of La Brea Avenue to follow Highland Avenue north to connect to the Metro B Line at the Hollywood/Highland Station.
- Alignment Alternative 2: Fairfax. This alignment alternative would travel north from the existing Metro K Line Expo/Crenshaw Station before heading northwest under San Vicente Boulevard and north under Fairfax Avenue, where it would connect with the future Metro D Line Wilshire/Fairfax Station. It would continue north under Fairfax Avenue and turn east under Santa Monica Boulevard. The alignment would then turn north just east of La Brea Avenue to follow Highland Avenue north to connect to the Metro B Line at the Hollywood/Highland Station.
- Alignment Alternative 3: La Brea. This alignment alternative would travel north from the existing Metro K Line Expo/Crenshaw Station before heading northwest under San Vicente Boulevard and north under La Brea Avenue, where it would connect with the future Metro D Line Wilshire/La Brea Station. From there, it would continue north under La Brea Avenue and turn northeast north of Fountain Avenue to follow Highland Avenue to connect with the Metro B Line at the Hollywood/Highland Station.

Table 2-1 provides a summary of the characteristics of each of the alignment alternatives and Table 2-2 identifies which stations would be constructed under each alignment alternative. In total, 12 station areas are identified, including the option to extend to the Hollywood Bowl.

FIGURE 2-1. K LINE NORTHERN EXTENSION ALIGNMENT ALTERNATIVES



Source: Connect Los Angeles Partners 2023

TABLE 2-1. CHARACTERISTICS OF THE ALIGNMENT ALTERNATIVES AND DESIGN OPTION

PROJECT COMPONENTS	ALIGNMENT ALTERNATIVES			DESIGN OPTION
	1. SAN VICENTE–FAIRFAX	2. FAIRFAX	3. LA BREA	HOLLYWOOD BOWL EXTENSION
Alignment Length	9.7 miles underground	7.9 miles underground	6.2 miles underground	+ 0.8 mile underground
Stations	9 underground	7 underground	6 underground	+1 underground
Travel time from Expo/Crenshaw to Hollywood/HighlandStations	19 minutes	15 minutes	12 minutes	+2 minutes (from Hollywood/Highland)

Source: Connect Los Angeles Partners 2023

TABLE 2-2. STATIONS BY ALIGNMENT ALTERNATIVE

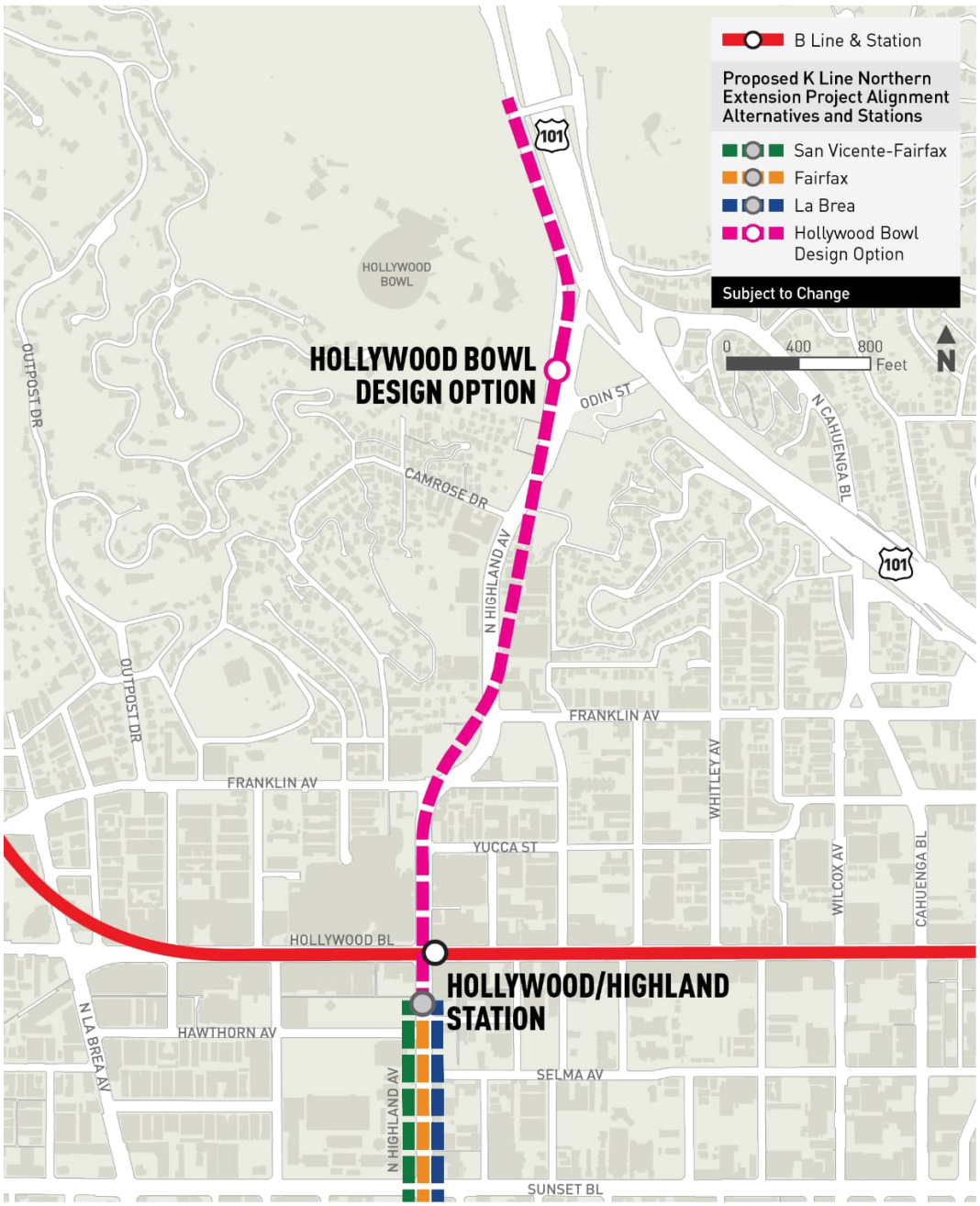
STATION	SAN VICENTE–FAIRFAX	FAIRFAX	LA BREA
Crenshaw/Adams (City of Los Angeles)	●	●	●
Midtown Crossing (City of Los Angeles)	●	●	●
Wilshire/Fairfax (City of Los Angeles)	●	●	
Fairfax/3rd (City of Los Angeles)	●	●	
La Cienega/Beverly (City of Los Angeles)	●		
San Vicente/Santa Monica (City of West Hollywood)	●		
Fairfax/Santa Monica (City of West Hollywood)	●	●	
La Brea/Santa Monica (City of West Hollywood)	●	●	●
Hollywood/Highland (City of Los Angeles)	●	●	●
Wilshire/La Brea (City of Los Angeles)			●
La Brea/Beverly (City of Los Angeles)			●
Hollywood Bowl (City of Los Angeles)	●	●	●

Source: Connect Los Angeles Partners 2023

2.2 HOLLYWOOD BOWL DESIGN OPTION

For every alignment alternative, there is one design option under consideration. The Hollywood Bowl Design Option includes an alternate terminus station at the Hollywood Bowl, north of the proposed Hollywood/Highland Station, as shown in Figure 2-2.

FIGURE 2-2. HOLLYWOOD BOWL DESIGN OPTION



Source: Connect Los Angeles Partners 2023

2.3 MAINTENANCE AND STORAGE FACILITY

An MSF would be constructed that would expand the Division 16 Maintenance Yard (Division 16), the existing MSF for the Metro K Line near LAX, as shown in Figure 2-3. The MSF would provide equipment and facilities to accommodate daily servicing and cleaning, inspection and repairs, and storage of light rail vehicles that are not in service. The MSF would be the primary physical employment center for rail operation employees, including train operators, maintenance workers, supervisors, administrators, security personnel, and other roles. If the Project is opened in sections, operation of the extended K Line from the Expo/Crenshaw Station to the Metro D Line could be accommodated within the existing Division 16 site with four new storage tracks.

FIGURE 2-3. MAINTENANCE AND STORAGE FACILITY

Source: Connect Los Angeles Partners 2023

2.4 CONSTRUCTION APPROACH

The Project would be constructed in sections that would be built sequentially, depending on available funding. The development of the Project would employ conventional construction methods, techniques, and equipment similar to other Metro projects that require underground tunneling. Detailed information on construction techniques can be found in the KNE Construction Approach Report. Major construction activities for the Project include surveys and preconstruction, which consist of local business surveys, building and utility assessments, and site preparations; right-of-way acquisition; tunnel construction, including tunnel boring machine (TBM) excavation and segmental lining and installation; utility relocation and installation work; station, crossover, and connection box construction; MSF construction, including site grading, maintenance building construction, and storage and access track construction; street restorations, including paving and sidewalks; ventilation and emergency egress construction; systems installation and facilities, including trackbed, rail, overhead contact system, conduit, electrical substation, and communications and signaling construction; and construction of other ancillary facilities.

The tunnels would be bored with TBMs, and the stations and track crossover boxes would be constructed via cut-and-cover methods, which entail excavating down from the ground surface and stabilizing the ground with an excavation support, then placing temporary decking surfaces above the excavation and conducting all excavation inside the supported area. The tunnel and station associated with the Hollywood Bowl Design Option would be constructed by sequential excavation method (SEM), which entails conventional mining techniques and equipment for hard rock excavation, which would reduce surface impacts.

Construction staging areas have been identified at each of the station locations, which are described and illustrated in Appendix A of the KNE Construction Approach Report. In order to construct a station, a minimum of one to two acres of construction staging sites would be needed for the duration of the station construction period. A larger construction staging site of three to four acres would be required if the site is also used to launch the TBMs and support tunneling activities. The TBM launch sites have been identified at the Midtown Crossing, San Vicente/Santa Monica, and La Brea/Santa Monica Stations. Temporary street, lane, sidewalk and bike lane closures as well as street reconfigurations will be part of construction activities. Construction and operational impacts on utilities and service systems are identified and discussed in this technical report.

CHAPTER 3 REGULATORY FRAMEWORK

3.1 FEDERAL REGULATIONS

3.1.1 ELECTRICITY

The Federal Power Act of 1935 gave the Federal Power Commission (succeeded by the Federal Energy Regulatory Commission in 1977) the authority to regulate the sale and transport of electric power.

3.1.2 SOLID WASTE

The Resource Conservation and Recovery Act (RCRA) (42 United States Code Section 6901 et seq.) was enacted in 1976 to oversee proper management of solid and hazardous wastes, from their generation to ultimate disposal or destruction. Implementation of RCRA has largely been delegated to federally approved state waste management programs and, under Subtitle D, further promulgated to local governments for management of planning, regulation, and implementation of non-hazardous solid waste disposal. The U.S. Environmental Protection Agency (USEPA) retains oversight of state actions. Where facilities are found to be inadequate, 40 Code of Federal Regulations (CFR) Section 256.42 requires that necessary facilities and practices be developed by the responsible state and local agencies or by the private sector. In California, that responsibility was created under the California Integrated Waste Management Act of 1989 and Assembly Bill (AB) 939.

3.1.3 TELECOMMUNICATIONS

The Communications Act of 1934 replaced the Federal Radio Commission with the Federal Communications Commission (FCC). It also transferred regulation of interstate telephone services from the Interstate Commerce Commission to the FCC. The FCC regulates interstate and international communications by radio, television, wire, satellite, and cable in all 50 states, the District of Columbia, and United States territories. An independent United States government agency overseen by Congress, the FCC is the United States' primary authority for communications law, regulation, and technological innovation. The FCC’s rules and regulations are in Title 47 of the CFR.

3.1.4 STORMWATER FACILITIES

The Clean Water Act (CWA) of 1977 establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters by outlawing the discharge of any pollutant from a point source into navigable waters unless a permit is obtained. Under the CWA's National Pollutant Discharge Elimination System (NPDES) program, USEPA regulates discharges of pollutants from municipal and industrial wastewater treatment plants, sewer collection systems, and stormwater discharges from industrial facilities and municipalities. USEPA enforces requirements to ensure that industries pre-treat pollutants in their wastes in order to protect local sanitary sewers and wastewater treatment plants. NPDES permits establish limits and conditions for discharges from municipal wastewater treatment facilities to waters of the United States.

The Safe Drinking Water Act (SDWA) of 1996 is the principal federal law in the United States intended to ensure safe drinking water for the public. Pursuant to the act, the USEPA is required to set standards for drinking water quality and oversee all states, localities, and water suppliers that implement the standards.

3.1.4.1 CWA SECTION 301

Under CWA Section 301, it is unlawful to discharge any pollutant into waters of the United States without authorization under specific provisions of the CWA, including Sections 402 and 404 that are discussed below.

3.1.4.2 CWA SECTION 303

The USEPA has authority under the CWA to implement water pollution control programs. In California, this authority is delegated to the State Water Resources Control Board (SWRCB). Section 303(d) requires states to develop a list of water-quality-impaired water bodies and to implement total maximum daily loads (TMDLs) for certain pollutants to meet water quality standards. A TMDL establishes the maximum amount of a pollutant allowed in a waterbody and serves as the starting point or planning tool for restoring water quality. In general, once a water body has been added to a state's list of impaired waters it stays there until the state develops a TMDL and SWRCB approves it. SWRCB reporting guidance provides a way to keep track of a state's water bodies, from listing as impaired to meeting water quality standards. This tracking system contains a running account of all of the state's water bodies and categorizes each based on the attainment status. For example, once a TMDL is developed, a water body is no longer on the 303(d) list, but it is still tracked until the water is fully restored (USEPA 2023).

3.1.4.3 CWA SECTION 401

Under CWA Section 401, projects permitted under CWA Section 404 (described below) for any activity that may result in a discharge into waters of the U.S. obtain State Water Quality Certification that the proposed activity will comply with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the United States Army Corps of Engineers (USACE). The 401 permit certifications are obtained from the Regional Water Quality Control Board (RWQCB), dependent on the project location, and are required before the USACE issues a 404 permit.

3.1.4.4 CWA SECTION 402 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Through delegated jurisdiction under the CWA, the SWRCB regulates point-source discharges to waters of the U.S. under the NPDES. Regulated discharges also include diffuse sources of discharge caused by general construction activities covering an area greater than one acre, and stormwater discharges in municipal separate storm sewer systems (MS4s) in which runoff is carried through a developed conveyance system to specific discharge locations. The SWRCB issues both a Construction General Permit for protection of water quality from stormwater discharges during construction

activities and an Industrial General Permit for protection of water quality from stormwater discharges during industrial activities. Under construction and operation of the Project, Metro would be responsible for compliance with both of these NPDES permits.

3.1.4.5 CWA SECTION 404

The USACE has jurisdiction over all waters of the U.S., which include navigable waters and traditionally navigable water as defined in CFR Title 33, Part 328.3(a). Under CWA Section 404, the USACE regulates the discharge of dredged or fill materials (including from construction activities) into waters of the U.S.; the waters of the U.S. potentially affected by the Project are Ballona Creek and the Dominguez Channel.

3.2 STATE REGULATIONS

3.2.1 SOLID WASTE

3.2.1.1 ASSEMBLY BILL 341

Under commercial recycling law (Chapter 476, Statutes of 2011), AB 341 directed California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling and declared a state policy goal that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020 and annually thereafter.

3.2.1.2 ASSEMBLY BILL 939

The Integrated Waste Management Act (AB 939) passed in 1989 requires the implementation of solid waste management programs, including requiring each city or county to divert solid waste from landfill disposal through source reduction, recycling, and composting, and achieve a 50 percent diversion. The law also requires every county and city in the state to prepare a Source Reduction and Recycling Element that identifies programs that the county or city will implement to achieve the required solid waste disposal reduction goal and submit an annual report to CalRecycle to provide an update on progress in achieving this goal. The Integrated Waste Management Act further requires that all businesses and public entities that generate four cubic yards or more of solid waste per week have a recycling program, and it sets a statewide goal for 75 percent reduction of solid waste disposal by 2020.

3.2.1.3 SENATE BILL 1374

Construction and Demolition Waste Materials Diversion Requirements (Senate Bill [SB] 1374) was signed into law in 2002 to assist jurisdictions with diverting construction and demolition waste material. The bill requires that jurisdictions provide a summary of progress made in diverting construction and debris waste in the annual AB 939 report to CalRecycle.

3.2.1.4 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)

Under Section 5.408.1.1 through 5.408.1.3 of the 2022 California Green Building Standards Code (CALGreen), the minimum recycling rate for all construction and demolition waste is 65 percent. Additionally, the 2022 CALGreen Building Code requires 100 percent accountability of excavated soil, proper accountability and disposal for universal waste, and 100 percent recycling of soil, vegetation, and rocks generated from land-clearing activities. CALGreen allows for either a 65 percent diversion requirement or the local requirements, whichever are more stringent. CALGreen does not require jurisdictions to adopt a local construction and demolition ordinance.

3.2.2 STORMWATER FACILITIES

The state regulates wastewater discharges to surface waters through the NPDES program. The NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants, including storm drain and sewer effluent, into waters of the United States. The NPDES program is a federal program that has been delegated to the State of California for implementation through the SWRCB and the nine RWQCBs, which are collectively known as the Water Boards. The Project is located in the Los Angeles RWQCB region.

The Construction General Permit, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ, requires dischargers for projects that disturb one or more acres but are part of a larger common plan of development that in total disturbs one or more acres, to obtain coverage under the General Permit for Discharges of Stormwater Associated with Construction Activity.

3.2.2.1 PORTER-COLOGNE WATER QUALITY ACT

This act provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the State include more than just waters of the U.S., such as groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. The SWRCB and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan.

3.2.2.2 CONSTRUCTION GENERAL NPDES PERMIT

The Construction General NPDES Permit (CGP) Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012) regulates stormwater discharges from construction sites that result in a Disturbed Soil Area of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By

law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the CGP. Construction activity that results in soil disturbances of less than one acre is subject to this CGP if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the CGP.

The main objectives of the CGP are to:

- Reduce erosion from construction projects or activities
- Minimize or eliminate sediment in stormwater discharges from construction projects
- Prevent materials used at a construction site from contacting stormwater
- Implement a sampling and analysis program to monitor construction site runoff
- Eliminate unauthorized non-stormwater discharges from the construction sites
- Implement appropriate measures to reduce potential impacts on waterways both during and after construction projects
- Establish maintenance commitments on post-construction pollution control measures

The CGP separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases and are based on potential erosion and transport to receiving waters. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP that includes BMPs in the five following categories:

- Good site management “housekeeping”
- Non-stormwater management
- Erosion control
- Sediment controls
- Run-on and runoff controls

3.2.2.3 INDUSTRIAL GENERAL NPDES PERMIT

The Industrial General NPDES Permit (IGP) Order 2014-0057-DWQ as amended in 2015 and 2018 (effective July 1, 2020) is implemented by the SWRCB to minimize impacts to stormwater from industrial activities. The Project would be subject to the regulations of the IGP because it is a transportation facility with vehicle maintenance shops and equipment cleaning operations. The IGP requires preparation of an industrial SWPPP and a monitoring plan for industrial facilities, including vehicle maintenance facilities associated with transportation operations.

3.2.3 WATER SUPPLY FACILITIES

3.2.3.1 METROPOLITAN WATER DISTRICT ACT OF 1928

The Metropolitan Water District (MWD) of Southern California was established by the California Legislature in 1928 through the Metropolitan Water District Act. While the primary purpose of the act was to construct and operate the 242-mile Colorado River Aqueduct, the act also authorizes MWD to:

- Levy property taxes within its service area
- Establish water rates
- Impose charges for water standby and service availability
- Incur general obligation bonded indebtedness and issue revenue bonds, notes, and short-term revenue certificates
- Execute contracts
- Exercise the power of eminent domain for the purpose of acquiring property

3.2.3.2 CALIFORNIA WATER CODE

When a city or county is the CEQA lead agency for a project meeting certain criteria, California Water Code Sections 10910 through 10915 require that the relevant water service provider determine whether the water demands of the proposed project were accounted for in the most recent urban water management plan (UWMP). If the project's water demand was not accounted for in the UWMP, the water service provider must prepare a Water Supply Assessment (WSA) demonstrating there are sufficient supplies to meet the anticipated needs of the project. If the provider determines that potable water supplies are, or will be, insufficient, the project applicant must submit plans for acquiring additional potable water supplies. With respect to this Project, the CEQA lead agency is Metro and not a county or city and, therefore, Water Code Sections 10190 through 10915 do not apply. Further, the Project does not meet the criteria identified for requiring preparation of a WSA.

California Water Code Section 10610-10656 requires every urban water supplier that either provides over 3,000 acre-feet (AF) of water annually, or serves more than 3,000 urban connections, to submit an UWMP every five years to the California DWR. UWMPs support long-term planning to ensure that adequate supplies are available to meet existing and future water needs. The UWMPs assess water sources over a 20-year planning period, describe management measures and water shortage contingency plans, and report progress toward meeting water demand reduction goals.

SB 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the UWMP Act, as well as the California Water Code (CWC) Sections 10910 et seq.

3.2.3.3 TITLE 22

The CWC requires the California Department of Public Health to establish water reclamation criteria. In 1975, the California Department of Public Health prepared Title 22 regulations to satisfy this requirement. Title 22 regulates production and use of reclaimed water in California by establishing three categories of reclaimed water: primary effluent, secondary effluent, and tertiary effluent. Primary effluent typically includes grit removal and initial sedimentation or settling tanks. Secondary effluent is adequately disinfected, oxidized effluent that typically involves aeration and additional settling basins. Tertiary effluent is adequately disinfected, oxidized, coagulated, clarified, filtered effluent which typically involves filtration and chlorination. In addition to defining reclaimed water uses, Title 22 defines requirements for sampling and analysis of effluent and specifies design requirements for treatment facilities.

3.2.3.4 STATE WATER RESOURCES CONTROL BOARD, DIVISION OF DRINKING WATER, SOURCE WATER ASSESSMENT PROGRAM

The 1996 SDWA Amendments require each state to develop and implement a Source Water Assessment Program. Section 11672.60 of the California Health and Safety Code requires the Department of Health Services (DHS), (the precursor to the California Department of Public Health) to develop and implement a program to protect sources of drinking water, specifying that the program must include both a Source Water Assessment Program and a Wellhead Protection Program. In response, DHS developed the Drinking Water Source Assessment and Protection Program, which addresses both groundwater and surface water sources.

3.2.4 OTHER UTILITIES

3.2.4.1 CALIFORNIA PUBLIC UTILITIES COMMISSION

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The CPUC is tasked with ensuring that consumers have safe, reliable utility service at reasonable rates, and are protected against fraud. Specifically related to utilities, the CPUC has authority over, and is responsible under, numerous General Orders.

3.2.4.2 CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations includes authoritative sections regarding public utilities in Title 20 (Public Utilities and Energy), Division 1 (Public Utilities Commission). Additionally, the California Health and Safety Code and the CWC contain information regarding sanitary and water utilities. The Public Utilities Code, Division 1 (Regulation of Public Utilities) gives specific regulation on public utilities, including the CPUC.

3.2.4.3 CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

At the state level, the management of solid waste is governed by regulations established by CalRecycle, which delegates local permitting, enforcement, and inspection responsibilities to local enforcement agencies. In 1997, some of the regulations adopted by the State Water Quality Control Board pertaining to landfills (Title 23, Chapter 15) were incorporated with CalRecycle regulations (Title 14) to form Title 27 of the California Code of Regulations.

3.2.4.4 CALIFORNIA GOVERNMENT CODE SECTION 4216

Section 4216 of the California Government Code (Protection of Underground Infrastructure) requires that an excavator must contact a regional notification center (e.g., Underground Service Alert) at least two days before excavation of any subsurface installations. An Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the excavation. Representatives of the utilities are required to mark the specific locations of their facilities within the work area prior to the start of excavation. The construction contractor is required to probe and expose the underground facilities by hand prior to using power equipment.

3.2.4.5 CALIFORNIA PLUMBING CODE

The California Plumbing Code is codified in Title 24, California Code of Regulations, Part 5. The Plumbing Code contains regulations including, but not limited to, plumbing materials, fixtures, water heaters, water supply and distribution, ventilation, and drainage. More specifically, Part 5, Chapter 4 contains provisions requiring the installation of low-flow fixtures and toilets (SB 407 [2009] Civil Code Sections 1101.1 et seq.).

3.3 REGIONAL REGULATIONS

3.3.1 LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

The Los Angeles Regional Water Quality Control Board (LARWQCB) has jurisdiction over stormwater and urban runoff discharges from 84 incorporated cities within the Los Angeles County Flood Control District (LACFCD), including the cities in the Resource Study Area (RSA). The following regional regulations are applicable to this Project:

3.3.1.1 LOS ANGELES COUNTY MS4 PERMIT

LARWQCB Order No. R4-2012-0175, as amended by SWRCB Order No. WQ 2015-0075, LARWQCB Order No. R4-2012-0175-A01, NPDES Permit No. CAS004001, and LA County MS4 NPDES permit, regulates the LACFCD, Los Angeles County, and 84 incorporated cities within the LACFCD for discharges of stormwater and urban runoff from MS4s, also called storm drainage systems. The LA County MS4 NPDES permit requires new development and redevelopment projects to have post-construction controls to manage pollutants, pollutant loads, and runoff volume emanating from the project site. New development and redevelopment projects are also required to implement hydrologic control measures to minimize changes in post-development hydrologic stormwater runoff discharge

rates, velocities, and durations. This shall be achieved by maintaining pre-project stormwater runoff flow rates and durations.

3.3.1.2 CONSTRUCTION DEWATERING

Removal of nuisance water from a construction site (known as dewatering) is regulated because of the high turbidity and other pollutants potentially associated with this activity. The following NPDES permits regulate different construction activities:

- LARWQCB Order No. R4-2013-0095 (NPDES No. CAG994004) Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Construction Dewatering Permit) is required for discharges to surface water from dewatering activities.
- LARWQCB Order No. 93-010, Waste Discharge Requirements for Specified Discharges to Groundwater in the Santa Clara River and Los Angeles River Basins, covers construction dewatering, and dust control application. The WDR requires that wastewater be analyzed prior to being discharged to determine if it contains pollutants in excess of the applicable Basin Plan Water Quality Objectives. Additionally, any wastewater that might be encountered and subsequently discharged to groundwater will need to comply with applicable water quality standards.

3.3.1.3 DISCHARGE OF NON-HAZARDOUS CONTAMINATED SOILS AND OTHER WASTES

LARWQCB Order No. 91-93, Waste Discharge Requirements for Discharge of Non-Hazardous Contaminated Soils and Other Wastes in Los Angeles River and Santa Clara River Basins, protects waters of the state from contamination due to disposal of soils containing moderate concentrations of petroleum hydrocarbons, heavy metals, and other wastes. The permit allows the disposal of up to 100,000 cubic yards of non-hazardous contaminated soils and other wastes for a maximum period of 90 days. This WDR requires that waste used as soil backfill shall not contain any substance in concentrations toxic to human, animal, plant, or aquatic life. The CGP allows for temporary stockpiling of non-hazardous, contaminated soils until they can be appropriately disposed of or reused, per permit conditions.

3.3.1.4 BASIN PLAN

The Water Quality Control Plan, Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (LARWQCB, 2019a) sets forth the regulatory water quality standards for surface waters and groundwater within the region. The water quality standards address both the designated beneficial uses for each water body and the water quality objectives to meet them. Where multiple designated beneficial uses exist, water quality standards are written to protect the most sensitive use.

3.3.1.5 TOTAL MAXIMUM DAILY LOADS

In accordance with the federal CWA and the state Porter-Cologne Water Quality Control Act, TMDLs have been developed and incorporated into the Basin Plan for some pollutants identified on the 303(d) list as causing contamination. Project-specific TMDLs are discussed in Section 5.2.3 of the K Line Northern Extension Hydrology and Water Quality Technical Report.

3.3.1.6 WATERSHED MANAGEMENT AND ENHANCED WATERSHED MANAGEMENT PROGRAMS

The goal of Watershed Management Programs (WMPs) and Enhanced Watershed Management Programs is to ensure that "discharges from the Los Angeles County MS4: (i) achieve applicable water quality-based effluent limitations that implement TMDLs; (ii) do not cause or contribute to exceedances of receiving water limitations; and (iii) for non-stormwater discharges from the MS4, are not sources of pollutants to receiving waters." Plans relevant to the Project are the Enhanced WMPs for the Ballona Creek and Dominguez Channel Watersheds.

3.4 LOCAL REGULATIONS

3.4.1 METRO

3.4.1.1 MOVING BEYOND SUSTAINABILITY STRATEGIC PLAN

Metro's 2020 Moving Beyond Sustainability Strategic Plan was approved by the Metro Board in September 2020. The adopted plan outlines a comprehensive sustainability strategy for Metro's operations and construction projects. The following targets focus upon Metro's solid waste management and strategies (Metro 2020).

- Achieve 85 percent construction landfill diversion rate.
  - Implement construction waste prevention and landfill diversion best practices.
- Achieve 50 percent landfill diversion rate for operational waste.
  - Implement operational recycling and organics diversion programs, including those that support compliance with AB 939, AB 341, AB 1826, and SB 1383.
  - Establish and integrate best waste management practices into agency-wide operations.
  - Establish comprehensive monitoring and reporting practices to drive continual improvement.
- Reduce annual operational solid waste disposal 24 percent from 2030 Business as Usual scenario. Implement operational waste prevention and material reuse programs, which support a circular economy.

3.4.1.2 WATER USE AND CONSERVATION POLICY

In addition to complying with local and regional water conservation regulations, Metro developed its own procedures dictating the use of potable water and conservation (Metro 2009c). Applicable procedures relating to water use and conservation required by Metro include:

- Procedure 2.1: Using Potable Water for Pressure Washing Activities
  - 2.1.1 Prioritize facility locations that must be regularly cleaned using pressure washing equipment.
  - 2.1.2 If pressure washing is deemed essential, appropriate water conservation and efficiency measures must be applied.
  - 2.1.3 Conduct pressure washing activities using cost-effective water efficient equipment.
  - 2.1.4 Capture and dispose any generated wastewater to an appropriate facility.
- Procedure 2.2: Using Potable Water for Construction
  - 2.2.1 Develop a plan for dust suppression purposes to comply with applicable environmental statutes, regulations, and guidelines.
  - 2.2.2 Use of potable water as a dust suppression agent should always be secondary and should only be used if all other dust suppression technologies are not feasible or cost effective.
- Procedure 2.3: New Construction Planning, Design and Construction; Existing Buildings Operations
  - 2.3.1 Use water conservation and efficiency guidelines outlined in applicable Leadership in Energy and Environmental Design reference books for all planning, procurement, design, construction, operation, and maintenance of Metro's linear and non-linear facilities.
  - 2.3.2 Prepare manuals of operation, as applicable, to ensure that water efficiency and conservation technologies are adopted and maintained.

3.4.1.3 WATER ACTION PLAN

One of the key elements of Metro's sustainability program is the development and implementation of a Water Action Plan that will reduce water consumption in a cost-effective manner. The Water Action Plan provides strategies for water conservation as recommendations and cost-benefit analysis of those recommended actions for Metro's consideration to reduce water consumption. It also recommends next steps for the refinement, implementation, and ongoing optimization of the Water Action Plan and its associated strategies for conservation. The intent of the Water Action Plan is to determine the potential for water conservation opportunities and cost-saving measures consistent with Metro's environmental policies and its future implementation of an Environmental Management System. The Water Action Plan will inform other Metro projects as part of the overall sustainability program for water use to be strategically aligned with other resource elements (e.g., fuel use, greenhouse gas emissions, etc.). The primary objectives of the Water Action Plan are to:

- Obtain water usage data from current equipment and operational practices representative of water use throughout Metro's maintenance divisions.

- Identify reasonable, cost-effective water-conserving strategies that can be replicated system-wide.
- Provide appropriate economic analysis of the costs and benefits for water conservation strategies, including substitution of non-potable water supplies.

3.4.2 COUNTY OF LOS ANGELES

3.4.2.1 GENERAL PLAN

As Los Angeles County continues to grow, the demand for public facilities and infrastructure will increase. The Public Services and Facilities Element of the General Plan provides a summary of some of the major public services and facilities that serve the unincorporated areas and establishes policies that guide the provision of public services and facilities (Los Angeles County 2022).

Utility Infrastructure

- Goal PS/F 6: A County with adequate public utilities.
  - Policy PS/F 6.1: Ensure efficient and cost-effective utilities that serve existing and future needs.
  - Policy PS/F 6.4: Protect and enhance utility facilities to maintain the safety, reliability, integrity, and security of utility services.

Waste Management

- Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution.
  - Policy PS/F 5.1: Maintain an efficient, safe, and responsive waste management system that reduces waste while protecting the health and safety of the public.
  - Policy PS/F 5.2: Ensure adequate disposal capacity by providing for environmentally sound and technically feasible development of solid waste management facilities, such as landfills and transfer/processing facilities.
  - Policy PS/F 5.3: Discourage incompatible land uses near or adjacent to solid waste disposal facilities identified in the Countywide Integrated Waste Management Plan.

Waste Diversion

- Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution.
  - Policy PS/F 5.4: Encourage solid waste management facilities that utilize conversion and other alternative technologies and waste to energy facilities.
  - Policy PS/F 5.5: Reduce the County's waste stream by minimizing waste generation and enhancing diversion.
  - Policy PS/F 5.6: Encourage the use and procurement of recyclable and biodegradable materials.
  - Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by public and private projects.
  - Policy PS/F 5.8: Ensure adequate and regular waste and recycling collection services.

- Policy PS/F 5.9: Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.

3.4.2.2 COUNTY ORDINANCES

CONSTRUCTION AND DEMOLITION DEBRIS RECYCLING AND REUSE ORDINANCE

On April 30, 2018, Los Angeles County Public Works updated Los Angeles County's green building code and adopted the 2016 CALGreen Code by reference. Los Angeles County Public Works is proposing to revise Los Angeles County's Construction and Demolition Debris Recycling and Reuse Ordinance to make Los Angeles County ordinance consistent with the recycling requirements in the latest CALGreen Code to help achieve the waste diversion targets in the Los Angeles County's Roadmap to a Sustainable Waste Management Future (Los Angeles County 2023).

- Increase minimum required construction and demolition recycling rate from 50 percent to 70 percent.
- Require a 100 percent recycling rate for trees, stumps, rocks, and associated vegetation and soil from land clearing.
- Require 100 percent of excavated soil for all projects be properly accounted for.
- Require proper disposal of Universal Waste.
- Introduce a Refundable Project Deposit for certain grading, building, and construction permit applicants who submits a recycling and reuse plan to encourage compliance with the ordinance.
- Require certification for construction and demolition debris recycling facilities.
- Require all County Projects comply with the construction and demolition recycling requirements of the County and the State.
- Require 100 percent accountability of all project construction and demolition debris.

3.4.3 CITY OF LOS ANGELES

3.4.3.1 GENERAL PLAN

The Citywide General Plan Framework an Element of the City of Los Angeles (City of Los Angeles 1995) reports upon existing wastewater treatment facilities, wastewater collection, water supply, and solid waste disposal.

3.4.3.2 SUSTAINABLE CITY PLAN

All projects implemented within the City of Los Angeles are considered in the context of the Sustainable City pLAn (City of Los Angeles 2015), which serves as the City of Los Angeles' guide for addressing the challenges presented by climate change. The Sustainable City pLAn seeks to achieve a landfill diversion rate of 90 percent by 2025, 95 percent by 2035, and 100 percent by 2050 (City of Los Angeles 2015). Targets from the Green New Deal Sustainable City pLAn include increasing construction and demolition waste recycling requirements to at least 80 percent. Two initiatives include the use of 100 percent recycled aggregate and the use of hot mix asphalt comprised of 50 percent recycled asphalt.

3.4.3.3 CITY ORDINANCES

On March 5, 2010, the Los Angeles City Council approved Council File 09-3029 pertaining to a Citywide Construction and Demolition Waste Recycling Ordinance that requires all mixed construction and demolition waste generated within city limits be taken to City of Los Angeles certified construction and demolition waste processors. The City of Los Angeles Bureau of Sanitation (LASAN) is responsible for the construction and demolition waste recycling policy (City of Los Angeles 2023).

3.4.4 CITY OF WEST HOLLYWOOD

The Infrastructure, Resources, and Conservation Chapter of the City of West Hollywood General Plan (City of West Hollywood 2011) provides background information and policy guidance for water supply and conservation, wastewater infrastructure, stormwater management, and recycling and solid waste.

- Goal IRC-1: Provide functional, safe, and well-maintained circulation and public infrastructure throughout the City.
  - IRC-1.3 Require utility and other service providers working in the public right-of-way to restore or improve trench areas to return the site to conditions that comply with City standards and prevent roadway and sidewalk deterioration.
  - IRC-1.4 Continue existing programs to place overhead utility lines underground, using Southern California Edison funds in accordance with California Public Utilities Commission Rule 20A, and other funds as they become available.
  - IRC-1.6 As feasible, implement energy efficient lighting in the public right-of-way and on City-owned properties.
- Goal IRC-2: Provide citywide access to high-quality water, gas, electricity, and telecommunications services.
  - IRC-2.1 Support city-wide access to water, gas, power, and telephone and other telecommunications services.
- Goal IRC-3: Reduce water use and ensure a long-term water supply.
  - IRC-3.3 Regularly update water conservation regulations to ensure that current best practices are utilized.

- IRC-3.5 Take steps to reduce water use from municipal operations, which may include water recapture systems in new buildings and major renovations.
- IRC-3.6 Require all new buildings to meet the following standards: Reduce water consumption for outdoor landscape irrigation, consistent with the most recent City policy.

- Goal IRC-8: Provide a wastewater system that protects the health, safety, ecology, and welfare of the community.
  - IRC-8.2 Require development projects to pay for their share of wastewater system improvements necessitated by that development.
- Goal IRC-9: Provide safe, sanitary, and environmentally sustainable stormwater management.
  - IRC-9.1 Work with Los Angeles County Flood Control District for maintenance and operation of the regional stormwater system that serves the City, sharing information about service needs and growth projections.
  - IRC-9.3 As feasible, maximize local actions to reduce, capture, and treat urban runoff.
  - IRC-9.6 Reduce the amount and improve the quality of stormwater that leaves the City through best management practices, including stormwater reuse and the use of vegetation and permeable surfaces to capture and filter stormwater.
  - IRC-9.7 Encourage development projects to manage stormwater on-site in accordance with the City approved Stormwater Pollution Prevention Plan and Standard Urban Stormwater Mitigation Plan.
  - IRC-9.8 Explore innovative ways of capturing and reusing stormwater for non-drinking water purposes to reduce the use of potable water.
  - IRC-9.9 Require that development projects pay for the cost of stormwater system improvements necessitated by that development.
- Goal IRC-10: Use best practices to reduce and manage solid waste.
  - IRC-10.1 Aggressively seek to reduce West Hollywood's rate of waste disposal per capita.
  - IRC-10.2 Provide services for recycling and composting and expand these services over time, where appropriate.
  - IRC-10.3 Encourage all construction projects (regardless of size) to divert 80% of the construction waste debris away from landfills.

3.4.5 URBAN WATER MANAGEMENT PLANS

The California Urban Water Management Planning Act requires that every urban water supplier prepare and adopt an UWMP every five years, first effective on January 1, 1948. The report shall be prepared in compliance with Water Code Sections 10610 through 10657 of the Urban Water Management Planning Act. The Urban Water Management Planning Act requires that "every urban water supplier shall prepare and adopt an urban water management plan" (Water Code § 10620(a)). An "urban water supplier" is defined as a supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 AF of water annually (Water Code § 10617). Water Code Section 10635 requires the urban water supplier to assess the reliability of its water service to its customers during normal, dry, and multiple dry water years. These plans must be filed

with the DWR every five years. Recent amendments to the California Urban Water Management Planning Act changed the Water Code to require each urban supplier to update and submit its 2020 UWMP by July 1, 2021.

UWMPs have been prepared for the following urban water suppliers in the RSA:

- MWD
- Los Angeles Department of Water (LADWP) UWMP

CHAPTER 4 METHODOLOGY AND SIGNIFICANCE THRESHOLDS

4.1 METHODOLOGY

The purpose of this assessment is to evaluate the Project against thresholds of significance as the basis for determining the level of impacts related to the existing network of utilities and services systems. Utilities and service systems considered as part of the analysis include aboveground and underground electrical and telecommunication lines; storm drains; electric power; natural gas lines; sewer lines; water supply lines; landfill capacity; and the type, size, and location of the infrastructure potentially affected by the Project.

The analysis of potential impacts to utilities and services systems evaluates the existing capacity and potential changes in demand on utilities that the Project would generate, then evaluates the potential consequences of the changes in demand based on existing facilities and whether facilities that would provide services to the Project would have sufficient resources and/or capacity to accommodate Project-related increases in utility demand. The analysis considers increases in utility demand associated with the alignment alternatives and stations, design option, and MSF and existing natural resources, existing utility capacity, and consistency with existing regulations and plans for utilities. Further information on storm drain systems as they relate to water quality is described in the KNE Hydrology and Water Quality Technical Report.

4.2 CEQA SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the Project would have a significant impact related to utilities and service systems if it would:

- Impact UTL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- Impact UTL-2: Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
- Impact UTL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Impact UTL-4: 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.
- Impact UTL-5: Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

CHAPTER 5 EXISTING SETTING

5.1 RESOURCE STUDY AREA

The utilities RSA is identified as the subsurface and surface area within one-half mile of both sides of the alignment alternatives, the design option, and the MSF where utilities exist. In assessing demand, utilities are also evaluated within their respective service areas, which vary among utility type and service provider and are regional. Service areas are described in Sections 5.2 through 5.8 as they relate to the RSAs for the alignment alternatives, the design option, and the MSF.

5.2 WATER SUPPLY

Within Los Angeles County, water supply is comprised of a complex system made up of state agencies and local water districts operating aqueducts, reservoirs, and groundwater basins. Due to the county's dependence on imported water supply sources and its vulnerability to drought, the county is consistently working to develop a diverse range of water resources (Los Angeles County 2015). The MWD of Southern California is the principal distributor of imported water in Southern California, providing water to 26 public water agencies across this region, including agencies located in the RSA (MWD 2021b). Member agencies purchase all or a portion of their water from MWD. LADWP and the City of Beverly Hills are member agencies that receive supplies from the MWD and subsequently supply that water to other local supply agencies in the RSA. Local water supply is described in further detail for each urban water supplier.

5.2.1 METROPOLITAN WATER DISTRICT

MWD's service area covers the Southern California coastal plain. MWD currently serves the RSAs related to the alignment alternatives, the design option, and the MSF. It extends about 200 miles along the Pacific Ocean from the City of Oxnard on the north to the international border with Mexico on the south, and it reaches as far as 70 miles inland from the coast. The total area served is approximately 5,200 square miles, and it includes portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties. Although only 14 percent of the land area of the six Southern California counties is within MWD's service area, approximately 86 percent of the populations of those counties reside within MWD's boundaries.

MWD's 26 member agencies deliver to their customers a combination of local groundwater, local surface water, recycled water, and imported water purchased from or exchanged with MWD. For some member agencies, MWD supplies most of the water used within that agency's service area, while others obtain varying amounts of water from MWD to supplement local supplies. The remaining water supply comes from local wells, local surface water, recycling, and the City of Los Angeles' aqueducts from the Owens Valley/Mono Basin east of the Sierra Nevada. MWD's member agencies serve residents in 152 cities and 89 unincorporated communities. Member agencies also implement conservation and other programs that can be considered part of their supplies.

MWD receives water from the Colorado River through the Colorado River Aqueduct (CRA) and from the State Water Project (SWP) through the California Aqueduct.

5.2.1.1 COLORADO RIVER

The Colorado River was MWD's original source of water after MWD's establishment in 1928. MWD has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. The Colorado River Agreement, which has a capacity of 1,250,000 acre-feet a year (AFY), is owned and operated by MWD. It transports water from Lake Havasu, at the state border between California and Arizona, approximately 242 miles to its terminus at Lake Mathews in Riverside County. MWD also receives approximately 277,700 AFY of additional Colorado River supplies pursuant to an exchange agreement with its member agency, the San Diego County Water Authority.

5.2.1.2 STATE WATER PROJECT

MWD imports water from the SWP, owned by the State of California and operated by DWR. The SWP transports Feather River water stored in and released from the Oroville Dam and conveyed through the Bay-Delta in Northern California, as well as unregulated flows diverted south directly from the Bay-Delta via the California Aqueduct to four delivery points—one from the Aqueduct's West Branch at the northwestern portion and three from the East Branch at the northeastern portion of MWD's service area.

In 1960, MWD signed a water supply contract with DWR for participation in the SWP. MWD is one of 29 agencies that have long-term contracts with DWR that are participants in the SWP through State Water Contracts, and is the largest agency in terms of the number of people it serves (19.2 million in a year), the share of SWP water that it is allocated pursuant to the State Water Contract (approximately 46 percent), and the percentage of total annual payments made to DWR by agencies with State Water Contracts (approximately 53 percent in 2020).

5.2.1.3 LOCAL SUPPLIES

Approximately 50 percent of the region's water supplies come from resources separately controlled or operated by local water agencies. These resources include water extracted from local groundwater basins, catchment of local surface water, and non-MWD imported water supplied through the Los Angeles Aqueduct (LAA).

5.2.1.4 GROUNDWATER

The groundwater basins that underlie the region provide an annual average supply of approximately 1,200,000 AF (2011-2020 average). Natural recharge of the groundwater basins is supplemented by active recharge of captured stormwater, recycled water, and imported water to support this level of annual production. Estimates indicate that available storage space in the region's groundwater basins in mid-2020 is approximately 4,700,000 AF. Successive dry years have resulted in groundwater depletions that will need to be replaced with natural recharge during wet years and active spreading of captured stormwater, recycled water, and imported water.

5.2.1.5 RECYCLING, GROUNDWATER RECOVERY

Recycling and groundwater recovery are local resources that add balance to Southern California's diverse water portfolio. In addition to replenishment of groundwater basins as described above, water recycling provides extensive treated wastewater for applicable municipal and industrial uses. Common uses of recycled water include landscape irrigation, agricultural irrigation, and commercial and industrial applications. Groundwater recovery employs additional treatment techniques to effectively use degraded groundwater supplies that were previously not considered viable due to high salinity or other contamination. While water recycling and groundwater recovery projects in the Southern California region are primarily developed by local water agencies, many newer projects have been developed with financial incentives provided through MWD's Local Resources Program. The Local Resources Program is a performance-based program that provides incentives to expand water recycling and support recovery of degraded groundwater, among other types of projects. In 2020, the regional water production from water recycling and groundwater recovery totaled approximately 552,000 AF, of which 120,000 AF was developed with MWD funding assistance.

5.2.1.6 SURFACE WATER

In addition to the groundwater basins, local agencies maintain surface reservoir capacity to capture local runoff. The average yield captured from local watersheds is estimated at approximately 90,000 AFY (2011-2020 average).

5.2.1.7 LOS ANGELES AQUEDUCT

Although the LAA imports water from outside the region, MWD classifies water provided by the LAA as a local resource because it is developed and imported by LADWP. This resource provided approximately 200,000 AFY on average over the last 10 years from 2011 to 2020 but was reduced to approximately 33,000 AF during a historic dry period of 2015.

MWD regional water demands and the population they serve are provided in Table 5-1.

TABLE 5-1. MWD REGIONAL WATER DEMANDS AND POPULATION

	2020 (EXISTING)	2025 (PROJECTED)	2030 (PROJECTED)	2035 (PROJECTED)	2040 (PROJECTED)	2045 (PROJECTED)
Total Population and Population Growth (MWD Service Area)	19,035,000	20,089,000	20,634,000	21,145,000	21,610,000	22,026,000
Total Water Use (Single Dry-Year) (Acre-Feet)	5,219,000	4,929,000	5,037,000	5,160,000	5,265,000	5,378,000
Total Water Use (Drought Lasting Five Consecutive Water Years) (Acre-Feet)	5,219,000	4,877,000	5,064,000	5,182,000	5,299,000	5,410,000
Total Water Use (Normal Water Year) (Acre-Feet)	5,219,000	4,925,000	5,032,000	5,156,000	5,261,000	5,374,000

Source: MWD 2021

5.2.2 LOS ANGELES DEPARTMENT OF WATER AND POWER

The LADWP is the nation's second largest public water utility that services over 687,000 customers. LADWP's system has 323,820 AF of storage capacity and operates and maintains 7,340 miles of water pipeline. LADWP is the water supplier for the City of Los Angeles. LADWP currently serves the RSAs for all alignment alternatives, the design option, and the MSF.

Primary sources of water for the LADWP service area are the LAA, local groundwater, SWP (supplied by MWD), and CRA (supplied by MWD). Many of LADWP's traditional water supply sources are becoming increasingly constrained due to hydrologic variability, environmental regulations, and groundwater basin contamination. To lessen these constraints on supply resources, LADWP is investing in sustainable sources such as conservation, water use efficiency, water recycling, stormwater capture, and local groundwater development and remediation, while protecting its imported water supply. Over the last 20 years, demand has undergone a 29 percent reduction to a near record low of 487,591 AF between 2019 and 2020; the average annual water supply between the years 2016-2020 was 497,386 AF (Table 5-2).

TABLE 5-2. LADWP WATER SERVICE AREA DEMANDS AND POPULATION

	2020 (EXISTING)	2025 (PROJECTED)	2030 (PROJECTED)	2035 (PROJECTED)	2040 (PROJECTED)	2045 (PROJECTED)
Total Population (LADWP Service Area)	4,041,284	4,243,478	4,374,240	4,520,870	4,670,693	4,806,396
Total Water Use (Acre-Feet)	487,591	509,501	526,658	536,148	554,486	565,751

Source: LADWP 2021b

5.2.2.1 LOS ANGELES AQUEDUCT

Since its construction in the early 1900s, the LAA historically provided the vast majority of water for the city. Annual LAA deliveries are dependent on snowfall in the eastern Sierra Nevada. Years with abundant snowpack result in larger LAA water deliveries and reduced purchases of supplemental water from MWD.

At its peak in fiscal year (FY) 1983-84, the LAA delivered 531,729 AF to the residents of the City of Los Angeles. Concerns over environmental impacts have required the City of Los Angeles to reallocate approximately one-half of the LAA water supply to other uses within the Owens Valley and Mono Basin. Between 1992 and 2020, the City of Los Angeles provided approximately 177,000 AFY of water to supply a variety of environmental projects throughout the eastern Sierra Nevada. The cyclical nature of hydrology and environmental obligations has affected the LAA's annual deliveries to the City of Los Angeles over the last 30 years.

5.2.2.2 LOCAL GROUNDWATER

A key resource that the City of Los Angeles has relied upon as a major component of its local water supply portfolio is local groundwater. Between 2015 and 2020, local groundwater has provided approximately eight percent of the total water supply for Los Angeles, and since 1970 has provided up to 23 percent of the total supply during extended dry periods when imported supplies become impacted.

5.2.2.3 RECYCLED WATER

LADWP delivers tertiary quality recycled water to the Department of Recreation and Parks and currently serves approximately 179 sites in Los Angeles with recycled water for irrigation, industrial, and environmental beneficial uses. There are approximately 200 individual customer service accounts, with several projects containing multiple customer accounts at a single location. Recycled water produced for FY 2019/20 was 36,392 AFY, inclusive of municipal, industrial, and environmental reuse. All recycled water used within the City of Los Angeles undergoes, at a minimum, tertiary treatment and disinfection and meets or exceeds local and state requirements designed to ensure public safety. Treatment and water reuse occurs at the Hyperion Water Reclamation Plant in southwest Los Angeles.

5.2.2.4 MWD SUPPLY

As a wholesaler, MWD sells supplemental water to all of its 26 member agencies. LADWP is exclusively a retailer and has historically purchased supplemental imported supplies from MWD to meet City of Los Angeles demands. As a percentage of LADWP's total water supply, purchases of supplemental water from MWD were on average 42 percent between FY 2015/16 to FY 2019/20. LADWP aims to help improve regional supply reliability by reducing its dependence on purchased imported water through the development of local supplies.

5.2.3 CITY OF BEVERLY HILLS

The City of Beverly Hills currently serves the western side of the City of West Hollywood and the RSA for the proposed San Vicente/Santa Monica Station that would be located within the San Vicente–Fairfax Alignment Alternative. The service area is north of Beverly Boulevard, south of Sunset Boulevard, west of Huntley Drive, and east of North Doheny Drive. LADWP serves the portions of the City of West Hollywood, generally east of Huntley Drive.

The City of Beverly Hills's water service area is approximately 6.35 square miles and consists of the City of Beverly Hills and a portion of the City of West Hollywood, which is about 10 percent of the city's total water service area. Based on data from the Southern California Association of Governments (SCAG) and the California Department of Finance, the City of Beverly Hills's water service area population was 43,371 in 2020 (Table 5-3). The City of Beverly Hills obtains its water supply from two sources: imported surface water purchased from MWD and local groundwater extracted from the local Hollywood Basin. The City of Beverly Hills's construction of a new well in the La Brea Subarea of the Central Groundwater Basin would also provide an additional water source. Local groundwater sourced by wells is treated at the City of Beverly Hills' Foothill Water Treatment Plant before being distributed to the water system. The Foothill Water Treatment Plant completed additional construction in late 2021.

TABLE 5-3. CITY OF BEVERLY HILLS WATER SERVICE AREA DEMANDS AND POPULATION

	2020 (EXISTING)	2025 (PROJECTED)	2030 (PROJECTED)	2035 (PROJECTED)	2040 (PROJECTED)	2045 (PROJECTED)
Total Population (City of Beverly Hills Water Service Area)	43,371	44,176	44,618	45,214	45,712	46,279
Total Water Use (Acre-Feet)	9,565	10,053	10,523	10,993	11,463	11,933

Source: City Beverly Hills 2021

The City of Beverly Hills's primary source of water supply is imported water from MWD. From 2004, the year the Foothill Water Treatment Plant was placed into service, through 2014, the City of Beverly Hills purchased an average of 92 percent of its water from MWD. The Foothill Water Treatment Plant was then taken out of service in 2015 and completed additional construction in 2021. As a result, no groundwater production occurred between 2014 and 2021. As such, the City of Beverly Hills water demands were met solely by imported water from MWD.

5.2.4 CITY OF INGLEWOOD

City of Inglewood infrastructure exists within the eastern side of the MSF RSA but would not provide water services to the site. Historically the City of Inglewood's only source of water supply was local groundwater produced, owned, and operated by local wells.

5.3 SANITARY SEWER

5.3.1 CITY OF LOS ANGELES DISTRICT OF SANITATION

The three collection systems owned and operated by the City of Los Angeles convey wastewater via approximately 6,439 miles of gravity mains, 33 miles of force mains, and 46 pumping plants. Currently, an average wastewater flow rate of approximately 272 million gallons per day (MGD) is generated in the system. The three collection systems also convey the flows of 29 satellite sanitary districts to plants for treatment. The City of Los Angeles currently serves the RSAs related to all alignment alternatives and the design option.

For its wastewater treatment needs, the City of Los Angeles uses the Hyperion Treatment Plant, the Tillman Water Reclamation Plant, the Los Angeles Glendale Water Reclamation Plant, and the Terminal Island Treatment Plant. Two contract agency plants also treat some City of Los Angeles' flows: the Burbank Water Reclamation Plant and the Los Angeles County Joint Water Pollution Control Plant. The Hyperion Treatment System, which consists of the Hyperion Treatment Plant and the upstream Tillman Water Reclamation Plant and Los Angeles Glendale Water Reclamation Plant, provides most Los Angeles' treatment needs.

The alignment alternatives, the design option, and the MSF would be served by the Hyperion Treatment Plant, as further described in Section 5.3.1. The Hyperion Collection System has approximately 6,043 miles of gravity mains, 12 miles of force mains, and an average wastewater flow rate of 260 MGD. The Hyperion Treatment Plant has a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of approximately 850 MGD.

5.3.2 LOS ANGELES COUNTY SANITATION DISTRICTS

The Sanitation Districts of Los Angeles County (LACSD), which comprise 24 independent districts, provide wastewater treatment services to approximately 5.6 million residents in 78 cities and unincorporated areas in Los Angeles County. The City of West Hollywood is served by District 4.

5.3.2.1 CITY OF WEST HOLLYWOOD

The City of West Hollywood owns a sanitary sewer system composed of approximately 39.37 miles of gravity flow sewer collection lines (City of West Hollywood 2019). The collection system is composed of clay, gravity flow, eight-inch to 18-inch diameter collection lines, and approximately 885 precast concrete and brick manholes. The City of West Hollywood's sanitary sewer and stormwater conveyance systems are separate. The City of West Hollywood is a part of LA County Sanitation District 4. Its collection system conveys wastewater into the Hyperion Collection System and Hyperion Treatment Plant owned and operated by the City of Los Angeles. Capacity and average daily flow of the Hyperion Collection System are described in Section 5.3.1. The City of West Hollywood sewer collection lines currently serve the San Vicente–Fairfax and Fairfax Alignment Alternative RSAs.

5.3.2.2 CITY OF INGLEWOOD

Although City of Inglewood infrastructure exists within the eastern side of the MSF RSA, it would not provide sanitary sewer services to the site. The City of Inglewood has a collection sewer system comprised of 145 miles of gravity sewer pipes ranging from four inches to 15 inches in diameter (City of Inglewood 2015). Most sewers tie directly into LACSD's trunk sewer lines that cross through the City of Inglewood.

5.4 SOLID WASTE

5.4.1 CITY OF LOS ANGELES

Solid waste generated in the City of Los Angeles is hauled to materials recovery/transfer stations in the Los Angeles area and is managed by LASAN. Those transfer stations have numerous landfills where the solid waste produced is deposited. Once a landfill reaches its maximum accepted tonnage for the day, haulers are sent to another landfill to deposit solid waste. Most of the solid waste generated in the City of Los Angeles is disposed of at the Calabasas and Chiquita Canyon Landfills. LASAN currently serves the RSAs related to all alignment alternatives and the design option. Table 5-4 lists active and regulatory permitted solid waste facilities that serve the City of Los Angeles with their permitted capacity and anticipated closure dates.

The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles, 2013). The City of Los Angeles' Green New Deal Sustainable City pLAn seeks to achieve a landfill diversion rate of 90 percent by 2025, 95 percent by 2035, and 100 percent by 2050 (City of Los Angeles 2015). Targets from the Green New Deal Sustainable City pLAn include increasing construction and demolition waste recycling requirements to at least 80 percent. Two initiatives include the use of 100 percent recycled aggregate and the use of hot mix asphalt comprised of 50 percent recycled asphalt.

TABLE 5-4. CITY OF LOS ANGELES SOLID WASTE DISPOSAL LANDFILL CAPACITY

LANDFILL SITE NAME	LOCATION	MAX. PERMIT CAPACITY (CUBIC YARDS)	REMAINING CAPACITY (CUBIC YARDS)	MAX. THROUGHPUT (TONS/DAY)	REMAINING CAPACITY DATE	CLOSURE
Antelope Valley Public	Palmdale	30,200,000	17,911,225	5,548	10/31/2017	4/1/2044
Avenal Regional Landfill	Avenal	36,300,000	28,900,000	6,000	8/31/2020	3/31/2056
Azusa Land Reclamation Co. Landfill	Azusa	216,000	NA	8,000	NA	7/11/2018
Bakersfield Metropolitan (Bena) Secured Landfill Facility	Bakersfield	53,000,000	32,808,260	4,500	7/1/2013	4/1/2046

LANDFILL SITE NAME	LOCATION	MAX. PERMIT CAPACITY (CUBIC YARDS)	REMAINING CAPACITY (CUBIC YARDS)	MAX. THROUGHPUT (TONS/DAY)	REMAINING CAPACITY DATE	CLOSURE
Burbank Landfill Site	Burbank	5,933,365	5,174,362	240	1/1/2010	1/1/2053
El Sobrante Landfill	Corona	209,910,000	143,977,170	16,054	4/1/018	1/1/2051
Calabasas Landfill	Agoura	69,300,000	14,500,000	3,500	12/31/2014	1/1/2029
Chiquita Canyon Sanitary	Castaic	110,366,00	60,408,000	12,000	8/24/2018	1/1/2047
CWMI, KHF (MSW Landfill B-19)	Kettleman City	4,200,000	303,125	2,000	1/1/2013	12/31/2010
Kettleman Hills – B18 Nonhaz Codisposal	Kettleman City	10,700,000	15,600,000	9,000	2/25/2020	NA
Olinda Alpha Sanitary Landfill	Santa Ana	148,800,000	17,500,000	8,000	10/1/2020	12/31/2036
Prima Deshecha Landfill	San Juan Capistrano	172,100,000	134,300,000	4,000	11/1/2018	12/31/2102
Sunshine Canyon	Sylmar	140,900,000	77,900,000	12,100	5/31/2018	10/31/2037
Scholl Canyon	Glendale	58,900,000	9,900,000	3,400	4/7/2011	4/1/2030
Simi Valley Landfill & Recycling Center	Simi Valley	119,600,000	82,954,873	9,250	1/1/2019	3/31/2063
Toland Road Landfill	Santa Paula	30,000,000	16,068,864	2,864	12/3/2018	4/30/2033
Total		1,059,859,365	640,294,654	100,908		

Source: CalRecycle 2022

5.4.2 LOS ANGELES COUNTY

LACSD serves the solid waste management needs of a large portion of Los Angeles County (including the City of West Hollywood), with several solid waste landfills, recycling centers, materials recovery/transfer facilities, and waste to energy facilities. Los Angeles County Department of Public Work (LACDPW) annually monitors landfill capacity and disposal rates to ensure that there is sufficient 15-year disposal capacity for the 88 cities within the county and unincorporated communities (LACDPW 2020). LACSD currently serves the RSAs for the San Vicente–Fairfax and Fairfax Alignment Alternatives and the MSF.

The Los Angeles County Public Health Department manages enforcement and permitting for facilities that receive and dispose of solid waste. Table 5-5 lists the largest active and regulatory permitted solid waste facilities that serve Los Angeles County with their permitted capacity and anticipated closure dates.

TABLE 5-5. LOS ANGELES COUNTY SOLID WASTE DISPOSAL LANDFILL CAPACITY

LANDFILL SITE NAME	LOCATION	MAX. PERMIT CAPACITY (CUBIC YARDS)	REMAINING CAPACITY (CUBIC YARDS)	MAX. THROUGHPUT (TONS/DAY)	REMAINING CAPACITY DATE	CLOSURE
Antelope Valley Public	Palmdale	30,200,000	17,911,225	5,548	10/31/2017	4/1/2044
Burbank Landfill Site	Burbank	5,933,365	5,174,362	240	1/1/2010	1/1/2053
Calabasas Landfill	Agoura	69,300,000	14,500,000	3,500	12/31/2014	1/1/2029
Chiquita Canyon Sanitary	Castaic	110,366,00	60,408,000	12,000	8/24/2018	1/1/2047
Durbin Inert Debris Engineered Fill Site	Irwindale	1,248,000	NA	4,000	NA	12/31/2034
Hanson Aggregates	Irwindale	1,000,000	NA	4,000	NA	NA
Lancaster Landfill and Recycling Center	Lancaster	27,700,000	14,514,648	5,100	8/25/2012	3/1/2044
Peck Road Gravel Pit	Monrovia	3,500,000	3,500,000	4,000	6/1/2009	NA
Reliance Landfill	Irwindale	2,187,000	NA	6,000	NA	1/1/2025
Savage Canyon	Whittier	19,337,450	9,510,833	3,350	12/31/2011	12/31/2055
Scholl Canyon	Glendale	58,900,000	9,900,000	3,400	4/7/2011	4/1/2030
Sunshine Canyon	Sylmar	140,900,000	77,900,000	12,100	5/31/2018	10/31/2037
United Rock Products Pit #2	Irwindale	1,200,000	NA	3,288	NA	12/31/2061
Total		361,405,815	213,319,068	66,526		

Source: CalRecycle 2022

Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012 (Los Angeles County 2019); 60 percent of solid waste generated in the county was reused, recycled, or diverted from landfills and transformation facilities.

5.5 STORMWATER FACILITIES

The Los Angeles County Flood Control Act was adopted by the State Legislature in 1915 and established the Los Angeles County Flood Control District to provide flood protection, water conservation, recreation, and aesthetic enhancement within its boundaries. The Flood Control District is governed, as a separate entity, by the Los Angeles County Board of Supervisors.

In 1984, the Flood Control District entered into an operational agreement with the LACDPW, transferring planning and operational activities to the Department of Public Works. The Watershed Management Division is the planning and policy arm of the Flood Control District. The Public Works Flood Maintenance and Water Resources Divisions, respectively, oversee its maintenance and operational efforts.

The Flood Control District encompasses more than 2,700 square miles and approximately 2.1 million land parcels within six major watersheds. It includes drainage infrastructure within 86 incorporated cities as well as the unincorporated Los Angeles County areas. This includes 14 major dams and reservoirs, 483 miles of open channel, 27 spreading grounds, 3,330 miles of underground storm drains, 47 pump plants, 172 debris basins, 27 sediment placement sites, three seawater intrusion barriers, and an estimated 82,000 catch basins.

Urban runoff in the alignment alternatives, the design option, and the MSF RSAs is captured by gutters, catch basins, and culverts and conveyed into underground storm drain systems. The collected stormwater flows through a network of pipes and open channels and is then typically released directly into the Pacific Ocean. LACFCD stormwater infrastructure, including drains, channels, catch basins, and debris basins, is present throughout the alignment alternatives, the design option, and the MSF RSAs. Additionally, within city boundaries, local storm drain facilities are owned and operated by each city's public works departments. The LACFCD serves all RSAs for the alignment alternatives, the design option, and the MSF.

5.6 NATURAL GAS

The Southern California Gas Company (SoCalGas) provides natural gas service to the City of Los Angeles, City of West Hollywood, and City of Inglewood. Like other private utility suppliers, SoCalGas is regulated by the CPUC. Natural gas from SoCalGas is transported through gas mains located throughout urbanized areas that are maintained by the company. Natural gas comes from the ground and is considered a "fossil fuel" similar to coal and oil. As the City of Los Angeles, City of West Hollywood, and City of Inglewood experience urban growth, demand for natural gas will increase. SoCalGas serves all RSAs for the alignment alternatives, the design option, and the MSF. New facilities to support this growth would be provided by SoCalGas in accordance with demand.

5.7 TELECOMMUNICATIONS

Telecommunication services include fiber optics, phone, and television cable. Transmission of internet service is available through various broadband technologies such as fiber optic, cable, or fixed wireless. Fiber optic utility owners located within the RSAs for the alignment alternatives, the design option, and the MSF include AT&T, Spectrum, Airtouch Cellular, Zayo Communications, CenturyLink, and Verizon Business. Telephone service providers include Verizon and AT&T. The alignment alternatives, the design option, and the MSF RSAs are served by a variety of internet service providers and internet transmission infrastructure and have extensive mobile phone coverage.

5.8 ENERGY

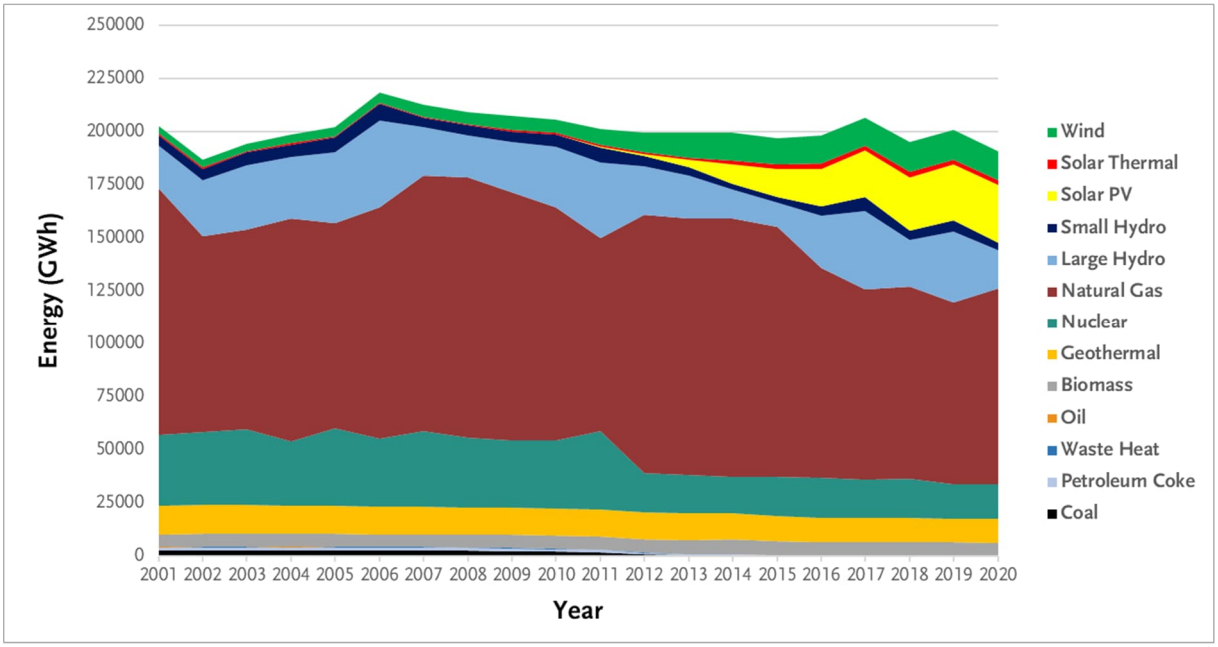
5.8.1 ENERGY CONSUMPTION

The California Energy Commission's (CEC) 2021 Integrated Energy Policy Report identifies that the state's electricity sector is adapting in response to climate policy and market changes. This includes decarbonizing the state's gas system as a fuel source for electric generation to meet air quality, climate, and other environmental goals. However, in 2021, total system generation for California was 277,764 gigawatt-hours (GWh), an increase of two percent, or 5,188 GWh, from 2020 (CEC 2021). The state experienced above average temperatures and experienced the fourth hottest year since 1895 as drought

conditions continued in the state. As a result, annual in-state hydroelectric generation fell by 32 percent from 2020 levels to 14,566 GWh (CEC 2021).

In recent years, California has witnessed a flat or downward trend in energy demand as a result of energy efficiency programs and installation of behind-the-meter solar photovoltaic (PV) systems[1] that directly displace utility-supplied generation. The total system electric generation for California in 2021 was slightly lower than 2019 levels, by 168 GWh (a reduction of 0.1 percent). Figure 5-1 depicts the change in the state's electricity system generation supply mix from 2001 to 2020, including a doubling of renewable supplies (CEC 2022).

FIGURE 5-1. IN-STATE ELECTRIC GENERATION BY FUEL TYPE (2011-2020)



Source: CEC 2022

5.8.2 LOS ANGELES DEPARTMENT OF WATER AND POWER

LADWP serves an area covering 465 square miles that includes over 4 million residents and 1.4 million power customers. As of 2021, energy sources consisted of 26 percent natural gas, 35 percent renewable sources, 19 percent coal, 14 percent nuclear, and seven percent hydroelectric resources (LADWP 2021b). Total daily generation capacity is over 7,880 megawatts (LADWP 2016). According to CEC data, LADWP customers consumed a total of approximately 20,891 million kilowatt hours (kWh) of electricity in 2021 (CEC 2021)

[1] Behind-the-meter PV systems provide a single building or facility with direct power, without passing through an electric meter.

5.8.3 SOUTHERN CALIFORNIA EDISON

Southern California Edison (SCE), a subsidiary of Edison International, provides electricity to approximately 15 million people in California and is one of the largest electric utilities in the United States (SCE 2019). SCE provides electricity to approximately 180 cities in 11 counties across Central and Southern California. The CEC reports on electricity consumption by planning area annually. The total electricity usage in the SCE planning area in 2021 was 81,128.9 million kWh (CEC 2021). As outlined in the 2021 Sustainability Report, SCE aims to deliver 100 percent carbon-free power to retail-sales customers by 2045 (SCE 2021). Sources for carbon-free energy include solar, geothermal, wind, hydro, biomass and biowaste, and nuclear energy.

CHAPTER 6 IMPACTS AND MITIGATION MEASURES

This section presents the evaluation of impacts to the existing network of utilities and services systems, as well as the corresponding mitigation measures, where applicable. Both construction and operational impacts are evaluated. Table 6-1 in Section 6.1.6 provides a summary of the impact conclusions.

Project measures are design features, best management practices, or other commitments that Metro implements as part of all alignment alternatives and stations, the design option, and the MSF to reduce or avoid environmental effects associated with the Project. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are identified here as part of the evaluation of the environmental impacts in this technical report.

There are no project measures specific to utilities and service systems that have been identified to date.

6.1 IMPACT ANALYSIS

6.1.1 IMPACT UTL-1: UTILITY RELOCATION OR CONSTRUCTION

Impact UTL-1: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

6.1.1.1 ALIGNMENT ALTERNATIVE 1: SAN VICENTE–FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the San Vicente–Fairfax Alignment Alternative would either relocate or protect-in-place utilities that would conflict with the cut-and-cover excavations, permanent structures, or the final roadway configuration. The locations of surface and subsurface utilities and their appurtenances (e.g., fire hydrants, electrical poles, telecommunication cabinet boxes) are illustrated in the Advanced Conceptual Engineering plans. Stormwater drainage, sanitary sewers, water lines, electric power lines, natural gas pipelines, oil pipelines, and telecommunications lines would require relocation. Electric power and telecommunication lines within the RSA are sometimes underground in duct banks and sometimes overhead on poles.

When construction of the alignment alternative would conflict with utilities, protecting-in-place is the method of choice because it is less disruptive to streets. However, if a utility mainline conflicts with the temporary engineering, permanent structure, or final roadway configuration, relocation of the utility line would be required. Utility relocations would be coordinated with the utility owner. Relocation of underground utilities would generally be conducted in the following sequence: excavation to the depth of the proposed utility line, laying of the utility line, tie-in, and then backfilling of the utility line. Utility relocations often entail temporary service interruptions during tie-in, which are typically planned for periods of minimum use (such as nights or weekends) when outages have the least effect on users. After the tie-in with the existing line is complete, the utility line that was in conflict would be removed.

Utilities within the proposed cut-and-cover station excavation, such as high-pressure water mains and gas lines, would be relocated around the construction area or would be lowered and supported in place by hanging from deck beams during construction. The contractor, in coordination with the utility owners, would determine whether to relocate or hang utility lines that cross the cut-and-cover excavation unless it was determined that the utility would be relocated as part of an Advanced Utility Relocation contract related to the Project.

Utility design criteria and operations would conform to applicable sections of the latest federal, state, and local codes and regulations, including ordinances, general regulations, and safety orders, as detailed in Chapter 3 and as required by law. Utility relocations would be designed and constructed in accordance with all applicable provisions set forth by uniform codes, city ordinances, public works standards and any agreement established between Metro and the utility agency.

In addition to utility relocations, new utility service feeds would be installed to accommodate construction needs. These include, but are not limited to, electrical service feeds, telecommunication and fiber service drops, sewer connections for temporary offices located at construction staging sites, and water service feeds for construction equipment, including the TBM. However, impacts of these new utility service feeds would be temporary and would not result in a substantial change in usage of the service providers in the RSA. Most of the LRT guideway tunnel would be constructed using a TBM that would require electricity. The electricity used to power the TBM would be sourced through a local substation and is not expected to exceed the capacity of the substation. Further discussion with LADWP following the advancement of project design would confirm that substation capacity is adequate for TBM demand.

Watering of construction staging sites would be implemented to reduce fugitive dust. Tunneling would require water for TBM mining (tunneling) and for jet grouting. Tunneling would require the use of slurry, or an engineered mixture of bentonite (a clay-like mineral), and water. The contractor would inject slurry into the front chamber of the TBM to balance soil and groundwater pressures and to carry the excavated material back to the surface. Similarly, the support-of-excavation for the underground stations would require jet grouting, which is typically used to create a groundwater barrier wall. Jet grouting is an engineered technique that injects water, air, and cement-based grout with high-pressure jets of water or grout to remove and loosen soil and replace the removed soil with cement-based grout. While alignment alternative construction would require water, water demand of this magnitude would be temporary and the amount of water consumed would be much less than the projected future capacity described in Table 5-1, Table 5-2, and Table 5-3 could accommodate and would not have a significant effect on water supply within the RSA. Construction of the Project would not use natural gas.

For the reasons described above, the San Vicente–Fairfax Alignment Alternative would not have significant environmental impacts related to relocation or construction of new or expanded water, sewer treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Therefore, construction of the San Vicente–Fairfax Alignment Alternative would have a less than significant impact.

OPERATIONAL IMPACTS

WATER SUPPLY FACILITIES

Less Than Significant Impact. Operation of the San Vicente–Fairfax Alignment Alternative would not substantially increase water usage within the RSA. Water would be needed for landscaping, irrigation, and to supply fire sprinkler systems, but the amount required for these operational activities would be much less than the projected future capacity (described in Table 5-1, Table 5-2, and Table 5-3) could accommodate and would not have a significant effect on water supply within the RSA. Existing water mains throughout the RSA would provide the infrastructure necessary to support Project-related water services. Therefore, operation of the San Vicente–Fairfax Alignment Alternative would result in a less than significant impact on water supply facilities.

WASTEWATER FACILITIES

Less than Significant Impact. Operation of the San Vicente–Fairfax Alignment Alternative would introduce minimal increases in wastewater treatment needs. The alignment alternative would connect to existing wastewater infrastructure for drainage of sump pumps during events when water accumulates in underground stations and the LRT guideway, as needed. Station operation and maintenance would also require connection to existing wastewater infrastructure to support station staff and cleaning. Such activities would minimally alter wastewater mainline flows since they would occur in limited quantities and/or intermittent intervals during events such as maintenance and rainfall. While the alignment alternative would require the construction of new service feeds, it would not require the expansion of any existing wastewater facilities. Therefore, the San Vicente–Fairfax Alignment Alternative would have a less than significant impact during operation.

STORMWATER FACILITIES

Less Than Significant Impact. Roadway and drainage improvements for the Project would occur at the areas surrounding the proposed stations. These areas are densely urbanized where existing stormwater infrastructure serves surrounding land uses and roadways. Roadway and drainage improvements for the Project would introduce minimal to no increases in impervious surfaces and would therefore minimally increase stormwater flow. Additionally, operation of the Project would require connection to stormwater facilities to protect Project-related equipment by removing any excess water accumulation at underground stations and the guideway. Such activities would minimally alter stormwater mainline flows since they would occur in intermittent intervals during events such as rainfall or initiation of the fire sprinkler systems, when and if needed. Operation of the San Vicente–Fairfax Alignment Alternative would comply with stormwater-related federal, local, and state requirements. Existing storm drain facilities have adequate capacity to accommodate stormwater flows associated with the Project. Therefore, operation of the San Vicente–Fairfax Alignment Alternative would result in a less than significant impact on stormwater drainage facilities.

ELECTRIC POWER

Less Than Significant Impact. Operation of the San Vicente–Fairfax Alignment Alternative would require electricity to power trains, lighting, and equipment (such as elevators, escalators, and switches) throughout the LRT guideway and underground stations. Operation of the alignment alternative would require 4,786,003 kWh of annual net electricity use to power the LRT (refer to KNE Energy Technical Report for additional details related to electricity consumption). LADWP delivered more than 20,891 million kWh of electricity to its service area in 2021 and would reasonably be able to accommodate this 0.023 percent increase in electricity use required by the alignment alternative (CEC 2021). Therefore, operation of the San Vicente–Fairfax Alignment Alternative would result in a less than significant impact on electric power facilities.

NATURAL GAS

No Impact. There would be no demand of natural gas under the operation of the San Vicente–Fairfax Alignment Alternative. Therefore, operation of the San Vicente–Fairfax Alignment Alternative would not require the expansion of any existing facilities or construction of any new facilities and would result in no impact on natural gas facilities.

TELECOMMUNICATION

Less Than Significant Impact. Telecommunication connections for a distributed antenna system would be installed at stations and in certain locations along the LRT guideway. A distributed antenna system is used to allow wireless signal coverage for cellular service and wi-fi in otherwise unserviceable areas, such as the underground stations and tunnel; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. The alignment alternative would install 60-foot-tall antenna towers in the vicinity of station portals. Such telecommunication connections would require tie-in to existing telecommunication infrastructure. However, since the alignment alternative is located in a densely urbanized setting where overhead and underground telecommunication infrastructure exists, such expansion to accommodate the antennas, additional cables, and utility cabinets would not cause significant environmental effects.

The Project would also require a Communication Transmission System to operate train signals and security cameras. The Communication Transmission System would be a new system installed within the tunnel and underground stations that would be owned and maintained by Metro. The Communication Transmission System would not require coordination with third-party utility owners nor cause significant environmental effects. Therefore, operation of the San Vicente–Fairfax Alignment Alternative would result in a less than significant impact on telecommunication facilities.

OPERATIONAL IMPACTS CONCLUSION

Less Than Significant Impact. Based on the impacts described in the above sections, operation of the San Vicente–Fairfax Alignment would not require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, telecommunications or natural gas

facilities, the construction or relocation of which could cause significant environmental effects. Therefore, overall, this alignment alternative would have a less than significant impact during operation.

6.1.1.2 ALIGNMENT ALTERNATIVE 2: FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the Fairfax Alignment Alternative would either relocate or protect-in-place utilities that would conflict with the cut-and-cover excavations, permanent structure, or final roadway configuration. The locations of surface and subsurface utilities and their appurtenances (e.g., fire hydrants, electrical poles, telecommunication cabinet boxes) are illustrated in the Advanced Conceptual Engineering plans.

Stormwater drainage, sanitary sewers, water lines, electric power lines, natural gas pipelines, oil pipelines, and telecommunications lines would require relocation. Electric power and telecommunication lines within the RSA are sometimes underground in duct banks and sometimes overhead on poles.

When construction of the alignment alternative would conflict with utilities, protecting-in-place is the method of choice, because it is less disruptive to existing streets. However, if a utility mainline conflicts with temporary engineering, permanent structures, or the final roadway configuration, relocation of the utility line would be required.

Utility relocations would be coordinated with the utility owner. Relocation of underground utilities would generally be conducted in the following sequence: excavation to the depth of the proposed utility line, laying of the utility line, tie-in, and then backfilling of the utility line. Utility relocations often entail temporary service interruptions during tie-in, which are typically planned for periods of minimum use (such as nights or weekends), when outages have the least effect on users. After the tie-in with the existing line is complete, the utility line that was in conflict would be removed.

Utilities within proposed cut-and-cover station excavation, such as high-pressure water mains and gas lines, would be relocated around the construction area or would be lowered and supported in place by hanging from deck beams during construction. The contractor, in coordination with the utility owners, would determine whether to relocate or hang utility lines that cross the cut-and-cover excavation unless it was determined that the utility would be relocated as part of an Advanced Utility Relocation contract related to the Project.

Utility design criteria and operations would conform to applicable sections of the latest federal, state, and local codes and regulations, including ordinances, general regulations, and safety orders, as detailed in Chapter 3 and as required by law. Utility relocations would be designed and constructed in accordance with all applicable provisions set forth by uniform codes, city ordinances, public works standards, and any agreement established between Metro and the utility agency.

In addition to utility relocations, new utility service feeds would be installed to accommodate construction needs. These include, but are not limited to, electrical service feeds, telecommunication and fiber service drops, sewer connections for temporary offices located at construction staging sites, and water service feeds for construction equipment, including the TBM. However, impacts of these new utility

service feeds would be temporary and would not result in a substantial change in usage of the service providers in the RSA. Most of the LRT guideway tunnel would be constructed using a TBM that would require electricity. The electricity used to power the TBM would be sourced through a local substation and is not expected to exceed the capacity of the substation. Further discussion with LADWP following the advancement of project design would confirm that substation capacity is adequate for TBM demand.

Watering of construction staging sites would be implemented to reduce fugitive dust. Tunneling would require water for TBM mining (tunneling) and for jet grouting. Tunneling would require the use of slurry, or an engineered mixture of bentonite (a clay-like mineral), and water. The contractor would inject slurry into the front chamber of the TBM to balance soil and groundwater pressures and to carry the excavated material back to the surface. Similarly, the support-of-excavation for the underground stations would require jet grouting, which is typically used to create a groundwater barrier wall. Jet grouting is an engineered technique that injects water, air, and cement-based grout with high-pressure jets of water or grout to remove and loosen soil and replace the removed soil with cement-based grout. While alignment alternative construction would require water, water demand of this magnitude would be temporary and the amount of water consumed would be much less than the projected future capacity described in Table 5-1 and Table 5-2 could accommodate and would not have a significant effect on the water supply within the RSA. Construction of the Project would not use natural gas.

For the reasons described above, the Fairfax Alignment Alternative would not have significant environmental impacts related to relocation or construction of new or expanded water, sewer treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Therefore, construction of the Fairfax Alignment Alternative would have a less than significant impact.

OPERATIONAL IMPACTS

WATER SUPPLY FACILITIES

Less Than Significant Impact. Operation of the Fairfax Alignment Alternative would not substantially increase water usage within the RSA. Water would be needed for landscaping, irrigation, and to supply fire sprinkler systems, but the amount required for these operational activities would be much less than the projected future capacity (described in Table 5-1 and Table 5-2) could accommodate and would not have a significant effect on the water supply within the RSA. Existing watermains throughout the RSA would provide the infrastructure necessary to support Project-related water services. Therefore, operation of the Fairfax Alignment Alternative would result in a less than significant impact on water supply facilities.

WASTEWATER FACILITIES

Less than Significant Impact. Operation of the Fairfax Alignment Alternative would introduce minimal increases in wastewater treatment needs. The alignment alternative would connect to existing wastewater infrastructure for drainage of sump pumps during events when water accumulates in underground stations and the LRT guideway, as needed. Station operation and maintenance would also require connection to existing wastewater infrastructure to support station staff and cleaning. Such activities would minimally alter wastewater mainline flows since they would occur in limited quantities

and/or intermittent intervals during events such as maintenance and rainfall. While the alignment alternative would require the construction of new service feeds, it would not require the expansion of any existing wastewater facilities. Therefore, the Fairfax Alignment Alternative would have a less than significant impact during operation.

STORMWATER FACILITIES

Less Than Significant Impact. Roadway and drainage improvements for the Project would occur at the areas surrounding the proposed stations. These areas are densely urbanized where existing stormwater infrastructure serves surrounding land uses and roadways. Roadway and drainage improvements for the Project would introduce minimal to no increases in impervious surfaces and would therefore minimally increase stormwater flow. Additionally, operation of the Project would require connection to stormwater facilities to protect Project-related equipment by removing any excess water accumulation at underground stations and the guideway. Such activities would minimally alter stormwater mainline flows since they would occur in intermittent intervals during events such as rainfall or fire sprinkler systems when and if needed. Operation of the Fairfax Alignment Alternative would comply with stormwater-related federal, local, and state requirements. Stormwater infrastructure that exists within the RSA already serves surrounding land uses and roadways. Existing storm drain infrastructure would adequately serve the additional demand generated by the Fairfax Alignment Alternative without requiring expansions. Therefore, operation of the Fairfax Alignment Alternative would result in a less than significant impact on stormwater drainage facilities.

ELECTRIC POWER

Less Than Significant Impact. Operation of the Fairfax Alignment Alternative would require electricity to power trains, lighting, and equipment (such as elevators, escalators, and switches) throughout the LRT guideway and underground stations. Operation of the alignment alternative would require 3,789,853 kWh of annual net electricity use to power the LRT (refer to the KNE Energy Technical Report for additional details related to electricity consumption). LADWP delivered more than 20,891 million kWh of electricity to its service area in 2021 and would reasonably be able to accommodate this 0.018 percent increase in electricity use required by the alignment alternative (CEC 2021). Therefore, operation of the Fairfax Alignment Alternative would result in a less than significant impact on electric power facilities.

NATURAL GAS

No Impact. There would be no demand of natural gas under operation of the Fairfax Alignment Alternative. Therefore, operation of the Fairfax Alignment Alternative would not require the expansion of any existing facilities or construction of any new facilities and would result in no impact on natural gas facilities.

TELECOMMUNICATION

Less Than Significant Impact. Telecommunication connections for a distributed antenna system would be installed at stations and in certain locations along the LRT guideway. A distributed antenna system is used to allow wireless signal coverage for cellular service and wi-fi in otherwise unserviceable areas, such as

the underground stations and tunnel; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. The alignment alternative would install 60-foot-tall antenna towers in the vicinity of station portals. Such telecommunication connections would require tie-in to existing telecommunication infrastructure. However, since the alignment alternative is located in a densely urbanized setting where overhead and underground telecommunication infrastructure exists, such expansion to accommodate the antennas, additional cables, and utility cabinets would not cause significant environmental effects.

The Project would also require a Communication Transmission System to operate train signals and security cameras. The Communication Transmission System would be a new system installed within the tunnel and underground stations that would be owned and maintained by Metro. The Communication Transmission System would not require coordination with third-party utility owners nor cause significant environmental effects. Therefore, operation of the Fairfax Alignment Alternative would result in a less than significant impact on telecommunication facilities.

OPERATIONAL IMPACTS CONCLUSION

Less Than Significant Impact. Based on the impacts described in the above sections, operation of the Fairfax Alignment would not require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Therefore, overall, this alignment alternative would have a less than significant impact during operation.

6.1.1.3 ALIGNMENT ALTERNATIVE 3: LA BREA

CONSTRUCTION IMPACTS

Less Than Significant Impact. The La Brea Alignment Alternative would either relocate or protect-in-place utilities that would conflict with cut-and-cover excavations, permanent structures, or the final roadway configuration. The locations of surface and subsurface utilities and their appurtenances (e.g., fire hydrants, electrical poles, telecommunication cabinet boxes) are illustrated in the Advanced Conceptual Engineering.

Stormwater drainage, sanitary sewers, water lines, electric power lines, natural gas pipelines, oil pipelines, and telecommunications lines would require relocation. Electric power and telecommunication lines within the RSA are sometimes underground in duct banks and sometimes overhead on poles.

When construction of the alignment alternative would conflict with utilities protecting-in-place is the method of choice because it is less disruptive to existing streets. However, if a utility mainline conflicts with the temporary engineering, permanent structure, or final roadway configuration, relocation of the utility line would be required.

Utility relocations would be coordinated with the utility owner. Relocation of underground utilities would generally be conducted in the following sequence: excavation to the depth of the proposed utility line, laying of the utility line, tie-in, and then backfilling of the utility line. Utility relocations often entail temporary service interruptions during tie-in, which are typically planned for periods of minimum use

(such as nights or weekends) when outages have the least effect on users. After the tie-in with the existing line is complete, the utility line that was in conflict would be removed.

Utilities within the proposed cut-and-cover station excavation, such as high-pressure water mains and gas lines, would be relocated around the construction area or would be lowered and supported in place by hanging from deck beams during construction. The contractor, in coordination with the utility owners, would determine whether to relocate or hang utility lines that cross the cut-and-cover excavation unless it was determined that the utility would be relocated as part of an Advanced Utility Relocation contract related to the Project.

Utility design criteria and operations would conform to applicable sections of the latest federal, state, and local codes and regulations, including ordinances, general regulations, and safety orders, as detailed in Chapter 3 and as required by law. Utility relocations would be designed and constructed in accordance with all applicable provisions set forth by uniform codes, city ordinances, public works standards and any agreement established between Metro and the utility agency.

In addition to utility relocations, new utility service feeds would be installed to accommodate construction needs. These include, but are not limited to, electrical service feeds, telecommunication and fiber service drops, sewer connections for temporary offices located at construction staging sites, and water service feeds for construction equipment, including the TBM. However, impacts of these new utility service feeds would be temporary and would not result in a substantial change in usage of the service providers in the RSA. Most of the LRT guideway tunnel would be constructed using a TBM that would require electricity. The electricity used to power the TBM would be sourced through a local substation and is not expected to exceed the capacity of the substation. Further discussion with LADWP following the advancement of project design would confirm that substation capacity is adequate for TBM demand.

Watering of construction staging sites would be implemented to reduce fugitive dust. Tunneling would require water for TBM mining (tunneling) and for jet grouting. Tunneling would require the use of slurry, or an engineered mixture of bentonite (a clay-like mineral), and water. The contractor would inject slurry into the front chamber of the TBM to balance soil and groundwater pressures and to carry the excavated material back to the surface. Similarly, the support-of-excavation for the underground stations would require jet grouting, which is typically used to create a groundwater barrier wall. Jet grouting is an engineered technique that injects water, air, and cement-based grout with high-pressure jets of water or grout to remove and loosen soil and replace the removed soil with cement-based grout. While alignment alternative construction would require water, water demand of this magnitude would be temporary and the amount of water consumed would be much less than the projected future capacity described in Table 5-1 and Table 5-2 could accommodate and would not have a significant effect on the water supply within the RSA. Construction of the Project would not use natural gas.

For the reasons described above, the La Brea Alignment Alternative would not have significant environmental impacts related to relocation or construction of new or expanded water, sewer treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Therefore, construction of the La Brea Alignment Alternative would have a less than significant impact.

OPERATIONAL IMPACTS

WATER SUPPLY FACILITIES

Less Than Significant Impact. Operation of the La Brea Alignment Alternative would not substantially increase water usage within the RSA. Water would be needed for landscaping, irrigation, and to supply fire sprinkler systems, but the amount required for these operational activities would be much less than the projected future capacity (described in Table 5-1 and Table 5-2) could accommodate and would not have a significant effect on water supply within the RSA. Existing watermains throughout the RSA would provide the infrastructure necessary to support Project-related water services. Therefore, operation of the La Brea Alignment Alternative would result in a less than significant impact on water supply facilities.

WASTEWATER FACILITIES

Less than Significant Impact. Operation of the La Brea Alignment Alternative would introduce minimal increases in wastewater treatment needs. The alignment alternative would connect to existing wastewater infrastructure for drainage of sump pumps during events when water accumulates in underground stations and the LRT guideway, as needed. Station operation and maintenance would also require connection to existing wastewater infrastructure to support station staff and cleaning. Such activities would minimally alter wastewater mainline flows since they would occur in limited quantities and/or intermittent intervals during events such as maintenance and rainfall. While the alignment alternative would require the construction of new service feeds, it would not require the expansion of any existing wastewater facilities. Therefore, the La Brea Alignment Alternative would have a less than significant impact during operation.

STORMWATER FACILITIES

Less Than Significant Impact. Roadway and drainage improvements for the Project would occur at the areas surrounding the proposed stations. These areas are densely urbanized where existing stormwater infrastructure serves surrounding land uses and roadways. Roadway and drainage improvements for the Project would introduce minimal to no increases in impervious surfaces and would therefore minimally increase stormwater flow. Additionally, operation of the Project would require connection to stormwater facilities to protect Project-related equipment by removing any excess water accumulation at underground stations and the guideway. Such activities would minimally alter stormwater mainline flows since they would occur in intermittent intervals during events such as rainfall or fire sprinkler systems when and if needed. Operation of the La Brea Alignment Alternative would comply with stormwater-related federal, local, and state requirements. Existing storm drain infrastructure would adequately serve the additional demand generated by the La Brea Alignment Alternative without requiring expansions. Therefore, operation of the La Brea Alignment Alternative would result in a less than significant impact on stormwater drainage facilities.

ELECTRIC POWER

Less Than Significant Impact. Operation of the La Brea Alignment Alternative would require electricity to power trains, lighting, and equipment (such as elevators, escalators, and switches) throughout the LRT

guideway and underground stations. Operation of the alignment alternative would require 2,969,648 kWh of annual net electricity use to power the LRT (refer to the KNE Energy Technical Report for additional details related to electricity consumption). LADWP delivered more than 20,891 million kWh of electricity to its service area in 2021 and would reasonably be able to accommodate this 0.014 percent increase in electricity use required by the alignment (CEC 2021). Therefore, operation of the La Brea Alignment Alternative would result in a less than significant impact on electric power facilities.

NATURAL GAS

No Impact. There would be no demand of natural gas for the La Brea Alignment Alternative. Therefore, operation of the La Brea Alignment Alternative would not require the expansion of any existing facilities or construction of any new facilities. There would be no impact on natural gas facilities.

TELECOMMUNICATION

Less Than Significant Impact. Telecommunication connections for a distributed antenna system would be installed at stations and in certain locations along the LRT guideway. A distributed antenna system is used to allow wireless signal coverage for cellular service and wi-fi in otherwise unserviceable areas, such as the underground stations and tunnel; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. The alignment alternative would install 60-foot-tall antenna towers in the vicinity of station portals. Such telecommunication connections would require tie-in to existing telecommunication infrastructure. However, since the alignment alternative is located in a densely urbanized setting where overhead and underground telecommunication infrastructure exists, such expansion to accommodate the antennas, additional cables, and utility cabinets would not cause significant environmental effects.

The Project would also require a Communication Transmission System to operate train signals and security cameras. The Communication Transmission System would be a new system installed within the tunnel and underground stations that would be owned and maintained by Metro. The Communication Transmission System would not require coordination with third-party utility owners nor cause significant environmental effects. Therefore, operation of the La Brea Alignment Alternative would result in a less than significant impact on telecommunication facilities.

OPERATIONAL IMPACTS CONCLUSION

Less Than Significant Impact. Based on the impacts described in the above sections, operation of the La Brea Alignment would not require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Therefore, this alignment alternative would have a less than significant impact during operation.

6.1.1.4 HOLLYWOOD BOWL DESIGN OPTION

CONSTRUCTION IMPACTS

Less Than Significant Impact. The Hollywood Bowl Design Option would use SEM for the construction of the proposed Hollywood Bowl Station instead of the cut-and-cover approach. It would not use TBM. Since excavation would not alter the street-level surface, utility hanging and relocations would not be necessary for the Hollywood Bowl Station excavation. Relocations would be anticipated for the build-out of the station and final configuration of the roadway. Utility relocations would be designed and constructed in accordance with all applicable provisions set forth by uniform codes, city ordinances, and public works standards. Therefore, relocation of utilities related to construction of the design option would result in a less than significant impact on water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications facilities.

Construction of the design option would have similar effects on utilities service and systems as described for the alignment alternatives and would not require significant construction of new facilities beyond those already addressed as part of the Project; therefore, construction of the design option would result in a less than significant impact on water, wastewater, stormwater, electric power, and telecommunication facilities. However, natural gas would not be used during construction of the design option and there would be no impact to natural gas facilities.

OPERATIONAL IMPACTS

WATER SUPPLY FACILITIES

Less Than Significant Impact. Operation of the Hollywood Bowl Design Option would not substantially increase water usage within the region. Water would be needed for landscaping, irrigation, and to supply fire sprinkler systems. The amount consumed would be significantly less than the projected future capacity (described in Table 5-1 and Table 5-2) could accommodate and would not have a significant effect on the water supply. Existing watermains throughout the design option RSA would provide the infrastructure necessary to connect to Project-related water services. Therefore, operation of the design option would not require the expansion of any existing facilities or construction of any new facilities and would result in a less than significant impact on water supply facilities.

WASTEWATER FACILITIES

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would introduce minimal increases in wastewater treatment needs. The design option would connect to existing wastewater infrastructure for drainage during events when water accumulates in underground stations and the LRT guideway, as needed. Station operation and maintenance would also require connection to existing wastewater infrastructure to support station staff and cleaning. Such activities would minimally alter wastewater mainline flows since they would occur in limited quantities and/or intermittent intervals during events such as maintenance and rainfall. While the design option would require the construction of new service feeds, it would not require the expansion of any existing wastewater facilities. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

STORMWATER FACILITIES

Less Than Significant Impact. Roadway and drainage improvements for the Hollywood Bowl Design Option would occur at the areas surrounding the proposed Hollywood Bowl Station. These areas are densely urbanized where existing stormwater infrastructure serves surrounding land uses and roadways. Roadway and drainage improvements for the design option would introduce minimal to no increases in impervious surfaces and would therefore minimally increase stormwater flow. Additionally, operation of the design option would require connection to stormwater facilities to protect Project-related equipment by removing any excess water accumulation at the underground station and the guideway. Such activities would minimally alter stormwater mainline flows since they would occur in intermittent intervals during events such as rainfall or fire sprinkler systems when and if needed. Existing storm drain infrastructure has adequate capacity to accommodate stormwater flows associated with the design option without requiring expansions. Operation of the design option would comply with stormwater-related federal, local, and state requirements. Therefore, operation of the design option would result in a less than significant impact on stormwater drainage facilities.

ELECTRIC POWER

Less Than Significant Impact. Operation of the Hollywood Bowl Design Option would require electricity to power trains, lighting, and equipment (such as elevators, escalators, and switches) throughout the additional LRT guideway and underground station. Operation of the design option would require 529,668 kWh of annual net electricity use to power the LRT (refer to the KNE Energy Technical Report for additional details related to electricity consumption). LADWP delivered more than 20,891 million kWh of electricity to its service area in 2021 and would reasonably be able to accommodate this 0.0025 percent increase in electricity use required by the design option (CEC 2021). Therefore, operation of the Hollywood Bowl Design Option would result in a less than significant impact on electric power facilities.

NATURAL GAS

No Impact. There would be no demand for natural gas for operation of the Hollywood Bowl Design Option. Therefore, operation of the design option would not require the expansion of any existing facilities or the construction of any new facilities, and there would be no impact on natural gas facilities.

TELECOMMUNICATION

Less Than Significant Impact. Minor telecommunication connections for a distributed antenna system would be installed at the station and in certain locations along the LRT guideway. A distributed antenna system is used to allow wireless signal coverage for cellular service and wi-fi in otherwise unserviceable areas, such as the underground stations and tunnel; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. The design option would install a 60-foot-tall antenna tower in the vicinity of the station portal. Such telecommunication connections would require tie-in to existing telecommunication infrastructure. However, since the design option is located in a densely urbanized setting where overhead and underground telecommunication infrastructure exists, such expansion to accommodate the antennas, additional cables, and utility cabinets would not cause significant environmental effects

The Project would also require a Communication Transmission System to operate train signals and security cameras. The Communication Transmission System would be a new system installed within the tunnel and underground station that would be owned and maintained by Metro. The Communication Transmission System would not require coordination with third-party utility owners nor cause significant environmental effects. Therefore, operation of the Hollywood Bowl Design Option would result in a less than significant impact on telecommunication facilities.

OPERATIONAL IMPACTS CONCLUSION

Less Than Significant Impact. Based on the impacts described in the above sections, operation of the Hollywood Bowl Design Option would not require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Therefore, overall, the design option would have a less than significant impact during operation.

6.1.1.5 MAINTENANCE AND STORAGE FACILITY

CONSTRUCTION IMPACTS

Less Than Significant Impact. Various new utility service feeds would be installed to accommodate construction and operation needs for the MSF. These include, but are not limited to, electrical service feeds and water service feeds for maintenance of the construction service yard. Natural gas would not be used during construction of the MSF. No expanded utility mainlines would be necessary for construction of the MSF. Therefore, construction of the MSF would result in a less than significant impact on water, wastewater treatment, stormwater drainage, electric power, and telecommunications facilities. However, natural gas would not be used during construction of the MSF and there would be no impact to natural gas facilities.

OPERATIONAL IMPACTS

WATER SUPPLY FACILITIES

Less Than Significant Impact. During operations, the MSF would consume water for landscaping irrigation, vehicle washing, and employee breakroom/kitchen uses. The MSF would be located within the MWD and LADWP service areas. Projected future demand within the service areas is described in Table 5-1 and Table 5-2. It is anticipated that operation of the MSF would result in a slight increase in water use; however, the amount consumed would be much less than the projected future capacity could accommodate and would not have a significant effect on the water supply. Therefore, operation of the MSF would result in a less than significant impact on water supply facilities.

WASTEWATER FACILITIES

Less Than Significant Impact. Operation of the MSF would produce wastewater related to washing light rail vehicles and use of employee restrooms. As described in Section 5.3, the City of Los Angeles would

have sufficient wastewater treatment capacity to serve the MSF because only a minimal amount of wastewater would be generated. Therefore, operation of the MSF would result in a less than significant impact on wastewater treatment facilities.

STORMWATER FACILITIES

Less Than Significant Impact. Roadway and drainage improvements would occur at the area surrounding the MSF. This area is densely urbanized, and existing stormwater infrastructure serves surrounding land uses and roadways. During operations, the MSF would introduce minimal to no impervious surfaces and would therefore minimally increase stormwater flow. Operation of the MSF would comply with stormwater-related federal, local, and state stormwater requirements. Existing storm drain facilities have adequate capacity to accommodate stormwater flows associated with the MSF. Therefore, operation of the MSF would result in a less than significant impact on stormwater drainage facilities.

ELECTRIC POWER

Less Than Significant Impact. Operation of the MSF would require electricity to power lighting and maintenance equipment and would require approximately 310,088 kWh of annual net electricity use. This would represent a 0.0015 percent increase in electricity use, which LADWP would reasonably be able to accommodate (CEC 2021). Therefore, operation of the MSF would not result in a less than significant impact on electric power facilities.

NATURAL GAS

No Impact. There would be no demand for natural gas for operation of the MSF. Therefore, operation of the MSF would not require the expansion of existing facilities or the construction of any new facilities; there would be no impact on natural gas.

TELECOMMUNICATION

Less Than Significant Impact. During operations, the MSF would use its own telecommunications infrastructure (e.g., server rooms, network equipment, cabling systems, intercom systems, phones). Therefore, operation of the MSF would result in a less than significant impact on telecommunication facilities.

OPERATIONAL IMPACTS CONCLUSION

Less Than Significant Impact. Based on the impacts described in the above sections, operation of the MSF would not require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Therefore, overall, the MSF would have a less than significant impact during operation.

6.1.2 IMPACT UTL-2: WATER SUPPLIES

Impact UTL-2: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

6.1.2.1 ALIGNMENT ALTERNATIVE 1: SAN VICENTE–FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. As discussed in Section 6.1.1, construction activities associated with the San Vicente–Fairfax Alignment Alternative would not substantially increase water usage. Construction needs include water service feeds for temporary offices located at construction staging sites. Tunneling would require water for TBM mining and jet grouting when needed. Watering of construction staging sites would be anticipated for dust control; the amount of water used for dust control would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would vary. Further, any water use would comply with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the San Vicente–Fairfax Alignment Alternative would be much less than the projected future capacity (described in Table 5-1 through Table 5-3) could accommodate and would not have a significant effect on the water supply. The increase in water use associated with the alignment alternative during construction would not significantly contribute to the overall projected increase in water use in MWD, LADWP, and the City of Beverly Hills' service areas compared to existing uses. MWD, LADWP, and the City of Beverly Hills have adequate water supplies to meet future demand and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b; City of Beverly Hills 2021). Future water supply demand in the UWMPs is based on SCAG's 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which accounts for the Project in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

For the reasons described above, construction activities would not substantially deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of the San Vicente–Fairfax Alignment Alternative would have a less than significant impact on water supplies.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the San Vicente–Fairfax Alignment Alternative would not substantially increase water usage. The 2020 UWMPs for MWD, LADWP, and the City of Beverly Hills considers population growth within the RSA in their projections of future water use demands within their service areas. The San Vicente–Fairfax Alignment Alternative would not result in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections.

Operational activities or features that would require long-term, permanent sources of water use include landscape irrigation and fire water systems if and when needed. This water demand would be a slight increase and would not affect water supplies. Further, any water use would comply with Metro's Water Use and Conservation Policy, which requires water efficiency and conservation methods to be adopted and maintained.

The increase in water use associated with operation of the San Vicente–Fairfax Alignment Alternative would not significantly contribute to the overall projected increase in water use in MWD, LADWP, and the City of Beverly Hills service areas compared to their existing uses. MWD, LADWP, and the City of Beverly Hills have adequate supplies to meet future demand and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b; City of Beverly Hills 2021). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for the Project in its project list (SCAG 2020b).

For the reasons described above, operation of the San Vicente–Fairfax Alignment Alternative would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of the San Vicente–Fairfax Alignment Alternative would have a less than significant impact on water supplies.

6.1.2.2 ALIGNMENT ALTERNATIVE 2: FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. As discussed in Section 6.1.1, implementation of the Fairfax Alignment Alternative would not substantially increase water usage during construction activities. Construction needs include water service feeds for temporary offices located at construction staging sites. Tunneling would require water for TBM mining and jet grouting when needed. Watering of construction staging sites would be anticipated for dust control. The amount of water used for dust control would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would be variable. Further, any water use would be in compliance with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the Fairfax Alignment Alternative would be significantly less than the projected future capacity (described in Table 5-1 and Table 5-2) would accommodate and would not have a significant effect on the water supply. The increase in water use for the Project during construction would not significantly contribute to the overall projected increase in water use in MWD and LADWP's service areas compared to existing uses. MWD and LADWP have adequate supplies to meet future demand and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for the Project in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

For the reasons described above, construction activities would not substantially deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of the Fairfax Alignment Alternative would have a less than significant impact on water supplies.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the Fairfax Alignment Alternative would not substantially increase water usage. The 2020 UWMPs for MWD and LADWP consider population growth within the RSA to project future water use demands within their service areas. The Fairfax Alignment Alternative would not result in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections.

Operational activities or features that would require long-term, permanent sources of water use include landscape irrigation and fire water systems if and when needed. This water demand would be a slight increase and would not affect water supplies. Further, any water use would be in compliance with Metro's Water Use and Conservation Policy, which requires water efficiency and conservation methods to be adopted and maintained.

The increase in water use at the Project site would not significantly contribute to the overall projected increase in water use in MWD and LADWP service areas compared to their existing uses. MWD and LADWP have adequate supplies to meet future demand and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b; City of Beverly Hills 2021). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for the Project in its project list (SCAG 2020b).

For the reasons described above, operation of the Fairfax Alignment Alternative would not substantially deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of the Fairfax Alignment Alternative would have a less than significant impact on water supplies.

6.1.2.3 ALIGNMENT ALTERNATIVE 3: LA BREA

CONSTRUCTION IMPACTS

Less Than Significant Impact. As discussed in Section 6.1.1, implementation of the La Brea Alignment Alternative would not substantially increase water usage during construction activities. Construction needs include water service feeds for temporary offices located at construction staging sites. Tunneling would require water for TBM mining and jet grouting when needed. Watering of construction staging sites would be anticipated for dust control. The amount of water used for dust control would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would be variable. Further, any water use would comply with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the La Brea Alignment Alternative would be significantly less than the projected future capacity (described in Table 5-1 and Table 5-2) could

accommodate and would not have a significant effect on the water supply. The increase in water use for the Project during construction would not significantly contribute to the overall projected increase in water use in MWD's and LADWP's service areas compared to existing uses. MWD and LADWP have adequate supplies to meet future demand and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for the Project in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

For the reasons described above, construction activities would not substantially deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of the La Brea Alignment Alternative would have a less than significant impact on water supplies.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the La Brea Alignment Alternative would not substantially increase water usage in municipal water use service areas. The 2020 UWMPs for MWD and LADWP consider the population growth within the RSA to project future water use demands within their service areas. The La Brea Alignment Alternative would not result in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections.

Operational activities or features that would require long-term, permanent sources of water use include landscape irrigation and fire water systems if and when needed. This water demand would be a slight increase and would not affect water supplies. Further, any water use would comply with Metro's Water Use and Conservation Policy, which requires water efficiency and conservation methods to be adopted and maintained.

The increase in water use at the Project site would not significantly contribute to the overall projected increase in water use in MWD and LADWP service areas compared to their existing uses. MWD and LADWP have adequate supplies to meet future demand and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b; City of Beverly Hills 2021). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for the Project in its project list (SCAG 2020b).

For the reasons described above, operation of the La Brea Alignment Alternative would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of the La Brea Alignment Alternative would have a less than significant impact on water supplies.

6.1.2.4 HOLLYWOOD BOWL DESIGN OPTION

CONSTRUCTION IMPACTS

Less Than Significant Impact. As discussed in Section 6.1.1, the Hollywood Bowl Design Option would not substantially increase water usage during construction activities. Tunneling would require water for SEM mining and jet grouting when needed. Any water use would comply with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the design option would be much less than the projected future capacity (shown in Table 5-1 and Table 5-2) could accommodate and would not have a significant effect on the water supply. The increase in water use during construction would not significantly contribute to the overall projected increase in water use in the LADWP service area compared to existing uses. LADWP has adequate supplies to meet future demand; water supply quantities are listed in the respective 2020 UWMP for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for the Project in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

For the reasons described above, construction activities would not substantially deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of the design option would have a less than significant impact on water supplies.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the Hollywood Bowl Design Option would not substantially increase water usage. The 2020 UWMPs for MWD and LADWP consider population growth within the RSA to project future water use demands within their service areas. The design option would not result in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections.

Operational activities or features for the Hollywood Bowl Design Option would require long-term, permanent sources of municipal water use include landscape irrigation and fire water systems. This water demand would be a slight increase and would not affect water supplies. Further, any water use would comply with Metro's Water Use and Conservation Policy, which requires water efficiency and conservation methods to be adopted and maintained.

The increase in water use at the Project site would not significantly contribute to the overall projected increase in water use in MWD and LADWP service areas compared to their existing uses. MWD and LADWP have adequate supplies to meet future demand and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for the Project in its project list (SCAG 2020b).

For the reasons described above, operation of the Hollywood Bowl Design Option would not substantially deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of the Hollywood Bowl Design Option would have a less than significant impact on water supplies.

6.1.2.5 MAINTENANCE AND STORAGE FACILITY

CONSTRUCTION IMPACTS

Less Than Significant Impact. New water utility service feeds would be installed to accommodate construction and operation of the MSF. The MSF would be located within the MWD and LADWP service areas. Construction needs include water service feeds for temporary offices located at construction

staging sites. Watering of construction staging sites would be needed for dust control. The amount of water used for dust control would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would vary. Further, any water use would comply with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the MSF would be much less than the projected future capacity could accommodate and would not have a significant effect on the water supply. Future demand within the service area is described in Table 5-1 and Table 5-2. The increase in water use during construction would not significantly contribute to the overall projected increase in water use in MWD and LADWP's service areas compared to existing uses. MWD and LADWP have adequate supplies to meet future normal, dry, or multiple dry years. Projected water supplies quantities are included in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021a). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for the Project in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

For the reasons described above, construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of the MSF would have a less than significant impact on water supplies.

OPERATIONAL IMPACTS

Less Than Significant Impact. During operation, the MSF would consume water for landscaping irrigation, vehicle washing, and employee breakroom/kitchen uses. The MSF would be located within the MWD and LADWP service areas. Operation of the MSF would result in a slight increase in water use; however, the amount consumed would be much less than the projected future capacity could accommodate and would not have a significant effect on the water supply. Future demand is described in Table 5-1 and Table 5-2 in Section 5.2.4.

Operation of the MSF would not substantially increase water usage in municipal water use service areas. The 2020 UWMPs for MWD and LADWP consider population growth within the RSA to project future water use demands within their service areas. The MSF would not result in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections. Water demand for the MSF would be a slight increase compared to existing conditions and would not affect water supplies. Further, any water use would comply with Metro's Water Use and Conservation Policy, which specifies that water efficiency and conservation methods be adopted and maintained.

The increase in water use for the MSF would not significantly contribute to the overall projected increase in water use in MWD's and LADWP's service areas compared to their existing uses. MWD and LADWP have adequate supplies to meet future demand, and water supplies are included in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021a). Future water supply demand

in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for the Project in its project list (SCAG 2020b).

For the reasons described above, operation of the MSF would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of the MSF would have a less than significant impact on water supplies.

6.1.3 IMPACT UTL-3: WASTEWATER FACILITIES

Impact UTL-3: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

6.1.3.1 ALIGNMENT ALTERNATIVE 1: SAN VICENTE–FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the San Vicente–Fairfax Alignment Alternative would generate wastewater through the use of temporary worker restrooms at field offices. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the San Vicente–Fairfax Alignment Alternative's projected demands. Wastewater generation rates would assume 120 gallons per day for each field office (City of Los Angeles 2019). The San Vicente–Fairfax Alignment Alternative would have a field office at each of the nine proposed stations during construction and would therefore have a generation rate of approximately 1,080 gallons per day, which is marginal to the existing capacity. The San Vicente–Fairfax Alignment Alternative's wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Project's projected demand. Therefore, construction of the San Vicente–Fairfax Alignment Alternative would result in a less than significant impact on wastewater capacity.

OPERATIONAL IMPACTS

Less than Significant Impact. The San Vicente–Fairfax Alignment Alternative would introduce minimal increases in wastewater treatment needs and would not require the expansion of any existing wastewater facilities. Therefore, the San Vicente–Fairfax Alignment Alternative would have a less than significant impact during operation.

6.1.3.2 ALIGNMENT ALTERNATIVE 2: FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the Fairfax Alignment Alternative would generate wastewater through the use of temporary worker restrooms at field offices. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of

850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the Fairfax Alignment Alternative's projected demands. Wastewater generation rates would assume 120 gallons per day for each field office (City of Los Angeles 2019). The Fairfax Alignment Alternative would have a field office at each of the seven proposed station during construction and would therefore have a generation rate of approximately 840 gallons per day, which is marginal to the Hyperion Treatment Plant's existing capacity. The Fairfax Alignment Alternative's wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Project's projected demand. Therefore, construction of the Fairfax Alignment Alternative would result in a less than significant impact on wastewater capacity.

OPERATIONAL IMPACTS

Less than Significant Impact. The Fairfax Alignment Alternative would introduce minimal increases in wastewater treatment needs and would not require the expansion of any existing wastewater facilities. Therefore, the Fairfax Alignment Alternative would have a less than significant impact during operation.

6.1.3.3 ALIGNMENT ALTERNATIVE 3: LA BREA

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the La Brea Alignment Alternative would generate wastewater through the use of temporary worker restrooms at field offices. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the La Brea Alignment Alternative's projected demands. Wastewater generation rates would assume 120 gallons per day for each field office (City of Los Angeles 2019). The La Brea Alignment Alternative would have a field office at each of the six proposed station during construction and would therefore have a generation rate of approximately 720 gallons per day, which is marginal to the Hyperion Treatment Plant's existing capacity. The La Brea Alignment Alternative's wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Project's projected demand. Therefore, construction of the La Brea Alignment Alternative would result in a less than significant impact on wastewater capacity.

OPERATIONAL IMPACTS

Less than Significant Impact. The La Brea Alignment Alternative would introduce minimal increases in wastewater treatment needs and would not require the expansion of any existing wastewater facilities. Therefore, the La Brea Alignment Alternative would have a less than significant impact during operation.

6.1.3.4 HOLLYWOOD BOWL DESIGN OPTION

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the Hollywood Bowl Design Option would generate wastewater through the use of temporary worker restrooms at field offices. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the design option's projected demands. Wastewater generation rates would assume 120 gallons per day for each field office (City of Los Angeles 2019). The design option would have a field office for the proposed Hollywood Bowl Station during construction and would therefore have a generation rate of approximately 120 gallons per day, which is marginal to the Hyperion Treatment Plant's existing capacity. The design option's wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Project's projected demand. Therefore, construction of the design option would result in a less than significant impact on wastewater capacity.

OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would introduce minimal increases in wastewater treatment needs and would not require the expansion of any existing wastewater facilities. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

6.1.3.5 MAINTENANCE AND STORAGE FACILITY

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the MSF would generate wastewater through the use of temporary worker restrooms at field offices. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the MSF's projected demands. Wastewater generation rates would assume 120 gallons per day for each field office (City of Los Angeles 2019). The MSF would have a field office during construction and would therefore have a generation rate of approximately 120 gallons per day, which is marginal to the Hyperion Treatment Plant's existing capacity. The MSF's wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Project's projected demand. Therefore, construction of the MSF would result in a less than significant impact on wastewater capacity.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the MSF would produce wastewater related to washing light rail vehicles and use of employee restrooms. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the MSF's projected demands. Wastewater demand would not result

in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Project's projected demand. Therefore, operation of the MSF would result in a less than significant impact on wastewater capacity.

6.1.4 IMPACT UTL-4: SOLID WASTE GENERATION

Impact UTL-4: Would the Project 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?

6.1.4.1 ALIGNMENT ALTERNATIVE 1: SAN VICENTE–FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the San Vicente–Fairfax Alignment Alternative would involve the generation and removal of solid waste to accommodate demolition and other construction activities. At the proposed stations where demolition of existing buildings is anticipated, generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. Demolition of structures containing hazardous materials such as asbestos and lead-based materials require specialized procedures and equipment and appropriately certified personnel.

For construction of underground guideway and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. With two TBMs, the San Vicente–Fairfax Alignment would generate the majority of its solid waste from spoils (excavated material from TBM construction activities). The Project will comply with the provisions set forth in Section 5.408.3 of the 2022 CALGreen Building code, which requires 100 percent of soils resulting primarily from land clearing to be reused or recycled. The Project will comply with Section 5.408.3 and some excavated soil would be used as backfill material on-site or reused. The remaining excavated soil would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction and demolition materials. Excavated material would be transported to local landfill site(s) if it is not suitable for fill or contains contaminated soils. As discussed in the KNE Hazards and Hazardous Materials Technical Report, transportation of hazardous materials would comply with laws and regulations governing hazardous materials transport. The cut-and-cover excavations would also involve construction of temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro, the City of Los Angeles, and Los Angeles County have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. The Los Angeles County construction and demolition program requires diverting at least 70 percent of construction and demolition waste under the Construction and Demolition Debris Recycling and Reuse Ordinance. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 5.408 of the 2022 CALGreen Building code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction

landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirement, whichever is more stringent. The Project would comply with the 2022 CALGreen Building Code and, therefore, would comply with Metro's Moving Beyond Sustainability Plan, which establishes the most stringent of the diversion rates discussed above and sets forth an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the San Vicente–Fairfax Alignment Alternative are shown in Table 5-4 and Table 5-5. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). As described above, tunneling activities would generate up to 750 cubic yards per day (approximately 1,215 tons[2]) from TBM spoils. Based on landfill capacity, the solid waste contribution to the landfills that serve the San Vicente–Fairfax Alignment Alternative would be far less than the allowed daily capacity. Construction of the San Vicente–Fairfax Alignment Alternative would not generate solid waste in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Based upon the analysis described above, construction of the San Vicente–Fairfax Alignment Alternative would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; therefore, construction of the San Vicente–Fairfax Alignment Alternative would have a less than significant impact related to solid waste generation.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the San Vicente–Fairfax Alignment Alternative would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users. Stations would include waste bins and recycle bins, but the disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals.

AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012 (Los Angeles County 2013). The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). Both the City of Los Angeles and Los Angeles County currently exceed AB 939's 50 percent diversion rate, and the Project would be required to participate in these efforts to minimize waste disposed of in landfills.

[2] TBM excavation rates were generated in cubic yards. Depending on soil conditions, TBM spoils would vary in density. This calculation assumes a density of 120 pounds per cubic foot for conversion into tons.

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the San Vicente–Fairfax Alignment Alternative are shown in Table 5-4 and Table 5-5. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution from the San Vicente–Fairfax Alignment Alternative to the landfills that serve the alignment alternative would be far less than the allowed daily capacity.

The disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Operation of the San Vicente–Fairfax Alignment Alternative would not result in a net increase in Project-related solid waste generation in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Based upon the analysis described above, operation of the San Vicente–Fairfax Alignment Alternative would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; therefore, operation of the San Vicente–Fairfax Alignment Alternative would result in a less than significant impact related to solid waste generation.

6.1.4.2 ALIGNMENT ALTERNATIVE 2: FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the Fairfax Alignment Alternative would involve the generation and removal of solid waste to accommodate demolition and construction activities. At the proposed stations where demolition of existing buildings is anticipated, generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. Demolition of structures containing hazardous materials such as asbestos and lead-based materials require specialized procedures and equipment and appropriately certified personnel.

For construction of underground guideway and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. With two TBMs, the Fairfax Alignment would generate the majority of its solid waste from spoils (excavated material from TBM construction activities) at an approximate rate of 750 cubic yards per day over the course of approximately 48 months. The Project will comply with the provisions set forth in Section 5.408.3 of the 2022 CALGreen Building code which requires 100 percent of soils resulting primarily from land clearing to be reused or recycled. The Project will comply with Section 5.408.3 and some excavated soil would be reused as backfill material on-site, the remaining excavated soil would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials. Excavated material would be transported to local landfill site(s) if it is not suitable for fill or contains contaminated soils. As discussed in the KNE Hazards and Hazardous Materials Technical Report, transportation of hazardous materials would comply with laws and regulations governing hazardous materials transport. The cut-and-cover excavations would

also involve construction of temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro, the City of Los Angeles, and Los Angeles County have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. Los Angeles County's construction and demolition program requires diverting at least 70 percent of construction and demolition waste under the Construction and Demolition Debris Recycling and Reuse Ordinance. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 5.408 of the 2022 CALGreen Building Code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirements, whichever are more stringent. The Project would comply with the 2022 CALGreen Building Code; therefore, would comply with Metro's Moving Beyond Sustainability Plan, which is the most stringent of the diversion rates discussed above and establishes an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the Fairfax Alignment Alternative are shown in Table 5-4 and Table 5-5. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). As described above, tunneling activities would generate up to 750 cubic yards per day (approximately 1,215 tons[3]) from TBM spoils. Based on landfill capacity, the solid waste contribution to the landfills that serve the Fairfax Alignment Alternative would be far less than the allowed daily capacity. Construction of the Fairfax Alignment Alternative would not generate solid waste in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Based upon the analysis described above, construction of the Fairfax Alignment Alternative would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; therefore, construction of the Fairfax Alignment Alternative would have a less than significant impact related to solid waste generation.

[3] TBM excavation rates were generated in cubic yards. Depending on soil conditions, TBM spoils would vary in density. This calculation assumes a density of 120 pounds per cubic foot for conversion into tons.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the Fairfax Alignment Alternative would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users. Stations would include waste bins and recycle bins. The disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals.

AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012 (Los Angeles County 2013). The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). Both the City of Los Angeles and Los Angeles County currently exceed AB 939's required 50 percent diversion rate, and the Project would be required to participate in these efforts to minimize waste disposed of in landfills.

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the Fairfax Alignment Alternative are shown in Table 5-4 and Table 5-5. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution from the Fairfax Alignment Alternative to the landfills that serve the alignment alternative would be far less than the allowed daily capacity.

The disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Operation of the Fairfax Alignment Alternative would not result in a net increase in Project-related solid waste generation in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, operation of the Fairfax Alignment Alternative would result in a less than significant impact related to solid waste generation.

6.1.4.3 ALIGNMENT ALTERNATIVE 3: LA BREA

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the La Brea Alignment Alternative would involve the generation and removal of solid waste to accommodate demolition and construction activities. At the proposed stations where demolition of existing buildings is anticipated, generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. Demolition of structures containing hazardous materials such as asbestos and lead-based materials require specialized procedures and equipment and appropriately certified personnel.

For construction of underground guideway and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. With two TBMs, the La Brea Alignment would generate the majority of its solid waste from spoils (excavated material from TBM construction activities) at an approximate rate of 750 cubic yards per day over the course of approximately 38 months.

The Project will comply with the provisions set forth in Section 5.408.3 of the 2022 CALGreen Building Code which requires 100 percent of soils resulting primarily from land clearing to be reused or recycled. The Project will comply with Section 5.408.3 and some excavated soil would be reused as backfill material on-site, the remaining excavated soil would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials. Excavated material would be transported to local landfill site(s) if it is not suitable for fill or contains contaminated soils. As discussed in the KNE Hazards and Hazardous Materials Technical Report, transportation of hazardous materials would comply with laws and regulations governing hazardous materials transport. The cut-and-cover excavations would also involve construction of temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro and the City of Los Angeles have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 5.408 of the 2022 CALGreen Building Code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirements, whichever is more stringent. The Project would comply with the 2022 CALGreen Building Code and, therefore, would comply with Metro's Moving Beyond Sustainability Plan, which establishes the most stringent of the diversion rates discussed above and sets forth an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles contracts with landfills to process solid waste. Landfills that would serve the La Brea Alignment Alternative are shown in Table 5-4. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). As described above, tunneling activities would generate up to 750 cubic yards per day (approximately 1,215 tons[4]) from TBM spoils. Based on landfill capacity, the solid waste contribution to the landfills that serve the La Brea Alignment Alternative would be far less than the allowed daily capacity. Construction of the La Brea Alignment Alternative would not generate solid waste in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

[4] TBM excavation rates were generated in cubic yards. Depending on soil conditions, TBM spoils would vary in density. This calculation assumes a density of 120 pounds per cubic foot for conversion into tons.

Based upon the analysis described above, construction of the La Brea Alignment Alternative would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; therefore, construction of the La Brea Alignment Alternative would have a less than significant impact related to solid waste generation.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the La Brea Alignment Alternative would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users. Stations would include waste bins and recycle bins, but the disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals.

AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). The City of Los Angeles currently exceeds AB 939's required 50 percent diversion rate, and the Project would be required to participate in these efforts to minimize waste disposed of in landfills.

The City of Los Angeles contracts with landfills to process solid waste. Landfills that would serve the La Brea Alignment Alternative are shown in Table 5-4. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution from the La Brea Alignment Alternative to the landfills that serve the alignment would be far less than the allowed daily capacity.

The disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Operation of the La Brea Alignment Alternative would not result in a net increase in Project-related solid waste generation in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Based upon the analysis described above, operation of the San Vicente–Fairfax Alignment Alternative would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; therefore, operation of the La Brea Alignment Alternative would result in a less than significant impact related to solid waste generation.

6.1.4.4 HOLLYWOOD BOWL DESIGN OPTION

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the Hollywood Bowl Design Option would involve the generation and removal of solid waste to accommodate demolition and construction activities. For construction of underground guideway and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. The Project would generate a majority of its solid waste from SEM activities. The Project will comply with the provisions set forth in Section 5.408.3 of the

2022 CALGreen Building Code, which requires 100 percent of soils resulting primarily from land clearing to be reused or recycled. The Project will comply with Section 5.408.3 and while some excavated soil would be reused as backfill material on-site, the remaining excavated soil would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials. The construction of the tunnel and station would also involve temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro and the City of Los Angeles have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 4.408 of the 2022 CALGreen Building Code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirements, whichever is more stringent. The Project would comply with the 2022 CALGreen Building Code and, therefore, would comply with Metro's Moving Beyond Sustainability Plan, which establishes the most stringent of the diversion rates discussed above and sets forth an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles contracts with landfills to process solid waste. Landfills that would serve the Project are shown in Table 5-4. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). The design option would result in an incremental and temporary increase in solid waste disposal at landfills and would generate solid waste that is marginal in comparison to the available landfill capacity. Based on landfill capacity, the solid waste contribution to the landfills that serve the design option would be far less than the allowed daily capacity. Construction of the design option would not generate solid waste in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Based upon the analysis described above, construction of the design option would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; therefore, construction of the design option would have a less than significant impact related to solid waste generation.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the Hollywood Bowl Design Option would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users. The station would include waste bins and recycle bins, but the disposal of solid waste collected at the station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals.

AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). The City of Los Angeles currently exceeds AB 939's required 50 percent diversion rate, and the Project would be required to participate in these efforts to minimize waste disposed of in landfills.

The City of Los Angeles contracts with landfills to process solid waste. Landfills that would serve the design option are shown in Table 5-4. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution from the design option would be far less than the allowed daily capacity.

The disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Operation of the design option would not result in a net increase in Project-related solid waste generation in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Based upon the analysis described above, operation of the design option would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; therefore, operation of the design option would result in a less than significant impact related to solid waste generation.

6.1.4.5 MAINTENANCE AND STORAGE FACILITY

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the MSF would involve the generation and removal of solid waste to accommodate demolition and other construction activities, including demolition of existing buildings. Generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. Demolition of structures containing hazardous materials such as asbestos and lead-based materials require specialized procedures and equipment and appropriately certified personnel. For construction of surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. Excavation associated with the MSF would also involve construction of temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro, the City of Los Angeles, and Los Angeles County have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. Los Angeles County's construction and demolition program requires diverting at least 70 percent of construction and demolition waste under the Construction and Demolition Debris Recycling and Reuse Ordinance. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 5.408 of

the 2022 CALGreen Building Code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirements, whichever is more stringent. The Project would comply with the 2022 CALGreen Building Code and, therefore, would comply with Metro's Moving Beyond Sustainability Plan, which establishes the most stringent of the diversion rates discussed above and sets forth an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles and Los Angeles County contracts with landfills to process solid waste. Landfills that would serve MSF construction are shown in Table 5-4 and Table 5-5. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Solid waste from the MSF would primarily consist of demolished building materials, which would abide to an 85 percent construction landfill diversion rate. The Project will comply with the provisions set forth in Section 5.408.3 of the 2022 CALGreen Building code which requires 100 percent of soils resulting primarily from land clearing to be reused or recycled. The MSF would result in an incremental and temporary increase in solid waste disposal at landfills and would generate waste that is marginal in comparison to the available landfill capacity. Based on landfill capacity, the solid waste contribution to the landfills that serve the MSF would be far less than the allowed daily capacity. Construction of the MSF would not generate solid waste in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Based upon the analysis described above, construction of the MSF would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; therefore, construction of the MSF would have a less than significant impact related to solid waste generation.

OPERATIONAL IMPACTS

Less Than Significant Impact. Operation of the MSF would generate small volumes of solid waste—product packaging, broken equipment, and site litter.

AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012 (Los Angeles County 2013). The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). Both the City of Los Angeles and Los Angeles County currently exceed AB 939's required 50 percent diversion rate, and the MSF would be required to participate in these efforts to minimize waste disposed of in landfills.

The City of Los Angeles and Los Angeles County contracts with landfills to process solid waste. Landfills that would serve the MSF are shown in Table 5-4 and Table 5-5. The maximum throughput columns show the landfills' design capacity, which cumulatively serves up to 66,526 tons per day for Los Angeles County

and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the small volume of solid waste contribution from the MSF to the landfills would be far less than the allowed daily capacity.

The disposal of solid waste collected at the MSF would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Operation of the MSF would not result in a net increase in Project-related solid waste generation in excess of state or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, operation of the MSF would result in a less than significant impact related to solid waste generation.

6.1.5 IMPACT UTL-5: SOLID WASTE DISPOSAL REGULATIONS

Impact UTL-5: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

6.1.5.1 ALIGNMENT ALTERNATIVE 1: SAN VICENTE–FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the San Vicente–Fairfax Alignment Alternative would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal, as outlined in Chapter 3. As discussed under Impact UTL-4, solid waste would be generated during construction of the San Vicente–Fairfax Alignment Alternative; however, Metro requires the contractor to comply with the most stringent applicable waste regulations. Therefore, construction of the San Vicente–Fairfax Alignment Alternative would result in a less than significant impact related to solid waste regulations.

OPERATIONAL IMPACTS

Less Than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011. Both jurisdictions currently exceed the required diversion rate, and the Project would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the San Vicente–Fairfax Alignment Alternative. Therefore, operation of the San Vicente–Fairfax Alignment Alternative would result in a less than significant impact.

6.1.5.2 ALIGNMENT ALTERNATIVE 2: FAIRFAX

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the Fairfax Alignment Alternative would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal, as outlined in Chapter 3. As discussed under Impact UTL-4, solid waste would be generated

during construction of the Fairfax Alignment Alternative; however, Metro requires the contractor to comply with the most stringent applicable waste regulations. Therefore, construction of the Fairfax Alignment Alternative would result in a less than significant impact related to solid waste regulations.

OPERATIONAL IMPACTS

Less Than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011. Both jurisdictions currently exceed the required diversion rate, and the Project would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the Fairfax Alignment Alternative. Therefore, operation of the Fairfax Alignment Alternative would result in a less than significant impact.

6.1.5.3 ALIGNMENT ALTERNATIVE 3: LA BREA

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the La Brea Alignment Alternative would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal, as outlined in Chapter 3. As discussed under Impact UTL-4, solid waste would be generated during construction of the La Brea Alignment Alternative; however, Metro requires the contractor to comply with the most stringent applicable waste regulations. Therefore, construction of the La Brea Alignment Alternative would result in a less than significant impact related to solid waste regulations.

OPERATIONAL IMPACTS

Less Than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011. The City of Los Angeles currently exceeds the required diversion rate, and the Project would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the La Brea Alignment Alternative. Therefore, operation of the La Brea Alignment Alternative would result in a less than significant impact.

6.1.5.4 HOLLYWOOD BOWL DESIGN OPTION

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the Hollywood Bowl Design Option would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal, as outlined in Chapter 3. As discussed under Impact UTL-4, solid waste would be generated during construction of the design option; however, Metro requires the contractor to comply with the

most stringent applicable waste regulations. Therefore, construction of the design option would result in a less than significant impact related to solid waste regulations.

OPERATIONAL IMPACTS

Less Than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011. The City of Los Angeles currently exceeds the required diversion rate, and the design option would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the design option. Therefore, operation of the design option would result in a less than significant impact.

6.1.5.5 MAINTENANCE AND STORAGE FACILITY

CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction of the MSF would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal, as outlined in Chapter 3. As discussed under Impact UTL-4, solid waste would be generated during construction of the MSF; however, Metro requires the contractor to comply with the most stringent applicable waste regulations. Therefore, construction of the MSF would result in a less than significant impact related to solid waste regulations.

OPERATIONAL IMPACTS

Less Than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011. Both jurisdictions currently exceed the required diversion rate, and the Project would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the MSF. Therefore, the operation of the MSF would result in a less than significant impact.

6.1.6 SUMMARY OF IMPACT CONCLUSIONS

Table 6-1 provides a summary of the impact conclusions discussed in this section.

TABLE 6-1. IMPACT SUMMARY CONCLUSION TABLE

IMPACT SIGNIFICANCE THRESHOLD	IMPACT CONCLUSION				
	ALIGNMENT ALTERNATIVE 1: SAN VICENTE–FAIRFAX	ALIGNMENT ALTERNATIVE 2: FAIRFAX	ALIGNMENT ALTERNATIVE 3: LA BREA	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact UTL-1: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant
Impact UTL-2: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant
IMPACT UTL-3: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant

IMPACT SIGNIFICANCE THRESHOLD	IMPACT CONCLUSION				
	ALIGNMENT ALTERNATIVE 1: SAN VICENTE–FAIRFAX	ALIGNMENT ALTERNATIVE 2: FAIRFAX	ALIGNMENT ALTERNATIVE 3: LA BREA	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact UTL-4: Would the Project 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?	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant
Impact UTL-5: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant	Construction: Less Than Significant Operation: Less Than Significant

6.2 MITIGATION MEASURES

As the impact analysis in Section 6.1 demonstrates, construction and operation of any of the alignment alternatives and stations, design option, and the MSF would result in either no impact or a less than significant impact related to utilities and service systems. Therefore, no mitigation is required under CEQA.

CHAPTER 7 CUMULATIVE IMPACTS

7.1 INTRODUCTION

Under the state CEQA Guidelines, cumulative impacts are defined as two or more individual impacts that, when considered together, are considerable or would compound and increase other environmental impacts (Section 15355). These cumulative impacts must be discussed in an EIR when the project's incremental effect is "cumulatively considerable" (Section 15130). "Cumulatively considerable" is defined as when the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (Section 15065(a)(3)).

CEQA Guidelines Section 15130(b)(1) includes two methodology approaches for assessing cumulative impacts. One approach is a "list of past, present, and probable future projects producing related or cumulative impacts" (CEQA Guidelines Section 15130(b)(1)(A)). The other approach is a "summary of projections contained in an adopted local, regional, or statewide plan, or related document, that describes or evaluates conditions contributing to the cumulative effect" (CEQA Guidelines Section 15030 (b)(1)(B)). For the purposes of this analysis, the latter approach is used due to the long Project implementation time. The forecasted Project completion timeframe is in the mid- to late-2040s based on Metro Measure M funding. Due to the long-term nature of the Project's implementation, a list of land use and transportation projects is insufficient for the cumulative analysis since the currently known projects would be completed and operational by the Project's forecasted completion. In addition, it is highly likely many additional projects will be proposed and constructed between now and project implementation in 20 years; therefore, any project list developed now would be incomplete and incorrect.

The SCAG 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Plan is the adopted long-range forecast for population, households, and employment within the six-county Southern California region, which includes all Project elements. The Project is also included in the SCAG 2020 RTP/SCS Plan, as well as Metro's 2020 Long Range Transportation Plan. The RTP/SCS was adopted in 2020 and proposes land use and transportation strategies to improve mobility options and achieve a more sustainable growth pattern (SCAG 2020). SCAG worked in close coordination with decision-makers and the public across multiple jurisdictions throughout the SCAG region to create the plan. The population, household, and employment growth projections from this plan are used to assess regional growth and its cumulative impact within the vicinity of the Project.

For the cumulative analysis, the RSA is defined as a half-mile radius from the stations, the design option, and the MSF. The half-mile radius is used for all resources to ensure consistency in evaluating cumulative effects. Table 7-1 shows the projected net growth in population, households, and employment between 2019 and 2045 for a half-mile radius from all Project stations, the design option, and the MSF. The data in the table were calculated by merging the SCAG 2020 RTP/SCS growth projections with the SCAG Tier 2 Transportation Analysis Zone boundaries for Los Angeles County, then assessed for a half-mile radius around the stations, the design option, and the MSF. The data show the projected growth from transportation and development projects, as well as associated infrastructure, that when combined with the Project's construction and operation, could result in cumulative effects.

TABLE 7-1. SCAG PROJECTED PERCENT GROWTH FOR HALF-MILE BUFFER AREAS, 2019-2045

HALF-MILE BUFFER AREA	POPULATION % GROWTH	HOUSEHOLD % GROWTH	EMPLOYMENT % GROWTH
STATIONS			
Expo/Crenshaw	46.0	65.9	26.4
Crenshaw/Adams	35.6	56.3	19.6
Midtown Crossing	20.2	33.1	21.1
Wilshire/Fairfax	19.8	21.2	6.2
Fairfax/3rd	21.9	23.1	6.5
La Cienega/Beverly	30.7	31.3	6.1
San Vicente/Santa Monica	11.5	11.4	46.2
Fairfax/Santa Monica	7.2	7.7	49.5
La Brea/Santa Monica	16.0	17.2	42.6
Hollywood/Highland	16.2	15.0	3.0
Wilshire/La Brea	22.8	24.3	9.4
La Brea/Beverly	17.9	24.5	14.5
DESIGN OPTION			
Hollywood Bowl Design Option	30.4	29.0	17.4
MAINTENANCE AND STORAGE FACILITY			
MSF	14.0	15.9	9.9

Source: SCAG 2020 RTP/SCS Growth Forecast
Note: MSF = maintenance and storage facility

7.2 CUMULATIVE IMPACTS

7.2.1 ALIGNMENTS AND STATIONS

7.2.1.1 WATER SUPPLY FACILITIES

The geographic context of the alignment alternatives for cumulative water supply impacts is the MWD, LADWP, and the City of Beverly Hills service areas. Development of past projects, other current projects, and probable future projects within these service areas would increase demand for water due to net increases in population, square footage, and intensity of uses. Table 5-1 through Table 5-3 identify future water demands for each service provider. Implementation of the Project would not substantially increase water usage within the geographical context. MWD, LADWP, and the City of Beverly Hills, through their respective 2020 UWMPs, have indicated they can accommodate the additional demand for the Project in addition to future growth assumed in the UWMPs. In addition, the implementation of conservation measures on a project-specific basis and water shortage contingency plans would reduce additional water demand. Past projects, other current projects, and probable future projects would be required to adhere to state and local water regulations and policies. Therefore, the Project would not be cumulatively considerable, and the cumulative impact to water supply facilities would be less than significant.

7.2.1.2 WASTEWATER FACILITIES

The geographical context of the alignment alternatives for cumulative impacts related to wastewater is the service areas of the City of Los Angeles District of Sanitation, the Los Angeles County Sanitary District, and the Hyperion Treatment Plant. Development of past projects, other current projects, and probable future projects could expand existing infrastructure and/or increase the need for wastewater treatment facilities. This increase in wastewater treatment facilities would comply with wastewater-related federal, local, and state requirements. Implementation of the Project would not substantially increase wastewater treatment demand at the Hyperion Treatment Plant or require expansion of infrastructure by the City of Los Angeles District of Sanitation or the Los Angeles County Sanitary District. Therefore, the Project would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded wastewater facilities would be less than significant.

7.2.1.3 STORMWATER FACILITIES

The geographical context of the alignment alternatives for cumulative impacts related to stormwater is the service areas of the LACFCD. Development of past projects, other current projects, and probable future projects would comply with stormwater-related federal, local, and state regulations and policies. The existing channel and associated stormwater drains are adequate to accommodate additional stormwater flows from implementation of the Project. Infrastructure exists in the City of Los Angeles, City of West Hollywood, and Los Angeles County. If new stormwater drainage facilities are required, they would be required to adhere to existing regulations. Therefore, the Project would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded stormwater facilities would be less than significant.

7.2.1.4 ELECTRIC POWER

The geographic context of the alignment alternatives for cumulative impacts related to electric power is the LADWP and SCE service areas. The amount of electric power consumed by the Project combined with past projects, other current projects, and probable future projects would be significantly less than the capacity described in Section 5.8.The Project would not be cumulatively considerable, and the cumulative impact related to the need for electric power would be less than significant.

7.2.1.5 TELECOMMUNICATION

With regard to telecommunication cumulative impacts, the geographic context for the alignment alternatives is the service areas of the telecommunication providers within the City of Los Angeles and the City of West Hollywood. Telecommunication facilities are present within the geographic area surrounding the Project and would be available for other current projects and probable future projects. If new telecommunication facilities are required, they would be installed to the regulations described in Section 3.2.4. The Project would not be cumulatively considerable, and the cumulative impact related to the supply of telecommunication services and the need for additional or expanded facilities would be less than significant.

7.2.1.6 NATURAL GAS

There would be no demand for natural gas from the alignment alternatives and stations. Therefore, the Project's contribution would not be cumulatively considerable, and there would be no cumulative impact related to the supply of natural gas and the need for additional or expanded facilities.

7.2.1.7 SOLID WASTE

The geographic context of the alignment alternatives for the analysis of cumulative solid waste impacts is the area serviced by the City of Los Angeles and Los Angeles County. The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the Project are shown in Table 5-4 and Table 5-5. The Project would generate minimal solid waste during operation, and solid waste generated during construction would adhere to state and local regulations. Development of the Project and past, present, and probable future projects could cumulatively increase demands on solid waste facilities. While indicated landfills may reach capacity in unidentified future years, there is no indication that would be an existing significant cumulative impact to regional landfill capacity. Therefore, the Project would not create demand for solid waste services that exceed the capabilities of the local waste management system. Consequently, cumulative impacts associated with solid waste would be considered less than significant.

7.2.2 HOLLYWOOD BOWL DESIGN OPTION

7.2.2.1 WATER SUPPLY FACILITIES

The geographic context of the Hollywood Bowl Design Option for cumulative water supply impacts is the MWD and LADWP service areas. Development of past projects, other current projects, and probable future projects within these service areas would increase demand for water due to net increases in population, square footage, and intensity of uses. Table 5-1 and Table 5-2 identify future water demands for each service provider. Implementation of the Hollywood Bowl Design Option would not substantially increase water usage within the geographical context. MWD and LADWP, through their respective 2020 UWMPs, have indicated they can accommodate the additional demand for the design option as well as the future growth assumed in the UWMPs. In addition, implementation of conservation measures on a project-specific basis and water shortage contingency plans would reduce additional water demand. Future development would be required to adhere to state and local water regulations and policies. The deign option would be required to adhere to state and local water regulations and policies. Therefore, the design option would not be cumulatively considerable, and the cumulative impact to the water supply would be less than significant.

7.2.2.2 SEWER WASTEWATER FACILITIES

There would be no demand of wastewater for the design option. Therefore, the design option's contribution would not be cumulatively considerable, and there would be no cumulative impact related to the supply of wastewater and the need for additional or expanded facilities.

7.2.2.3 STORMWATER FACILITIES

The geographical context of the design option for cumulative impacts related to stormwater is the service areas of the LACFCD. Development of cumulative past projects, other current projects, and probable future projects would comply with stormwater-related federal, local, and state regulations and policies. The existing channel and associated stormwater drains are adequate to accommodate additional stormwater flows from the implementation of the design option. If new stormwater drainage facilities are required, they would be required to adhere to existing regulations. Therefore, the design option would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded stormwater facilities would be less than significant.

7.2.2.4 ELECTRIC POWER

The geographic context of the design option for cumulative impacts related to electric power is the LADWP service area. The amount of electric power consumed by the design option combined with past projects, other current projects, and probable future projects would be significantly less than the capacity described in Section 5.8. The design option would not be cumulatively considerable, and the cumulative impact related to the need for electric power would be less than significant.

7.2.2.5 NATURAL GAS

There would be no demand for natural gas from the design option. Therefore, the design option's contribution would not be cumulatively considerable, and there would be no cumulative impact related to the supply of natural gas and the need for additional or expanded facilities.

7.2.2.6 SOLID WASTE

The geographic context of the design option for cumulative solid waste impacts is the area serviced by the City of Los Angeles. The City of Los Angeles contracts with landfills to process solid waste. Landfills that would serve the design option are listed in Table 5-4. The design option would generate minimal solid waste during operational activities, and solid waste generated during construction activities would adhere to state and local regulations. Development of the design option and past, present, and probable future projects could cumulatively increase demands on solid waste facilities. While indicated landfills may reach capacity in unidentified future years, there is no indication that would be an existing significant cumulative impact to regional landfill capacity. Therefore, the design option would not create demands for solid waste services that would exceed the capabilities of the local waste management system. Cumulative impacts associated with solid waste would be considered less than significant.

7.2.3 MAINTENANCE AND STORAGE FACILITY

7.2.3.1 WATER SUPPLY FACILITIES

The geographic context of the MSF for cumulative water supply impacts is the MWD and LADWP service areas. Development of past projects, other current projects, and probable future projects within these service areas would increase demand for water due to net increases in population, square footage, and

intensity of uses. Table 5-1 and Table 5-2 identify future water demands for the MSF. Implementation of the MSF would not substantially increase water usage within its geographical context. MWD and LADWP, through their respective 2020 UWMPs, have indicated they can accommodate the additional demand in addition to future growth assumed in the UWMPs. In addition, the implementation of conservation measures on a project-specific basis and water shortage contingency plans would reduce additional water demand. Future development would be required to adhere to state and local water regulations and policies. Therefore, the MSF would not be cumulatively considerable, and the cumulative impact to the water supply would be less than significant.

7.2.3.2 WASTEWATER FACILITIES

The geographic context of the MSF for cumulative impacts related to wastewater is the service areas of the City of Los Angeles and the Hyperion Treatment Plant. Development of past projects, other current projects, and probable future projects could increase the need for wastewater treatment facilities. This increase in wastewater treatment facilities would comply with wastewater-related federal, local, and state requirements. Implementation of the MSF would not substantially increase wastewater treatment demand at the Hyperion Treatment Plant or require expansion of infrastructure by the City of Los Angeles District of Sanitation or the Los Angeles County Sanitary District. Therefore, the MSF would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded wastewater facilities would be less than significant.

7.2.3.3 STORMWATER FACILITIES

The geographical context of the MSF for cumulative impacts related to wastewater is the service areas of the LACFCD. Development of past projects, other current projects, and probable future projects would comply with stormwater-related federal, local, and state regulations and policies. The existing channel and associated stormwater drains are adequate to accommodate additional stormwater flows from implementation of the MSF. Infrastructure exists in Los Angeles County. If new stormwater drainage facilities are needed, they would be required to adhere to existing regulations. Therefore, the MSF would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded stormwater facilities would be less than significant.

7.2.3.4 ELECTRIC POWER

The geographic context of the MSF for cumulative impacts related to electric power is the SCE service area. The amount of electric power consumed would be significantly less than the projected capacity described in Section 5.8. The MSF would not be cumulatively considerable, and the cumulative impact related to the need for electric power would be less than significant.

7.2.3.5 NATURAL GAS

There would be no demand for natural gas from the MSF. Therefore, the MSF's contribution would not be cumulatively considerable, and there would be no cumulative impact related to the supply of natural gas and the need for additional or expanded facilities.

7.2.3.6 SOLID WASTE

The geographic context of the MSF for the analysis of cumulative solid waste impacts is the area serviced by Los Angeles County. Landfills that would serve the MSF are shown in Table 5-5. The MSF would generate minimal solid waste during operation, and solid waste generated during construction would adhere to state and local regulations. Development of the MSF and past, present, and probable future projects could cumulatively increase demands on solid waste facilities. While indicated landfills may reach capacity in unidentified future years, there is no indication that would be an existing significant cumulative impact to regional landfill capacity. Therefore, the MSF would not create demands for solid waste services that exceed the capabilities of the local waste management system. Consequently, cumulative impacts associated with solid waste would be less than significant.

7.3 CUMULATIVE MITIGATION MEASURES

The Project's effects on utilities and service systems for the alignment alternatives and stations, design option, and MSF would not be cumulatively considerable. Therefore, no mitigation is required under CEQA.

CHAPTER 8 REFERENCES

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