APPENDIX L

HYDROLOGY AND WATER QUALITY TECHNICAL STUDY

AECOM

Hydrology and Water Quality Technical Study

Los Angeles Aerial Rapid Transit Project
Los Angeles, California

September 2022

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Executive Summary

This Hydrology and Water Quality Technical Study (Study) assesses the potential impacts of the proposed Los Angeles Aerial Rapid Transit Project (the proposed Project) on surface and groundwater hydrology and water quality. The proposed Project study area is located within the Los Angeles River watershed. Surface water resources in the vicinity of the proposed Project study area comprise the Los Angeles River and local runoff, which discharges to the Los Angeles River. The proposed Project study area is in the Central Subbasin (basin number 4-11.04; Central Basin) of the Coastal Plain of Los Angeles Groundwater Basin (basin number 4-11), within the South Coast Hydrologic Region.

Groundwater levels in the proposed Project study area range from depths of approximately 20 to 60 feet below ground surface (bgs). The groundwater in the portions of the Central Basin is known to contain elevated levels of total dissolved solids (TDS), volatile organic compounds (VOCs), perchlorate, nitrate, iron, manganese, and chromium. The Central Basin was adjudicated in 1965, and the judgement was subsequently amended in 1991.

During construction activities, the potential exists for the proposed Project to violate water quality standards, waste discharge requirements, and/or substantially degrade surface or groundwater quality during construction and operation. During construction activities involving ground-disturbing activities, uncontrolled erosion and discharge of sediments and other potential pollutants could result in adverse effects to water quality in the Los Angeles River, violating water quality standards and waste discharge requirements, and substantial erosion or siltation, if not appropriately managed.

During operation, the proposed Project would not result in a significant increase in impervious surfaces because most of the land surfaces in the proposed Project study area are developed, and covered by existing impervious surfaces. The proposed Project would result in approximately 27,861 square feet of new impervious surface area. Proposed Project components that would add new impervious surfaces include the Alameda Station, Alameda Tower, Chinatown/Station Park Station, Stadium Tower, and Dodger Stadium Station. A summary of new impervious areas created by the proposed Project components is presented in Table ES-1. The total impervious area for the proposed Project components includes all elements of these components, including the station and junction canopies and platforms, and tower heads down to ground level; however, the actual footprint of the proposed Project components on ground level is a much smaller area, including columns, mechanical, and vertical circulation at the stations and junction and the tower base at the towers.

The Sponsor would comply with all applicable federal, State, regional, and local agency water quality protection laws and regulations, as well as commonly used industry standards. With adherence to these laws, regulations, and industry standards, construction and operation of the proposed Project would not violate any water quality standards or waste discharge requirements; would not result in substantial erosion or siltation on- or off-site; would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site; would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. Additionally, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Table ES-1: New Impervious Surface Area

Component	Existing Impervious Surface Area at Component Site	Total Footprint of Project at Ground Level	Amount of New Impervious Surface Area Added by Project	Total Impervious Area Created by Component
Alameda Station	20,339 sf	1,980 sf	642 sf	20,981 sf
Alameda Tower	2,776 sf	900 sf	1,113 sf	3,889 sf
Alpine Tower	3,433 sf	1,030 sf	0 sf	3,433 sf
Chinatown/State Park Station	18,420 sf[c]	4,080 sf[b]	11,331 sf[d]	29,751 sf[a]
Broadway Junction	13,331 sf	1,460 sf	0 sf	13,331 sf
Stadium Tower	0 sf	870 sf	1,907 sf	1,907 sf
Dodger Stadium Station	62,956 sf	27,770 sf	12,868 sf	75,824 sf
Total	**121,255 sf**	**38,090 sf***	**27,861 sf**	**149,116 sf**

Note: sf = square feet

***** The total footprint of the Project component at ground level is provided for informational purposes only.

a. Including 5,840 sf of Park Amenities.

b. Including 1,508 sf of Park Amenities.

c. Including 4,357 sf of Park Amenities.

d. Including 1,483 sf of Park Amenities.

During excavation activities and construction of the foundations, the proposed Project may require the removal of water that seeps into boreholes during construction. Nuisance water generated during construction would be removed from the boreholes, containerized, and analyzed consistent with existing applicable regulations to determine the proper disposal method. Volumes generated would not be expected to be significant, and would be limited to the construction phase only. Proposed Project operations would not be expected to require further groundwater management. Therefore, the management of these minimal nuisance waters would not decrease groundwater supplies or interfere substantially with groundwater recharge or sustainable groundwater management of the basin.

The potential for the proposed Project to impact water quality during flood inundation, tsunami occurrence, or seiche conditions would be less than significant and rare. The proposed Project alignment is not within the boundaries of a dam failure inundation zone, and therefore would not potentially be affected by seiche; dams in California are monitored by government agencies to protect against the threat of dam failure. Additionally, due to the regulatory monitoring of dams and typical flood control measures that are currently in place, the impact of inundation due to upstream dam failure is not considered a significant constraint to the proposed Project. Impacts would be less than significant.

Overall, the proposed Project would not result in significant impacts to hydrology and water quality based on physical changes to the environment that modify existing baseline conditions.

1 Introduction

This Study provides a description of the existing surface and groundwater hydrology and water quality conditions in the proposed Project study area. The Study also analyzes the potential of the proposed Project to adversely affect surface and groundwater hydrologic conditions and water quality. Where warranted, the analysis identifies opportunities to avoid, reduce, or otherwise mitigate potentially significant impacts related to hydrology and water quality. Additionally, this Study includes a summary of the regulatory framework guiding the decision-making process and thresholds for determining impact significance, and identifies the level of significance for potential impacts.

2 Project Description

2.1 Project Overview

The proposed Los Angeles Aerial Rapid Transit Project (proposed Project) would connect Los Angeles Union Station (LAUS) to the Dodger Stadium property via an aerial gondola system. The proposed Project would include an intermediate station at the southernmost entrance of the Los Angeles State Historic Park. The proposed Project would provide an aerial rapid transit (ART) option for visitors to Dodger Stadium, while also providing access between the Dodger Stadium property, the surrounding communities, including Chinatown, Mission Junction, the Los Angeles State Historic Park, Elysian Park, and Solano Canyon, to the regional transit system accessible at LAUS. The aerial gondola system would be approximately 1.2 miles long, and consist of cables, three passenger stations, a non-passenger junction, towers, and gondola cabins. When complete, the proposed Project would have a maximum capacity of approximately 5,000 people per hour per direction, and the travel time from LAUS to Dodger Stadium would be approximately 7 minutes. The proposed Project would provide amenities at the Los Angeles State Historic Park, and would provide pedestrian improvements, including hardscape and landscape improvements. The ART system has the ability to overcome grade and elevation issues between LAUS and Dodger Stadium, and provide safe, zero-emission, environmentally friendly, high-capacity transit connectivity in the Project area that would reduce greenhouse gas (GHG) emissions as a result of reduced vehicular congestion in and around Dodger Stadium and on neighborhood streets, arterial roadways, and freeways. The proposed Project would operate daily to serve existing residents, workers, park users, and visitors to Los Angeles.

Established aerial gondola transit systems worldwide, such as in La Paz, Bolivia, and Mexico City, Mexico, are being used as rapid transit for the urban population that they serve. The proposed Project would employ a Tricable Detachable Gondola system (also known as "3S").[1] 3S Gondola system cabins carry approximately 30 to 40 passengers. Similar systems are used in Koblenz, Germany, Phu Quoc, Vietnam, and Toulouse, France.

2.2 Project Location

The proposed Project is in the City of Los Angeles, situated northeast of downtown Los Angeles. Figure 1 shows the regional location of the proposed Project. The proposed Project would commence adjacent to LAUS and El Pueblo de Los Angeles (El Pueblo) and terminate at Dodger Stadium, with an intermediate station at the southernmost entrance of the Los Angeles State Historic Park. The proposed Project would include three stations, a non-passenger junction, and three cable-supporting towers at various locations along the alignment. As shown in Figure 2, the proposed Project location would generally be in public right-of-way (ROW) or on publicly owned property, following Alameda Street and then continuing along Spring Street in a northeasterly direction through the community of Chinatown to the southernmost corner of Los Angeles State Historic Park.

[1] *The naming convention for this system is derived from the German word "seil", which translates in English to "rope". Therefore, Tricable Detachable Gondola systems are known as a "3S" systems due to the use of three ropes, or cables.*

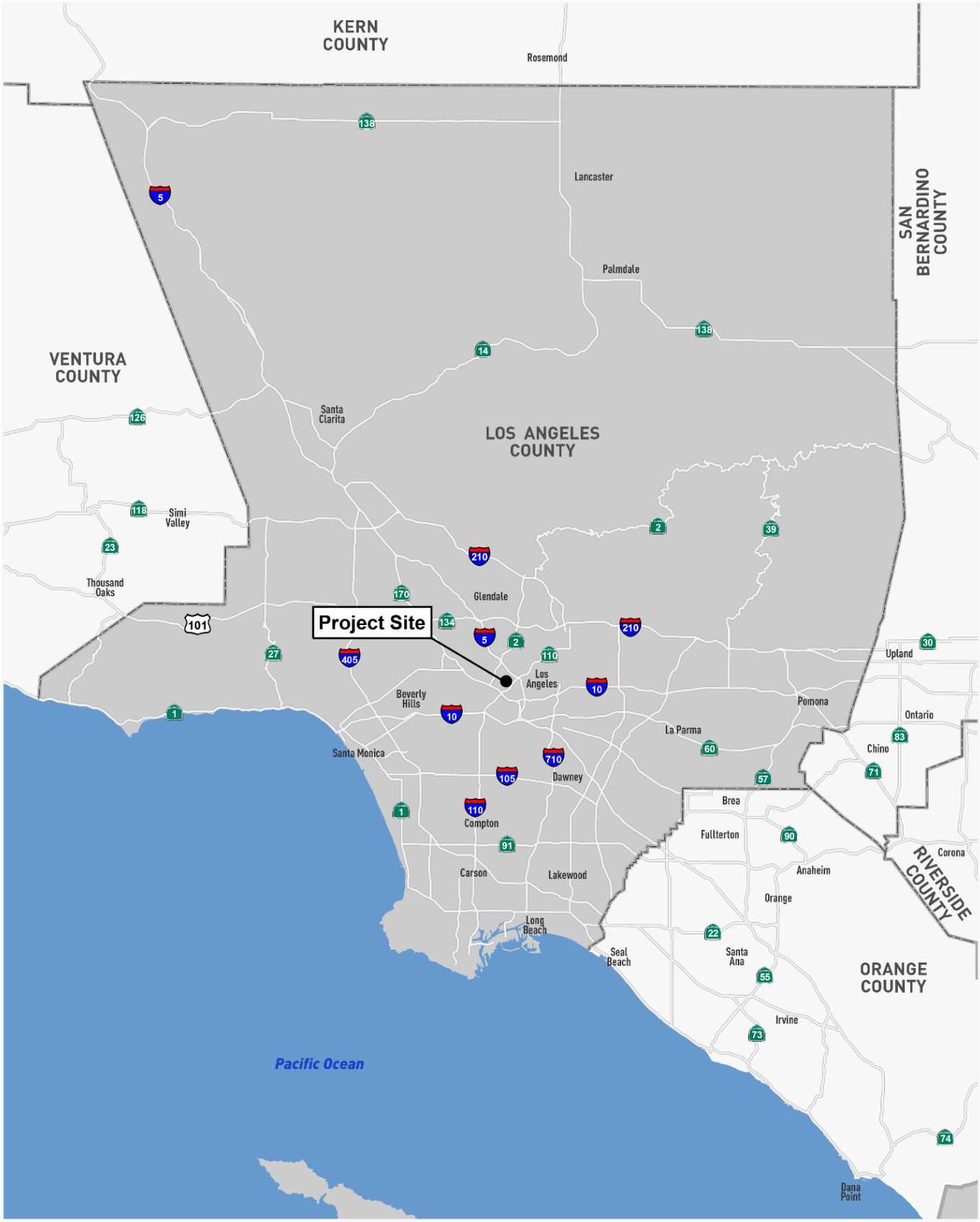


Figure 1: Regional Location Map

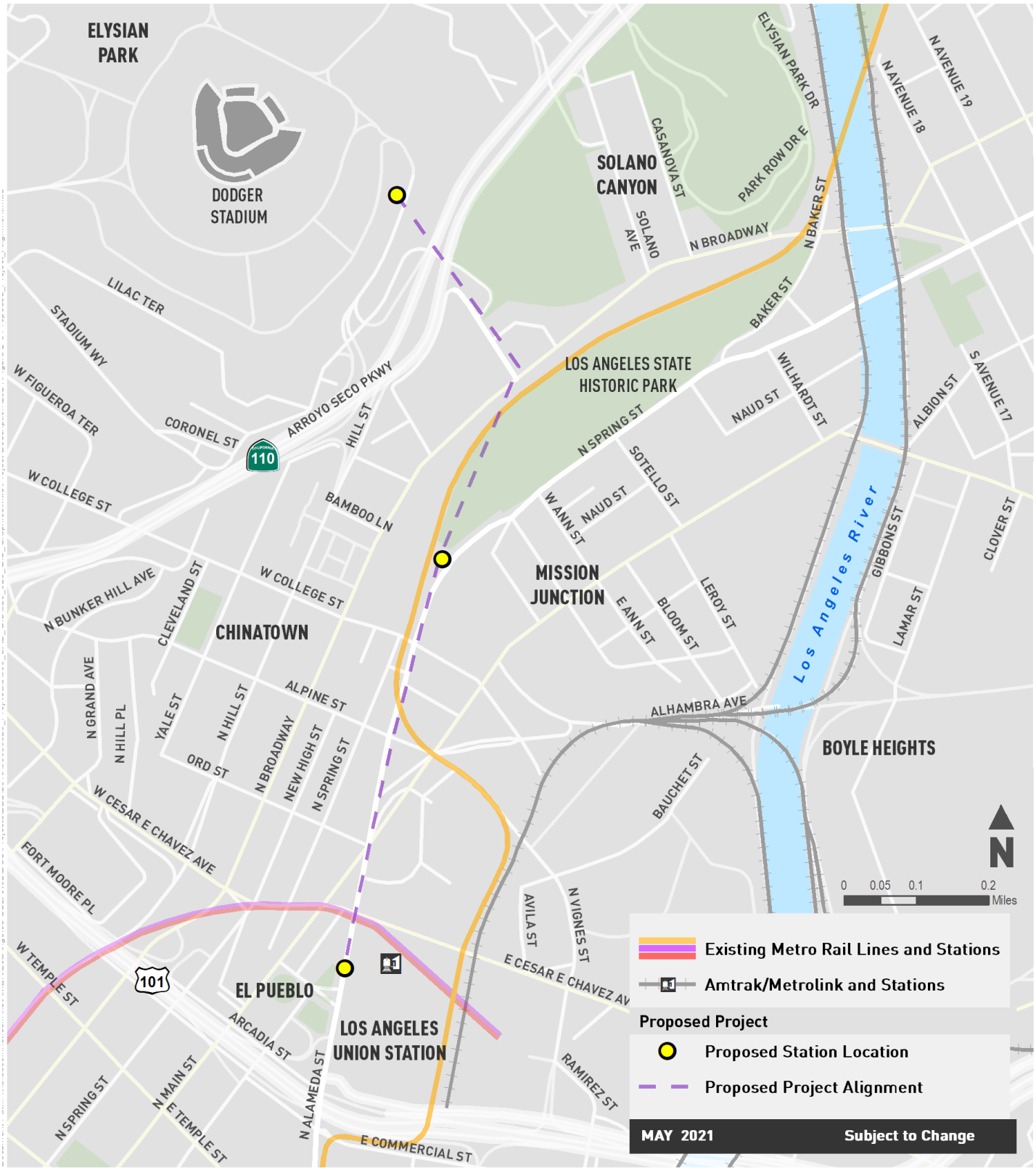


Figure 2: Proposed Project Location

The alignment would then continue northeast over the western edge of Los Angeles State Historic Park and the Los Angeles County Metropolitan Transportation Authority (Metro) L Line (Gold) to the intersection of North Broadway and Bishops Road. At this intersection, the proposed Project alignment would turn and continue northwest following Bishops Road toward its terminus at Dodger Stadium in the Elysian Park community. Figure 2 provides an overview of the proposed Project location.

2.3 Proposed Project Alignment and Components

The proposed Project "alignment" includes the suspended above-grade cables and cabins following the position of the Project components along the ART route from Alameda Station to Dodger Stadium Station.

2.3.1 Proposed Project Alignment

The proposed Project alignment would extend approximately 1.2 miles beginning near El Pueblo and LAUS on Alameda Street (Figure 3). The proposed Alameda Station would be constructed over Alameda Street between Los Angeles Street and Cesar Chavez Avenue, adjacent to the Placita de Dolores and planned LAUS Forecourt.

From the Alameda Station, the proposed Project alignment would remain primarily above the public ROW with portions above private property, and travel north along Alameda Street to the proposed Alameda Tower, which would be constructed on the Alameda Triangle, a portion of City ROW between Alameda Street, North Main Street, and Alhambra Street.

From the Alameda Tower, the proposed Project alignment would continue north along Alameda Street and cross Alpine Street. The proposed Alpine Tower would be constructed at the corner of Alameda Street and Alpine Street on City-owned property.

From the Alpine Tower, the proposed Project alignment would follow the public ROW and continue over the elevated Metro L Line (Gold). North of College Street, Alameda Street becomes Spring Street, and the proposed alignment would generally follow Spring Street in a northeasterly trajectory until it reaches the southernmost point of Los Angeles State Historic Park, where the proposed Chinatown/State Park Station would be constructed partially on City ROW, and partially within the boundaries of the Los Angeles State Historic Park.

The alignment then crosses over the western edge of Los Angeles State Historic Park and the Metro L Line (Gold) tracks.

The proposed Project alignment would continue traveling north towards the intersection of North Broadway and Bishops Road. The Broadway Junction would be at the northern corner of the intersection of North Broadway and Bishops Road (1201 North Broadway). From the Broadway Junction, the proposed Project alignment would travel northwest, primarily along Bishops Road, with portions above private property, crossing over State Route 110 (SR-110) towards Dodger Stadium. The proposed Stadium Tower would be on hillside private property north of Stadium Way between the Downtown Gate entrance road to Dodger Stadium and SR-110. The northern terminus of the system would be in a parking lot at the Dodger Stadium property, where the proposed Dodger Stadium Station would be constructed.

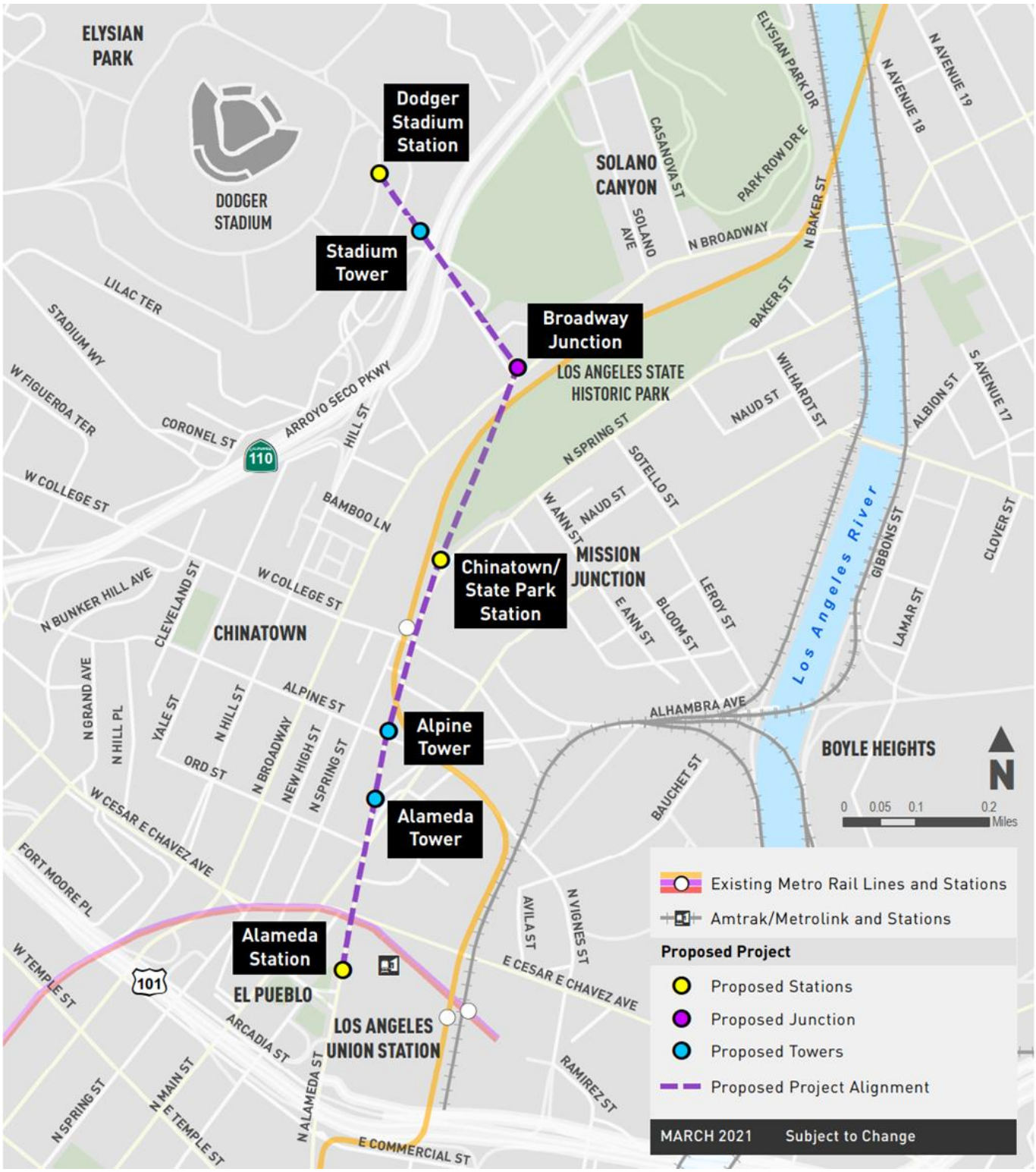


Figure 3: Proposed Project Alignment

Alameda Station: The Alameda Station would be on Alameda Street adjacent to the planned LAUS Forecourt and Placita de Dolores between Los Angeles Street and Cesar E. Chavez Avenue. The station would be approximately 173 feet long, 109 feet wide, and 78 feet high at its tallest point, with the passenger loading platform approximately 31 feet above Alameda Street. Vertical circulation elements (i.e., elevators, escalators, stairs) for pedestrian access, which would also serve as queuing areas to the station, would be introduced at-grade north of Placita de Dolores in a proposed new pedestrian plaza at El Pueblo on the west, in an area currently used as a parking and loading area for El Pueblo. On the east, vertical circulation elements would be introduced at-grade from the planned LAUS Forecourt. Installation of the vertical circulation elements may include removal and replacement of trees, removal of parking and loading for El Pueblo, and installation of landscaping and hardscape.

Alameda Tower: The Alameda Tower would be on the Alameda Triangle, a City ROW between Alameda Street, North Main Street, and Alhambra Avenue, consisting of a small green space flanked on all sides by roadways. The Alameda Tower would be 195 feet tall, with the cable suspended 175 feet above ground. Implementation of the Alameda Tower would include reuse and integration of the existing pavers at the Alameda Triangle, as well as landscape and hardscape updates to the Alameda Triangle.

Alpine Tower: The Alpine Tower would be on a City-owned parcel, currently being used as non-public parking storage for City vehicles, at the northeastern corner of Alameda Street and Alpine Street, adjacent to the Metro L Line (Gold). The Alpine Tower would be 195 feet tall at its tallest point, with the cable suspended 175 feet above ground. The Alpine Tower would also include the installation of landscaping and hardscaping near the base of the tower.

Chinatown/State Park Station: The Chinatown/State Park Station would be adjacent to Spring Street in the southernmost portion of Los Angeles State Historic Park. The southern portion of the station would be on City ROW, while the northern portion of the station would be integrated into the southern boundary of Los Angeles State Historic Park. The station would be approximately 200 feet long, 80 feet wide, and 98 feet tall at its tallest point, with the passenger boarding platform approximately 50 feet above grade. Access to the boarding platform would be from the mezzanine via elevators and stairs. Composed of three levels, elevators and stairs from the ground level would lead up to a mezzanine, 27 feet above grade, and ramps for the queuing area would lead up to the boarding platform, 50 feet above ground.

The Chinatown/State Park Station would also include Park amenities, including approximately 740 square feet of concessions, 770 square feet of restrooms, and a 220-square-foot covered breezeway connecting the concessions and restrooms. Additionally, the Chinatown/State Park Station would include a mobility hub where passengers would be able to access a suite of first and last mile multi-modal options, such as a bike share program. Pedestrian access enhancements could include pedestrian improvements between Metro's L Line (Gold) Station and the Chinatown/State Park Station, consistent with the Connect US Action Plan, including hardscape and landscape improvements, shade structures, and potential seating, as well as support for the future Los Angeles State Historic Park bike and pedestrian bridge. The Chinatown/State Park Station would require the removal of trees and vegetation; however, it would include the installation of landscaping and hardscaping, with integration of the granite pavers. The Chinatown/State Park Station would provide passenger access to Chinatown, Los Angeles State Historic Park, and to nearby neighborhoods and

land uses, including the Mission Junction neighborhood, which includes the William Mead Homes public housing complex.

Broadway Junction: The Broadway Junction is a non-passenger junction that would be at the intersection of North Broadway and Bishops Road. The junction would primarily be on privately owned property, with a portion of the junction and overhead cable infrastructure cantilevered and elevated above the public ROW. The existing commercial building at 1201 N. Broadway would be demolished. The Broadway Junction would be approximately 227 feet long, 60 feet wide, and 98 feet high at its tallest point, with the platform approximately 50 feet above ground. Vertical circulation elements (i.e., elevators and stairs) would be installed on the northwestern side of the junction for staff and maintenance access to the platform.

Stadium Tower: The Stadium Tower would be on hillside private property north of Stadium Way between the Downtown Gate and SR-110, and would stand 179 feet tall with the cable suspended 159 feet above ground. The Stadium Tower would also include the installation of landscaping near the base of the tower.

Dodger Stadium Station: The Dodger Stadium Station would be in the southeastern portion of the Dodger Stadium property near the Downtown Gate. This station would be approximately 194 feet long, 80 feet wide, and 74 feet high at its tallest point. Cabins at this station would arrive and depart from an at-grade boarding platform, with the passenger queuing area also at-grade. The Dodger Stadium Station would include a subterranean area below the platform for storage and maintenance of cabins, as well as staff break rooms, lockers, and parts storage areas. The cabins would be transferred between the station platform and the subterranean area by way of a cabin elevator. Automated parking and controls would manage the process of storing cabins or returning them to service. Cabins would be returned to and stored at the Dodger Stadium Station when the system is not in use.

Restrooms would be available for passenger use at the station. The Dodger Stadium Station would also include a pedestrian connection to Dodger Stadium, including hardscape and landscape improvements and potential seating.

The Dodger Stadium Station is adjacent to Dodger Stadium, which is operated as an MLB Stadium. The Project Sponsor would request consideration by the Los Angeles Dodgers of the potential for the Dodger Stadium Station to include a mobility hub, where outside of game-day periods, passengers would be able to access a suite of first and last mile multi-modal options, such as a bike share program and individual bike lockers, to access Elysian Park and other nearby neighborhoods, including Solano Canyon. Issues to be addressed in connection with the mobility hub include maintaining security for Dodger Stadium and the surrounding surface parking areas.

Implementation of the Dodger Stadium Station would require the removal of parking spaces, as well as removal and replacement of landscaping.

2.4 System Operations

2.4.1 Typical Operating Logistics

During operations, the cabins would travel on a continuous loop between the Alameda Station and the Dodger Stadium Station. Cabins would pass through passenger stations at roughly one foot per second (less than one mile per hour) to allow for unloading and loading. If needed, a cabin could be stopped to accommodate passenger boarding. After the cabins pass through the unload/load zones, the doors would close and the cabins would accelerate to match the line speed of the haul rope before reattaching to the haul rope.

At Alameda Station, arriving cabins (southbound) would decelerate, doors would open, and passengers would unload. The cabins would execute a U-turn in the station before passing through the load zone (for northbound passengers), load passengers (if any), close doors, then accelerate to be reattached to the haul rope.

At the Chinatown/State Park Station, cabins would detach from the rope and decelerate to the station speed. Because passenger access would be provided at this station, the cabins would decelerate to about one foot per second (less than one mile per hour), and the doors would open. After traveling through the unload and load zones, the cabin doors would close, and the cabins would accelerate to line speed and then reattach to the haul rope.

At the Broadway Junction, where passenger unloading or loading is not proposed, the cabins would detach from the haul rope, decelerate to a speed of approximately 6 miles per hour, execute a slight turn to follow the alignment, and then re-accelerate and reattach to the haul rope. As described in Section 2.5.2, the Alameda Station to Broadway Junction and Broadway Junction to Dodger Stadium Station systems come together at the Broadway Junction. When the cabins detach from the haul rope in the Junction, their move from one haul rope to the other haul rope would not be perceptible by passengers.

At the Dodger Stadium Station, the cabins would decelerate, doors would open, and passengers would unload. Because the Dodger Stadium Station would be an end station, the cabins would execute a U-turn in the station before passing through the load zone (for southbound passengers), load passengers (if any), close doors, then accelerate and reattach to the haul rope. As described above, gondola cabins would enter, traverse, and depart stations under fully automated control. Operation of the proposed Project would require approximately 20 personnel. Station attendants would be in each station to assure safe boarding or to execute stops, if necessary. Attendants would also provide customer interaction and observation; if a passenger needs special assistance, an attendant may either further slow or stop a cabin. A separate operator may sit in a booth adjacent to the boarding area and monitor screens that would show activities in each cabin and station, as well as the system controls.

2.4.2 Queueing and Ticketing/Fare Checking

Queueing areas would be built into (and adjacent as necessary) each of the stations to provide a gathering place for passengers waiting to enter the stations, thereby preventing crowding of sidewalks and walkways by passengers around stations. Queueing for the Alameda Station would occur in the planned LAUS Forecourt area on the eastern side of Alameda Street, and north of the Placita de Dolores in a proposed new pedestrian plaza at El Pueblo on the western side of Alameda

Street. At the Chinatown/State Park Station, queueing would occur on the mezzanine and boarding platform levels. At the Dodger Stadium Station, the queueing area would be on the northern side of the station in a designated queueing area adjacent to the station.

Ticketing for the proposed Project would use either a chip-based card system or electronic ticketing that could be purchased and saved on a personal mobile device. Using these types of technologies would allow for contactless fare checking at the stations. Riders would pre-purchase their ticket prior to entering the boarding platform, and fares would be checked using a card reader/scanner.

2.4.3 Signage

Similar to other transit projects that incorporate signage, the proposed Project would include signage to support wayfinding for transit patrons, including information about transit connections and other important information to facilitate transit usage. Private funding for the proposed Project is anticipated to be supported by naming rights and sponsorship revenues, and such sponsors would be recognized in Project signage, which would be designed consistent with applicable Metro-, City-, and State-approval requirements. Such signage may include identification and other static signs, electronic digital displays and/or changeable message light-emitting diode (LED) boards that include both transit information and other content such as off-site advertising that generates proceeds to support transit system costs and operations. Signage would be architecturally integrated into the design of the ART system, including its stations, the junction, towers, and cabins. In addition, directional and pedestrian signage would be placed adjacent to and throughout the proposed Project as necessary to facilitate access and safety, including along the pedestrian improvements between Metro's L Line (Gold) Station and the pedestrian connection between the Dodger Stadium Station and Dodger Stadium. Project signage would be illuminated by means of low-level external lighting, internal lighting, or ambient light. Exterior lights would be directed onto signs to minimize off-site glare. Signage would be in conformance with all applicable requirements of the Los Angeles Municipal Code (LAMC); and in accordance with LAMC, lighting intensity would be minimized to avoid negative impacts to adjacent residential properties.

2.4.4 Lighting

Project lighting would include low-level lighting for security and wayfinding purposes adjacent to and in the stations, junction, and towers; in cabins; at the vertical circulation; and areas for ticketing, fare checking, and queueing. In addition, low-level lighting to accent signage, architectural features, landscaping, adjacent pedestrian plazas, Chinatown/State Park Station mobility hub, and potential Dodger Stadium Station mobility hub would be installed at the stations, junction, and towers. Lighting would also be provided underneath the elevated stations and junction. Lighting for the pedestrian access enhancements, including the pedestrian improvements between Metro's L Line (Gold) Station and the pedestrian connection between the Dodger Stadium Station and Dodger Stadium, would include new pole lights for security and wayfinding purposes, as well as low-level lighting to accent signage and landscaping.

Lighting would be low-level and primarily integrated into the architectural features. Exterior lighting would be shielded or directed toward the areas to be lit to limit spillover onto adjacent properties and off-site uses, and would meet all applicable LAMC lighting standards.

2.4.5 Maintenance

The proposed Project would require routine maintenance that would be performed by the system operator. The overall system would be observed on a daily basis as part of the startup routine.

Routine maintenance activities would generally take place during overnight periods or other scheduled down time. Cabins and their associated grips and hangers would be maintained in the shop at the Dodger Stadium Station. A work carrier cabin would be provided to facilitate work at tower equipment. Annual maintenance activities may require crane access at tower locations, including the potential to require the temporary closing of traffic lanes.

Rope maintenance schedules would be determined through a combination of system design and periodic monitoring. The haul rope would need replacement approximately every 5 to 10 years. This would require pulling a new haul rope, which would take up to two weeks to complete.

On a periodic basis, the system would undergo formal testing as prescribed by the California Division of Occupational Safety and Health (Cal/OSHA) and appropriate ropeway standards. This formal testing is required by standards to occur at least every seven years. It is anticipated that the system would be closed to riders for up to two days during the formal testing events.

Backup power would be provided by battery storage at each station and tower, and the non-passenger junction. The battery storage system would be tested on a regular basis, and would provide backup power to allow unloading of the system in the event of a power grid failure.

2.4.6 Power Requirements

Operational power requirements can be separated into two categories: normal operations and emergency operations. Power requirements for 100 percent of the power for the proposed Project would be provided by the City of Los Angeles Department of Water and Power's (LADWP) Green Power Program, through a connection to their power grid, and would include the power to operate the gondola system and the non-gondola system components (i.e., lights, ventilation, escalators, elevators). When operating at capacity, normal operations are estimated to require a total of approximately 2.5 megawatts of power.

Power requirements for emergency operations consist of the energy needed for operations in the event of a power grid failure. The proposed Project would include the installation of backup battery storage at each station, tower, and junction to provide backup power to allow unloading of the system in the event of a power grid failure. The total backup power required to allow unloading of the system is 1.4 megawatts.

2.4.7 Sustainability Features

The proposed Project would provide a sustainable, high-capacity zero-emission ART option for visitors to Dodger Stadium, while also providing access between Dodger Stadium, the surrounding communities, and the regional transit system accessible at LAUS. ART technology is quiet, and the proposed Project would reduce VMT and congestion, leading to reduced GHG emissions and improved air quality.

The proposed Project's stations, junction, towers, and gondola cabins would incorporate energy-efficient, sustainable, water and waste efficient, and resilient features, as feasible. The proposed

stations and junction are designed to be open-air buildings, allowing for passive ventilation strategies and providing direct access to outdoor air and natural daylight, while also providing adequate shade protection from heat. The cabins would be ventilated to enhance air quality for passengers.

The design intent and structural strategy for the stations and towers also provides an efficiency of materials. The steel plate tower forms have been designed as "Monocoque" structures—where structure, form, and finish are unified. Materials for the stations, junction, and towers would be locally sourced where possible, and would include recycled content where possible. Light-toned finish materials would also serve to minimize heat island concerns.

The proposed Project would be designed to comply with all applicable State and local codes, including the City of Los Angeles Green Building and Low-Impact Development (LID) Ordinances, as applicable.

2.4.8 Construction

Construction of the proposed Project is anticipated to begin as early as 2024, and take approximately 25 months, including construction, cable installation, and system testing. The detailed construction procedures informing the environmental impact analyses are included in Appendix B of the Draft EIR. A summary of the construction activities is provided below. Construction of the Project components may partially overlap in schedule, especially because construction would occur at several physically separated sites.

Utility relocations would occur prior to construction of the proposed Project components, and would be coordinated directly with the utility providers. Following utility relocations, construction would commence. Detailed information on utilities relocations is included in Appendix B of the Draft EIR.

During construction, some parking spaces at Dodger Stadium would be temporarily closed for construction of the Dodger Stadium Station, and for overall Project construction, trailers, laydown and staging areas, and construction worker parking.

Construction of more than one Project component would occur at the same time, with consideration of available materials, work crew availability, and coordination of roadway closures. Table 2-1 includes the estimated duration to complete construction of each of the proposed Project components, the maximum depths of drilled piles, the maximum depth of excavation, the amount of excavation, and the amount of materials (soils and demolition debris) to be exported for each component of the proposed Project.

Table 2-1: Proposed Project Construction Details

Component	Construction Duration	Maximum Depth of Drilled Piles	Maximum Depth of Excavation	Amount of Excavation	Amount of Materials Exported
Alameda Station	17 months	125 feet	10 feet	2,728 cubic yards	2,295 cubic yards
Alameda Tower	12 months	120 feet	10 feet	2,850 cubic yards	2,292 cubic yards
Alpine Tower	11 months	120 feet	10 feet	3,606 cubic yards	2,887 cubic yards
Chinatown/State Park Station	19 months	80 feet	10 feet	6,267 cubic yards	4,567 cubic yards
Broadway Junction	19 months	120 feet	7 feet	6,407 cubic yards	5,379 cubic yards
Stadium Tower	12 months	120 feet	7 feet	1,286 cubic yards	1,202 cubic yards
Dodger Stadium Station	20 months	55 feet	42 feet	44,313 cubic yards	44,001 cubic yards

Following completion of construction, the gondola cables would be installed, followed by system testing and inspections.

Working hours would vary to meet special circumstances and restrictions, but are anticipated to be consistent with the City's allowable construction hours of Monday through Friday between 7:00 a.m. to 9:00 p.m. and Saturdays and National Holidays between 8:00 a.m. to 6:00 p.m. While not anticipated, approval would be required from the City of Los Angeles Board of Police Commissioners for any extended construction hours and possible construction on Sundays.

Anticipated closures would include lane closures in which lanes would be closed 24-hours a day during certain phases of construction, or alternating closures during certain phases of construction, in which closures would occur during construction hours for approximately 10 hours a day, and roads would reopen during non construction hours for approximately 14 hours a day. For alternating closures, during non-construction hours, steel plates would be placed over construction sites to the extent feasible in order to allow for vehicular and pedestrian circulation. The closures and hours would vary between location and phase of construction. The proposed Project would implement a Construction Traffic Management Plan that would include detours and ensure that emergency access is maintained throughout all construction activities.

3 Regulatory Setting

3.1 Federal Laws and Regulations

3.1.1 Clean Water Act of 1972 (Including 1977 and 1987 Amendments) – Sections 303, 304, 401, 402, and 404

The Clean Water Act (CWA) is the primary federal law that establishes the basic structure for regulating discharges of pollutants into the waters of the United States, and regulates quality standards for surface waters. The primary objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's surface waters. Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand, total suspended solids, oil and grease, and pH; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority.

CWA Sections 303 and 304 provide broad statutory guidance requiring states to issue water quality standards, criteria, implementation plans, and guidelines. CWA Section 401 requires applicants for a federal license or permit to conduct activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act.

CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system that controls point source discharges from municipal, industrial, and other facilities if their discharges go directly to surface waters (except for dredge or fill material). In accordance with Section 402(p) of the CWA, the municipal NPDES Permit allows stormwater discharges, except under certain conditions, and requires controls to reduce pollutants in those discharges to the maximum extent practicable. Such controls include best management practices (BMPs), as well as system, design, and engineering methods. A municipal NPDES permit has been issued to the County and 84 incorporated cities.

Under the Los Angeles County Municipal NPDES Permit, permittees are required to implement a development planning program to address stormwater pollution. This program requires project applicants for development projects to implement a Low Impact Development (LID) Plan throughout the operational life of the project. The purpose of the LID is to reduce the discharge of pollutants in stormwater by outlining BMPs, which must be incorporated into the design of new development and redevelopment. These treatment control BMPs must be sufficiently designed and constructed to treat or filter the greater of an 85th percentile rain event, or first 0.75 inch of stormwater runoff from a storm event.

The CWA authorizes the United States Environmental Protection Agency (USEPA) and states to implement activities to regulate water quality. Under the CWA, the USEPA has implemented many pollution control standards for industries, as well as water quality standards for contaminants in surface waters. The CWA makes it unlawful to discharge pollutants from a point source into navigable waters unless an NPDES permit is obtained and regulates discharge of dredge or fill material to surface waters.

3.1.2 National Flood Insurance Act of 1968

Congress implemented the National Flood Insurance Act of 1968 to provide subsidized flood insurance coverage to communities in compliance with Federal Emergency Management Agency (FEMA) regulations, which limit development on recognized floodplains. The National Flood Insurance Act was amended by the Flood Disaster Protection Act of 1973 (42 United State Code 4001 et seq.). These acts are administered by FEMA, which delineates Special Flood Hazard Areas and risk premium flood zones applicable to individual communities. The Flood Insurance Rate Maps (FIRMs) issued by FEMA identify land areas that are subject to flooding and flood hazard zones in the community. The design standard for flood protection covered by the FIRMs is established by FEMA, with the minimum level of flood protection for new development determined to be the 100-year floodplain, defined as an area that is predicted to have a one percent probability of flooding in any given year.

3.1.3 Antidegradation Policy of 1968

The Federal Antidegradation Policy is designed to protect and maintain existing water uses, water quality, and national water resources, and establishes tiers to guide degradation analysis of water bodies.

3.1.4 40 Code of Federal Regulations (CFR) 131.38 – California Toxics Rule

The California Toxics Rule establishes numeric criteria for priority toxic pollutants for inland surface waters, enclosed bays, and estuaries. These federally promulgated criteria create water quality standards for California waters, and satisfy CWA requirements to protect human health and the environment.

3.2 State Laws and Regulations

3.2.1 State of California Constitution, Article X, Section 2

Article X, Section 2 of the California Constitution prohibits the unreasonable use or waste of water, regulates the method of use and method of diversion of water, and requires all water users to conserve and reuse available water supplies to the maximum extent possible.

3.2.2 Porter-Cologne Water Quality Control Act of 1969

The Porter-Cologne Water Quality Control Act of 1969 (California Water Code Section 13000 et seq.) (the Porter-Cologne Act) is California's statutory authority for the protection of water quality and requires the State Water Resource Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) to adopt water quality standards, plans, and objectives to protect State waters. The Porter-Cologne Water Quality Control Act regulates groundwater, surface water, and discharges to land. Water quality standards for the proposed Project are contained in the Los Angeles RWQCB *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan).[2]

[2] Los Angeles Regional Water Quality Control Board. 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.* September. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Accessed May 2022.

The Basin Plan outlines the regulatory process for the protection of the beneficial uses of regional waters, and sets numeric and narrative water quality criteria controlling the discharge of wastes to the State's waters and land in the region. The Basin Plan describes implementation plans and other control measures designed to ensure compliance with statewide plans and policies, and provides comprehensive water quality planning.

The Basin Plan lists the beneficial uses of groundwater in the Central Basin as municipal and domestic supply; industrial service supply; industrial process supply; and agricultural supply.

The Basin Plan also contains water quality objectives, which are region-wide narrative and numeric objectives for surface waters and groundwater.

3.2.3 Sustainable Groundwater Management Act

In 2014, California enacted a three-bill legislative package collectively known as the Sustainable Groundwater Management Act (SGMA) to improve local and regional management of groundwater resources. The SGMA, composed of Assembly Bill 1739, Senate Bill 1168, and Senate Bill 1319, provides a framework for sustainable groundwater management, and requires government and water agencies of groundwater basins designated as high or medium priority by the California Department of Water Resources (DWR) California Statewide Groundwater Elevation Monitoring (CASGEM) program to halt overdraft, and bring groundwater basins into balanced levels of pumping and recharge.

Under the SGMA, all basins that are designated as medium or high priority in the DWR CASGEM program and are subject to critical overdraft conditions must be managed under a new Groundwater Sustainability Plan (GSP) by January 31, 2020.

The Central Basin is categorized as high priority. To comply with SGMA, local agencies may either form a groundwater sustainability agency to prepare a GSP, or submit an "Alternative Analysis" in lieu of forming a GSA. The Water Replenishment District of Southern California (WRD), which manages the Central Basin, chose to submit an Alternative Analysis of basin conditions that demonstrates that the Central Basin has operated within its sustainable yield over a period of at least 10 years, pursuant to the SGMA provision of the California Water Code Section 10733.6(b)(3). WRD prepared the Alternative Analysis with key stakeholders of the Central Basin, including LADWP, DWR, LA County Department of Public Works, and others.

3.2.4 State of California Antidegradation Policy – State Water Resources Control Board Resolution 68-16

The State and federal antidegradation policies are similar and complementary. The State Antidegradation Policy incorporates the Federal Antidegradation Policy "where applicable" in State Water Resources Control Board Resolution 68-19.

State Water Resources Control Board Resolution 68-16 (State Antidegradation Policy) protects surface and ground waters from degradation. It states that waters having quality that is better than that established in effective policies shall be maintained unless any change will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses and will not result in water quality less than that prescribed in the policies.

3.2.5 Statewide NPDES Construction General Permit and Waste Discharge Requirements for Stormwater Discharges Associated with Construction Activity

In California, the NPDES stormwater permitting program for compliance with Section 402(d) of the CWA is administered by the SWRCB on behalf of the USEPA. Pursuant to Section 402 of the CWA and the Porter-Cologne Act, the SWRCB has issued a statewide NPDES Construction General Permit (CGP) for stormwater discharges associated with construction activities under Order No. 2009-0009-DWQ, which was adopted on September 2, 2009, and went into effect on July 1, 2010. The CGP was subsequently amended by Order No. 2010-0004-DWQ and Order No. 2012-0006-DWQ. The existing CGP expired on September 2, 2014, and is administratively extended until the effective date of a reissued permit.

The CGP regulates stormwater discharges from construction sites that result in soil disturbance of one acre or more of total land area and/or are smaller sites that are part of a larger plan of development. All stormwater discharges associated with construction activity where clearing, grading, and disturbances to soil such as stockpiling or excavation result in soil disturbance of one acre or more of total land area must be in compliance with the CGP. Construction activity that results in soil disturbances of less than one acre of total land area is subject to the CGP if there is potential for significant water quality impairment resulting from the activity, as determined by the LARWQCB. Operators of construction sites subject to the CGP must develop an adequate Stormwater Pollution Prevention Plan (SWPPP) establishing BMPs; implement erosion, sediment, and pollution prevention control measures; submit a Notice of Intent (NOI) to the SWRCB; and apply for and obtain a permit for coverage under the CGP.

3.2.6 Statewide NPDES General Permit for Stormwater Discharges Associated with Industrial Activities

The SWRCB has issued a statewide NPDES Industrial General Permit (IGP) for stormwater discharges associated with industrial activities under Order No. 2014-0057-DWQ, which was adopted on April 1, 2014, and went into effect on July 1, 2015. The IGP was subsequently amended in 2015 and 2018.[3]

The IGP regulates stormwater discharges from industrial activities discharging to waters of the United States. Operators of qualifying industrial sites subject to the IGP are required to prepare SWPPPs describing BMPs that will be employed to protect water quality.

The IGP provides regulatory coverage for all facilities with industrial activities described in IGP Attachment A. Attachment A includes "Transportation Facilities" with Standard Industrial Classifications (SICs) 40XX through 45XX (except 4221-25) and 5171 with vehicle maintenance shops, equipment cleaning operations, or airport deicing operations (but only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified under the IGP as associated with industrial activity.[4] SIC 4119 Local Passenger Transportation, Not Elsewhere Classified lists Aerial Tramways,

[3] SWRCB. 2020. Industrial General Permit. Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/igp_20140057dwq.html. Accessed July 2022.
[4] NPDES Industrial General Permit. 2014. Attachment A: Facilities Covered by National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Industrial Activities (General Permit). Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/industrial/2014indgenpermit/atta.pdf. Accessed May 2022.

except amusement and scenic.[5] Therefore, the proposed Project may require coverage under the IGP.

3.2.7 Phase I Municipal Separate Storm Sewer System (MS4) Permit

In 1990, the USEPA promulgated regulations for permitting stormwater discharges from municipal separate storm sewer systems (MS4s) serving a population of 100,000 or more people (Phase I MS4 Permits). In 2012, the Regional Board issued a revised NPDES Permit and waste discharge requirements (Order No. R4-2012-0175; NPDES Permit No. CAS004001) under the CWA and the Porter-Cologne Act for discharges of urban runoff in public storm drains in Los Angeles County. The Regional Board issued a revised permit in September 2021 (Order No. R4-2021-0105; NPDES Permit No. CAS004004, the MS4 Permit), and the permittees include the City of Los Angeles. The MS4 Permit regulates stormwater discharges from MS4s in the proposed Project area and details specific requirements for new development and significant redevelopment projects, including selection, sizing, and design criteria for LID, treatment control, and hydromodification control BMPs.[6]

Portions of the proposed Project are in ROWs covered by California Department of Transportation (Caltrans) and County of Los Angeles MS4 permits. Permit requirements would be applicable to the portions of the proposed Project within the permit boundaries (see IGP section above).

3.2.8 California Ocean Plan

Ocean standards protect the beneficial uses of California's marine waters through establishing water quality objectives and implementation provisions in statewide water quality control plans and polices. Ocean standards plans and policies include the SWRCB's Water Quality Control Plan for Ocean Waters of California (Ocean Plan). The Ocean Standards Unit is responsible for developing and updating the statewide plans and policies involving marine waters, as well as providing scientific support and inter-agency coordination regarding marine pollution and resource management. This plan is applicable, in its entirety, to point source discharges to the ocean. Nonpoint sources of waste discharges to the ocean are subject to Chapter I, Chapter II, and Chapter III of the plan. This plan is not applicable to discharges to enclosed bays and estuaries or inland waters, or the control of dredged material.[7]

3.3 Local Laws, Regulations, and Plans

3.3.1 Municipal NPDES Permit

Los Angeles County receives coverage under the NPDES stormwater municipal permit, also known as the Regional Phase I MS4 Permit (NPDES permit No. CAS004004), issued in September 2021.[8] The permit regulates municipal stormwater and urban runoff discharges in the covered jurisdictions

[5]US Dept of Labor, OSHA – Standard Industrial Classification Manual. Available at https://www.osha.gov/pls/imis/sic_manual.display?id=895&tab=description. Accessed May 2022.
[6] Note also Caltrans' discharges consist of stormwater and non-stormwater discharges from State-owned ROWs California Water Boards. Storm Water Program - Caltrans Permits. Available at: https://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/caltrans_permits/. Accessed May 2022.
[7] State Water Resources Control Board. Revised 2019. California Ocean Plan. Available at: https://www.waterboards.ca.gov/water_issues/programs/ocean/docs/oceanplan2019.pdf. Accessed August 2022.
[8] California Water Boards. 2021. Regional Phase I MS4 NPDES Permit. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/public_docs/2022/1_Order(ACC-RPSignature).pdf. Accessed April 2022.

during construction and post-construction. Under the Regional Phase I MS4 Permit, the City of Los Angeles as a permittee is responsible for the management of storm drain systems in its jurisdiction. Permittees must comply with the applicable stormwater program requirements of 40 CFR Section 122.26(d)(2), and additional controls, where necessary, to reduce the discharges of pollutants in stormwater to the maximum extent practical. The proposed Project would need to comply with the applicable MS4 Permit requirements.

3.3.2 City of Los Angeles General Plan

The City of Los Angeles General Plan is a comprehensive policy document that informs future land use decisions by identifying land use categories and corresponding zones and includes sections, known as "elements" for land use, air quality, conservation, health, safety, mobility, infrastructure systems, open space, public facilities and services, noise, and housing, as well as the Framework Elements, which is considered the organizing Element that connects all the Elements of the General Plan.[9] Of these, the Conservation, Health and Wellness, Safety, and Framework Elements are relevant to this document. The Conservation Element addresses the conservation, protection, development, utilization, and reclamation of natural resources. The Health and Wellness Element addresses water quality and sets objectives to prioritize and safeguard health and the environment. The Safety Element addresses the issue of protection for people from unreasonable risks associated with natural disasters such as fires, earthquakes, and floods. The Framework Element presents a strategy for long-term growth, and provides population forecasts to guide the update of the community plan and citywide elements. Additionally, Chapter 9 of the Framework Element includes goals, objectives, and polices for infrastructure and public services, including stormwater infrastructure.

3.3.3 City of Los Angeles Municipal Code

The LAMC is a body of regulations developed for the preservation of the public peace, health, and safety. Per the LAMC, stormwater discharge is regulated under Chapter VI – Public Works and Property, Article 4.4, Section 64.70 et seq. – Stormwater and Urban Runoff Pollution Control. Article 4.4 provides for the control and regulation of discharges to the storm drain system and receiving waters, through a program of education and enforcement of specific and general requirements and prohibitions.

According to Article 4.4, discharge of non-stormwater is permissible only if the discharge is exempted or conditionally exempted by the Regional Phase I MS4 Permit, a special waiver or exemption is granted by the Regional Board, or authorized by an applicable NPDES permit. In addition, projects in the City are required to comply with the requirements of the CGP and the MS4 Permit, which includes preparation of an SWPPP and implementation of construction and post-construction BMPs. Additionally, Article 4.4 establishes authority to inspect for compliance with the provisions or the article, and provides reporting requirements for accidental discharge to the storm drain system.

[9] City of Los Angeles Department of City Planning, General Plan Overview, Available at: https://planning.lacity.org/plans-policies/general-plan-overview. Accessed May 2022.

3.3.4 City of Los Angeles One Water LA 2040 Plan

The Los Angeles One Water LA 2040 Plan is a collaborative approach to develop an integrated framework for managing the City's water resources, watersheds, and water facilities in an environmentally, economically, and socially beneficial manner. The One Water LA 2040 Plan identifies projects, programs, and policies intended to yield sustainable, long-term water supplies for Los Angeles, and provide greater resiliency to drought conditions and climate change.

3.3.5 City of Los Angeles Stormwater LID Ordinance (Ordinance #181899 and Ordinance #183833)

The City of Los Angeles adopted the Stormwater LID Ordinance in November 2011 to ensure that development and redevelopment projects mitigate runoff in a manner that captures rainwater at its source, while using natural resources. The LID Ordinance amended LAMC Sections 64.70.01 and 64.72, and expanded on the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by incorporating LID practices and principles, and expanding the applicable development categories. Depending on the scope and size of the project (and the impervious surfaces involved), all development and redevelopment projects that create, add, or replace impervious area must comply with the LID Ordinance. Projects subject to the LID Ordinance must prepare and submit an LID Plan.

The LID Ordinance was updated in September 2015 (Ordinance #183833) to amend the LAMC Section 64.70 et seq., expanding on the LID requirements and eliminating the requirement for an SUSMP.

LID stormwater management practices seek to mitigate the stormwater runoff—and pollution impacts—as close to its source as possible. LID practices involve a combination of site designs and BMPs that promote the use of natural drainage systems that favor infiltration, evapotranspiration, and stormwater re-use such that the proposed project will have features that mimic the site's predevelopment drainage characteristics. These practices improve the removal of nutrients, bacteria, and metals from stormwater while reducing the volume and intensity of site runoff.

By promoting infiltration design features in a project, impervious surface area can be reduced that simultaneously minimizes off-site stormwater discharge. Where infiltration is infeasible, the use of bioretention, rain gardens, vegetated rooftops, and rain barrels that can store, evaporate, detain, and/or treat runoff are also useful.

3.3.6 City of Los Angeles Bureau of Sanitation LID Handbook

In line with the City's LID Ordinance 183833, in 2016, the City's Sanitation Bureau published the *Planning and Land Development Handbook for Low Impact Development*[10]((the "LID Handbook"). This LID Handbook was adopted by the City of Los Angeles, Board of Public Works, on May 9, 2016, as authorized by Section 64.72 of the LAMC approved by Ordinance 183833. The LID Handbook serves to assist developers in complying with the requirements of the Development Planning Program regulations of the City's Stormwater Program. The LID Handbook summarizes the City's project review and permitting process, identifies stormwater mitigation measures (when needed),

[10] City of Los Angeles Bureau of Sanitation. 2016. *Planning and Land Development Handbook for Low Impact Development (LID),* 5th edition.

and references source and treatment control BMP information. It provides guidance for individuals involved in new development and redevelopment projects. The target audience for this handbook includes developers, designers, contractors, homeowners, and City staffs that are engaged in plan-checking, permitting, and inspections related to land development activities. This handbook also contains the necessary forms and worksheets required to be completed by the developer for approval.

LID Manual-identified performance measures and practices include:

(1) Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing communities via infill or redevelopment, and safeguarding of environmentally sensitive areas.

(2) Minimize the adverse impacts from stormwater runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of water bodies in accordance with requirements under California Environmental Quality Act (CEQA; Cal. Pub. Resources Code § 21000 et seq.).

(3) Minimize the percentage of impervious surfaces on land developments by minimizing soil compaction during construction, designing projects to minimize the impervious area footprint, and employing LID design principles to mimic predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use.

(4) Maintain existing riparian buffers and enhance riparian buffers when possible.

(5) Minimize pollutant loadings from impervious surfaces such as roof tops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), LID Strategies, and Treatment Control BMPs.

(6) Properly select, design and maintain LID and Hydromodification Control BMPs to address pollutants that are likely to be generated, reduce changes to pre-development hydrology, assure long-term function, and avoid the breeding of vectors.

(7) Prioritize the selection of BMPs to remove stormwater pollutants, reduce stormwater runoff volume, and beneficially use stormwater to support an integrated approach to protecting water quality and managing water resources in the following order of preference:

(a) On-site infiltration, bioretention and/or rainfall harvest and use.

(b) On-site biofiltration, off-site groundwater replenishment, and/or off-site retrofit.

3.3.7 City of Los Angeles Water Quality Compliance Master Plan for Urban Runoff (WQCMPUR)

The City of Los Angeles completed and adopted the Water Quality Compliance Master Plan for Urban Runoff (WQCMPUR), a 20-year strategy for clean stormwater and urban runoff, in April 2009, as a strategy to comply with current and emerging water quality regulations. The WQCMPUR was developed to provide a water quality master plan with strategic directions for budgeting, planning, and funding to reduce pollution from urban runoff in the City. The WQCMPUR seeks a broad watershed-based perspective to improve water quality and bring the City into sustainable compliance with water quality regulations. Specifically, the WQCMPUR identifies the City's four

watersheds; summarizes water quality conditions in the City's receiving waters as well as known sources of pollutants; summarizes regulatory requirements for water quality; describes BMPs required by the City for stormwater quality management; and discusses related plans for water quality that are implemented in the Los Angeles region.

3.3.8 Los Angeles County Department of Public Works Hydrology Manual

Per the City's Special Order No. 007-1299, issued on December 3, 1999, the City has adopted the Los Angeles County Department of Public Works' Hydrology Manual as its basis of design for storm drainage facilities. The Los Angeles County Department of Public Works Hydrology Manual establishes the hydrologic design procedures and serves as a reference and training guide. The manual contains the information necessary to conduct a hydrologic study in the County. The manual compiles information from previous editions of the County of Los Angeles Hydrology Manual, the 2002 Hydrology Manual Addendum, and other reference materials, and the standards in the manual govern all hydrology calculations under Public Works' jurisdiction.[11]

3.3.9 City of Los Angeles Bureau of Engineering "B" Permit (LAMC 62.106.b)

A 'B' Permit is issued for extensive public works improvements, including the widening of streets and alleys; the changing of existing street grade; construction of bridges and retaining walls; and the installation of sewer, storm drains, street lighting, and traffic signals. Construction plans are usually required, which must be signed by a California licensed Civil and/or Electrical and/or Traffic Engineer.

'B' Permits have four phases: bond estimate, design, construction, and post-construction. The permit covers plan check engineering, installation of traffic control devices, inspection, testing during construction, and maintenance of street trees.

'B' Permits are most frequently issued for public works improvements adjacent to land being developed. In these instances, the extent and type of improvements depend on conditions imposed by the Council, City Engineer, Department of City Planning, or some other jurisdictional body in accordance with the Municipal Code, City Charter, State Law, or City Ordinance.

3.3.10 Specific Plan for the Management of Flood Hazards Ordinance No. 172801

Ordinance 172801 amends the Specific Plan for the Management of Flood Hazards, originally established by Ordinance No. 154, 405, and amended by Ordinance No. 163, 913. The Plan is intended to provide for the establishment, management, and regulatory control of flood control hazards, and provides sections designed to deal with flood hazards in addition to Citywide policies and goals.

3.3.11 City of Los Angeles Bureau of Engineering 2020 Floodplain Management Plan

The 2020 Floodplain Management Plan (FMP) (October 2020) is an overall strategy of programs, projects, and measures aimed at reducing the adverse impacts of flood hazards on the community. The FMP identifies and addresses the impacts caused by flood hazards, and provides specific mitigation measures to help protect the properties and their occupants. The National Flood Insurance Program requires the City to update its FMP every five years.

[11] Los Angeles County Department of Public Works. 2006. *Hydrology Manual*.

4 Existing Conditions

This section provides a description of the existing hydrology, floodplains, and surface water and groundwater quality conditions in the proposed Project study area, which includes the footprint of the proposed Project alignment and components, and the areas surrounding the proposed Project alignment. The baseline conditions are based on information obtained from publicly accessible databases and information from various sources. The data sources used in this document are listed in footnotes throughout this document

4.1 Surface Water

Surface water resources in the vicinity of the proposed Project study area comprise the Los Angeles River and local runoff, which discharges to the Los Angeles River. The Los Angeles River is east of the proposed Project study area and constitutes the primary drainage in the vicinity (Figure 4). The portion of the Los Angeles River near the proposed alignment is channelized and lined with concrete. The portion of the river which flows from Figueroa Street in the City of Los Angeles to Carson Street in the City of Long Beach is designated as Reach 2 in the Basin Plan.[12]

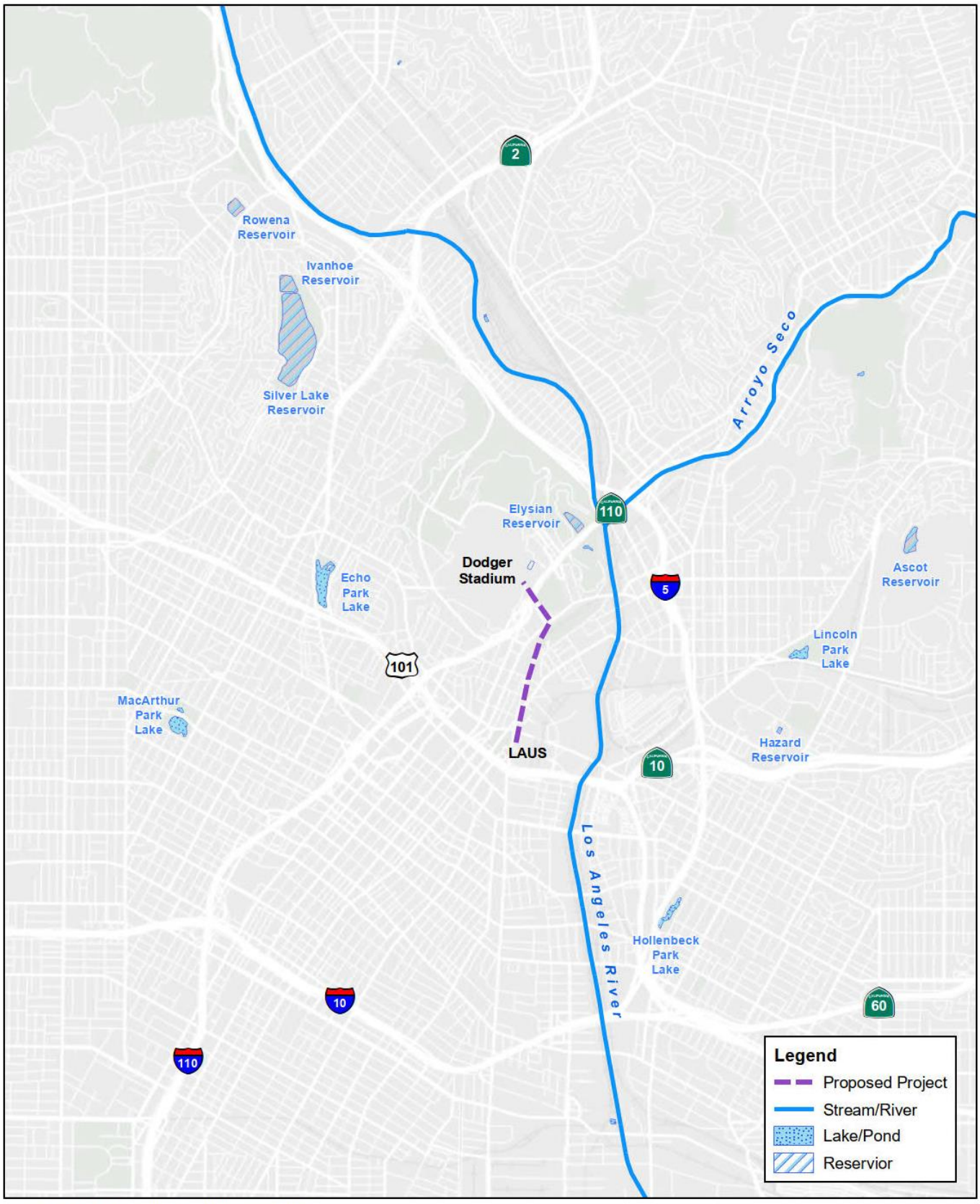
4.1.1 Climate and Precipitation

The climate in Los Angeles is Mediterranean, characterized by warm, dry summers and mild, wet winters. The average maximum temperature is 83.1 degrees Fahrenheit (°F) in August, with an average minimum temperature of 48.3°F in January. The average precipitation in the proposed Project study area is approximately an inch or less per month from April through October, and close to zero (less than 0.06 inch monthly from June through August). The average monthly precipitation for the months of November through March is 1.25 inches, 2.41 inches, 3.20 inches, 3.38 inches, and 2.40 inches. In contrast to the mostly arid climate, the rainy season from November through March can result in high flows in rivers and channels and increased runoff. The area receives an average annual precipitation of approximately 14.77 inches.[13]

4.1.2 Hydrologic Basin

The proposed Project study area is in the Los Angeles River watershed (Figure 5). The watershed covers approximately 824 square miles, the majority of which are in southern Los Angeles County, California. The watershed is drained by the Los Angeles River and its tributaries, and flows approximately 51 miles from its headwaters in the upper San Fernando Valley to San Pedro Bay and the Pacific Ocean, draining the Santa Monica, Santa Susana, and San Gabriel Mountains.[14] Much of

[12] Los Angeles Regional Water Quality Control Board. 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.* September. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html.
[13] Western Regional Climate Center (WRCC). 2020. Los Angeles Downtown USC Campus, California (045115). Period of Record Monthly Climate Summary (7/1/1877 to 6/9/2016). Available at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5115. Accessed May2022.
[14] Los Angeles County Department of Public Works. 1996. *Los Angeles River Master Plan.* June. Available at: http://ladpw.org/wmd/watershed/LA/LARMP/. Accessed May 2022.

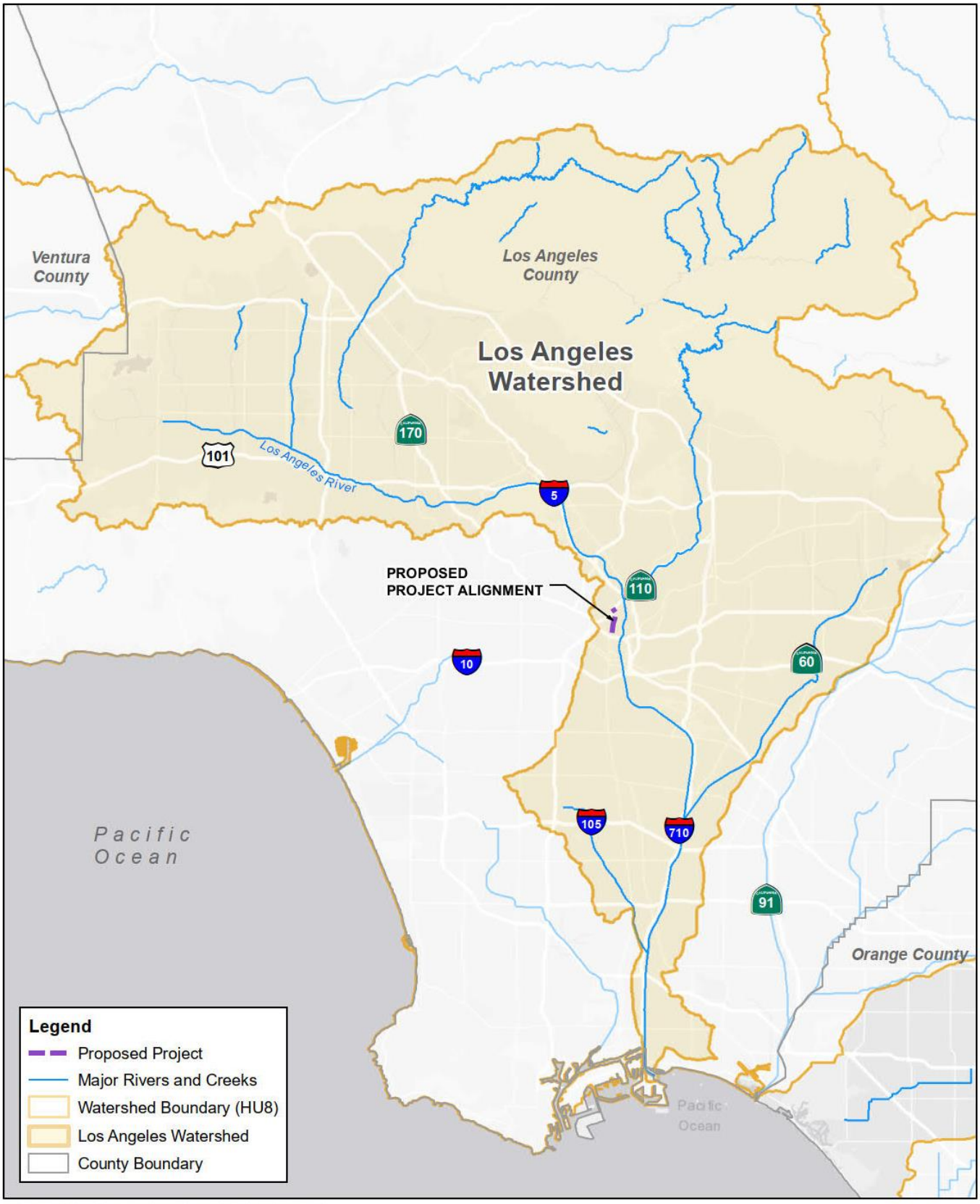


Source: Esri, 2020, LA County, National Hydrography Dataset.

0 1 2 Miles

Figure 4

Surface Water



Source: Esri, 2020, LA County, National Hydrography Dataset.

0 4 8 Miles

Figure 5

Los Angeles River Watershed Boundary

the natural hydrology of the watershed has been altered by construction of dams and flood control reservoirs, and channelization of rivers and streams.[15] Approximately 47.9 miles of the total length of the Los Angeles River is lined with concrete.[16]

The Project study area is in the Central Subbasin (Central Basin) of the Coastal Plain of Los Angeles River Basin.[17] According to the Basin Plan, the proposed Project is in an area where the beneficial uses of surface water have been designated as municipal and domestic supply; industrial service supply; groundwater recharge; water contact recreation; noncontact water (recreation); warm freshwater habitat; wildlife habitat; and wetland habitat. Surface waters of the Los Angeles River watershed are divided into a hierarchical system of hydrologic units, areas, and subareas. Based on the Overlay #1 Exhibit in the Basin Plan Appendix 2, the proposed Project alignment is in the Los Angeles-San Gabriel Hydraulic Unit (405.00), in the Coastal Plain Hydraulic Area (405.10), in the Central Hydraulic Subarea Split (405.15).[18]

Surface water resources in the vicinity of the Project study area comprise the Los Angeles River and local runoff, which discharges to the Los Angeles River. The Los Angeles River is east of the Project study area, and constitutes the primary drainage in the vicinity (Figure 4). The portion of the Los Angeles River near the proposed Project alignment is channelized and lined with concrete. The portion of the river that flows from Figueroa Street, City of Los Angeles to Carson Street, City of Long Beach is designated as Reach 2 in the Basin Plan.[19]

4.1.3 General Drainage

Most of the land surfaces in the proposed Project study area are developed and covered by impervious surfaces, except for existing public parks and landscaped areas along public ROWs and on private property, including private yards on residential properties near the proposed Project alignment. The majority of runoff flows to drain inlets along the streets and is then discharged directly to the Los Angeles River. Elevation in the proposed Project study area slopes gently from north to south, with ground surface elevations ranging from approximately 515 to 280 feet above mean sea level (msl).[20]

Runoff from the proposed Project study area flows to storm drain inlets, including curbside catch basins and inlets along the streets, each of which ultimately discharge to Reach 2 of the Los Angeles

[15] Los Angeles County Flood Control. 2015. *District Enhanced Watershed Management Programs Draft Environmental Impact Report.* April. Available at: https://dpw.lacounty.gov/LACFCD/ewmppeir/. Accessed May 2022.
[16] Los Angeles Gateway Region Integrated Regional Water Management Joint Powers Authority. 2013. *Gateway Integrated Regional Water Management Plan.* June. Available at: https://gatewaywater.org/download/irwmp_general_documents/gateway-irwm-plan/Gateway-IRWMP-Report-Final.pdf. Accessed May2022.
[17] California Department of Water Resources. 2004. *Bulletin 118. Coastal Plain of Los Angeles Groundwater Basin, Central Subbasin.* Available at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/4_011_04_CentralSubbasin.pdfhttps://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/4_011_04_CentralSubbasin.pdf. Accessed July 2022.
[18] Los Angeles Regional Water Quality Control Board. 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.* September. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Accessed May 2022.
[19] Ibid.
[20] Los Angeles County Public Works. *Los Angeles County Topography Maps Web Viewer*. Interactive tool available at: https://pw.lacounty.gov/smpm/cetopo/. Accessed May2022.

River without treatment.[21] Storm drain inlets along the proposed Project alignment, which drain the proposed Project study area, include those on North Alameda Street, North Broadway, and Bishops Road. Runoff from the southern portion of the proposed Project study area between the Alameda Station and the area just southwest of the southernmost portion of the Los Angeles State Historic Park property is collected in storm drain inlets along Alameda Street, and drains into a 120-inch reinforced-concrete pipe in East Cesar E. Chavez Avenue, which ultimately discharges to the Los Angeles River. Runoff from the northern portion of the proposed Project study area between the Los Angeles State Historic Park property and Dodger Stadium is collected in storm drain inlets along North Spring Street and neighboring roads, including Broadway and Bishops Road, and Academy Road and Stadium Way near Dodger Stadium, and drains into a 96-inch reinforced-concrete pipe that follows street alignments to Leroy Street before ultimately discharging to the Los Angeles River.[22] Drainage in the proposed Project study area is managed by the City of Los Angeles, Metro, Southern California Regional Rail Authority, and Caltrans.

4.1.4 Surface Water Quality

Surface water quality in the region is typically better in the upper reaches and headwaters of a watershed, and deteriorates as it receives urban runoff in the developed portions of the lower watershed prior to discharging to the Pacific Ocean.[23] Typical contaminants in urban runoff in the region include sediment, nutrients, bacteria, oil, metals, organic compounds, and trash.

Surface water quality in portions of the Los Angeles Watershed is impaired due to urban runoff from industrial, commercial, and residential land uses, and tertiary-treated effluent from several municipal wastewater treatment facilities.[24] The water quality of the Los Angeles River and its tributaries is impaired as a result of these activities, including Reach 2 of the Los Angeles River in the proposed Project study area.

The 2020-2022 CWA Section 303(d) list identifies waters in California that do not meet water quality standards, and are therefore designated impaired waters. The 2020-2022 303(d) list has been finalized by the SWRCB and was submitted to the USEPA on April 1, 2022, for final approval.[25] This listing, as it appears in the 2020-2022 California Integrated Report, does not include any new listing or delisting of impairments for Reach 2 of the Los Angeles River, which continues to be identified on

[21] Los Angeles River Upper Reach 2 Watershed Management Area. 2015. *Revised Watershed Management Program (WMP) Plan.* January. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/los_angeles/upper_reach2/15-01-27LARUR2WMARevWMP.pdf. Accessed May2022.

[22] Los Angeles County Public Works. 2020. Los Angeles County Storm Drain System. Interactive tool available at: https://pw.lacounty.gov/fcd/stormdrain/disclaimer.cfm. Accessed May2022.

[23] Greater Los Angeles County Integrated Regional Water Management Region. 2014. The Greater Los Angeles County Integrated Regional Water Management Plan, 2013 Update. Available at: https://dpw.lacounty.gov/wmd/irwmp/FileList.aspx?path=docs\2014%20Public%20IRWMP%20Update, accessed May 2022.

[24] Los Angeles River Upper Reach 2 Watershed Management Area. 2015. *Revised Watershed Management Program (WMP) Plan.* January. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/los_angeles/upper_reach2/15-01-27LARUR2WMARevWMP.pdf. Accessed May 2022.

[25] California State Water Resources Control Board. 2022. State Water Resources Control Board Resolution No. 2022-0006 to Adopt The Clean Water Act Section 303(d) List Of Impaired Waters for the 2020-2022 California Integrated Report. Available at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2022/rs2022_0006.pdf Accessed May 2022.

the CWA Section 303(d) list as an impaired water body based on concentrations of constituents listed in Table 4-1.

Table 4-1: Reach 2 Surface Water Body Impairments

Water Body Name	Area Affected (miles)	Category	Pollutant
Los Angeles River Reach 2 (Carson to Figueroa Street)	18.78	5: a water segment where standards are not met and a total maximum daily load (TMDL) is required but not yet completed for at least one of the pollutants listed	Ammonia
			Copper
			Indicator Bacteria
			Lead
			Nutrients (Causing Algae)
			Oil
			Trash

Source: State Water Resources Control Board 2022[26]; Caltrans 2020.[27]

4.1.5 Water Quality Objectives and Beneficial Uses

The Basin Plan identifies beneficial uses for the Los Angeles River as those uses deemed necessary for the survival or well-being of humans, plants, and wildlife.[28] The existing and potential beneficial uses for Reach 2 of the Los Angeles River identified in the Basin Plan are summarized in Table 4-2, below.

Table 4-2: Surface Water Beneficial Uses for Reach 2 of the Los Angeles River

Use	Code	Designation	Description
Municipal and Domestic Supply	MUN	Potential*	Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
Industrial Service Supply	IND	Potential	Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.
Groundwater Recharge	GWR	Existing	Uses of water for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

[26] California State Water Resources Control Board. 2020-2022 California Integrated Report. Available at: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html. Accessed May 2022.
[27] California Department of Transportation (Caltrans). 2020. Caltrans Water Quality Planning Tool. Interactive tool available at: http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx. Accessed May 2022.
[28] Los Angeles Regional Water Quality Control Board. 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.* September. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Accessed May 2022.

Table 4-2: Surface Water Beneficial Uses for Reach 2 of the Los Angeles River

Use	Code	Designation	Description
Warm Freshwater Habitat	WARM	Existing	Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Wildlife Habitat	WILD	Potential	Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

*Asterisked MUN designations are designated under SB 88-63 and RB 89-03. Some designations may be considered for exemption at a later date

Source: Los Angeles Regional Water Quality Control Board. 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.* September. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Accessed May 2022.

4.1.6 Floodplains and Flood Control Improvements

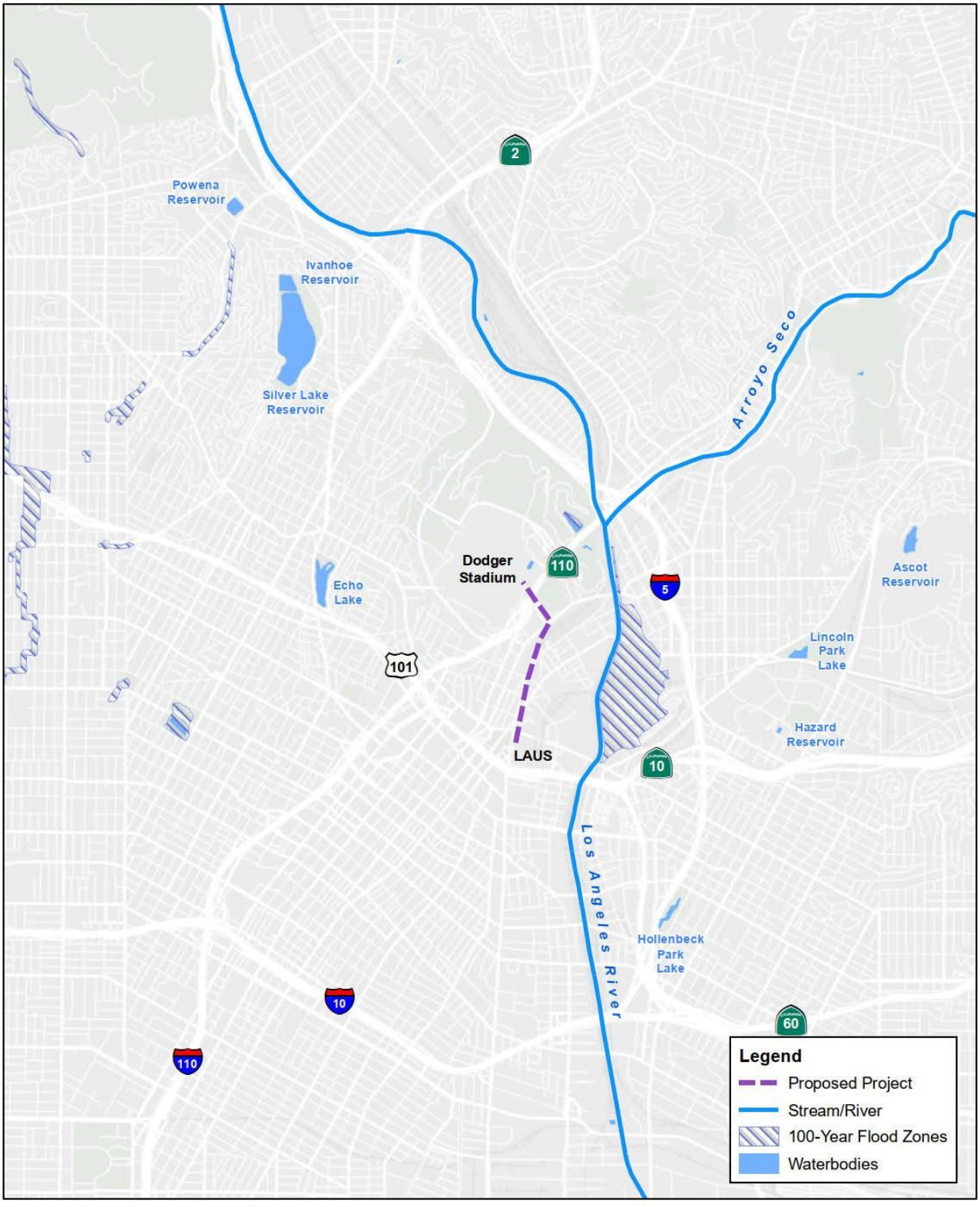
Floodplains are generally defined as the typically flat land adjacent to a river or stream which experiences periodic flooding. The 100-year floodplain is defined as an area which is predicted to have a 1% probability of flooding in any given year. FEMA administers the National Flood Insurance Program (NFIP) which provides flood insurance for those properties which are located within mapped 100-year floodplains.

The FEMA flood maps for the proposed Project study area include Panel 060137-1628F, effective September 26, 2008, and Panel 060137-1636G, revised December 21, 2018.[29] These panels show the 100-year flood inundation area is not mapped as extending west of the Los Angeles River Flood Control Channel; therefore, the proposed Project study area is not included in the 100-year flood inundation area. The proposed Project study area is located within Zone X, defined as Areas of Minimal Flooding (Figure 6). In the proposed Project study area, drainage and flood control structures and improvements are under the jurisdiction of the City of Los Angeles Bureau of Engineering, Southern California Regional Rail Authority, and Caltrans.

4.1.7 Dam Failure

The proposed Project alignment is depicted in the California Dam Breach and Inundation Maps as not being located within the footprint of a dam failure inundation zone (Figure 7).[30] The Elysian Dam is

[29] Federal Emergency Management Agency (FEMA). 2020. Flood Insurance Rate Maps; 06037C1628F (effective September 2008) and 06037C1636G (effective December 2018). Interactive map available at: https://msc.fema.gov/portal/search. Accessed May2022.
[30] California Dam Breach and Inundation Maps, 2022. Interactive map available at: https://fmds.water.ca.gov/maps/damim/, accessed May 2022.

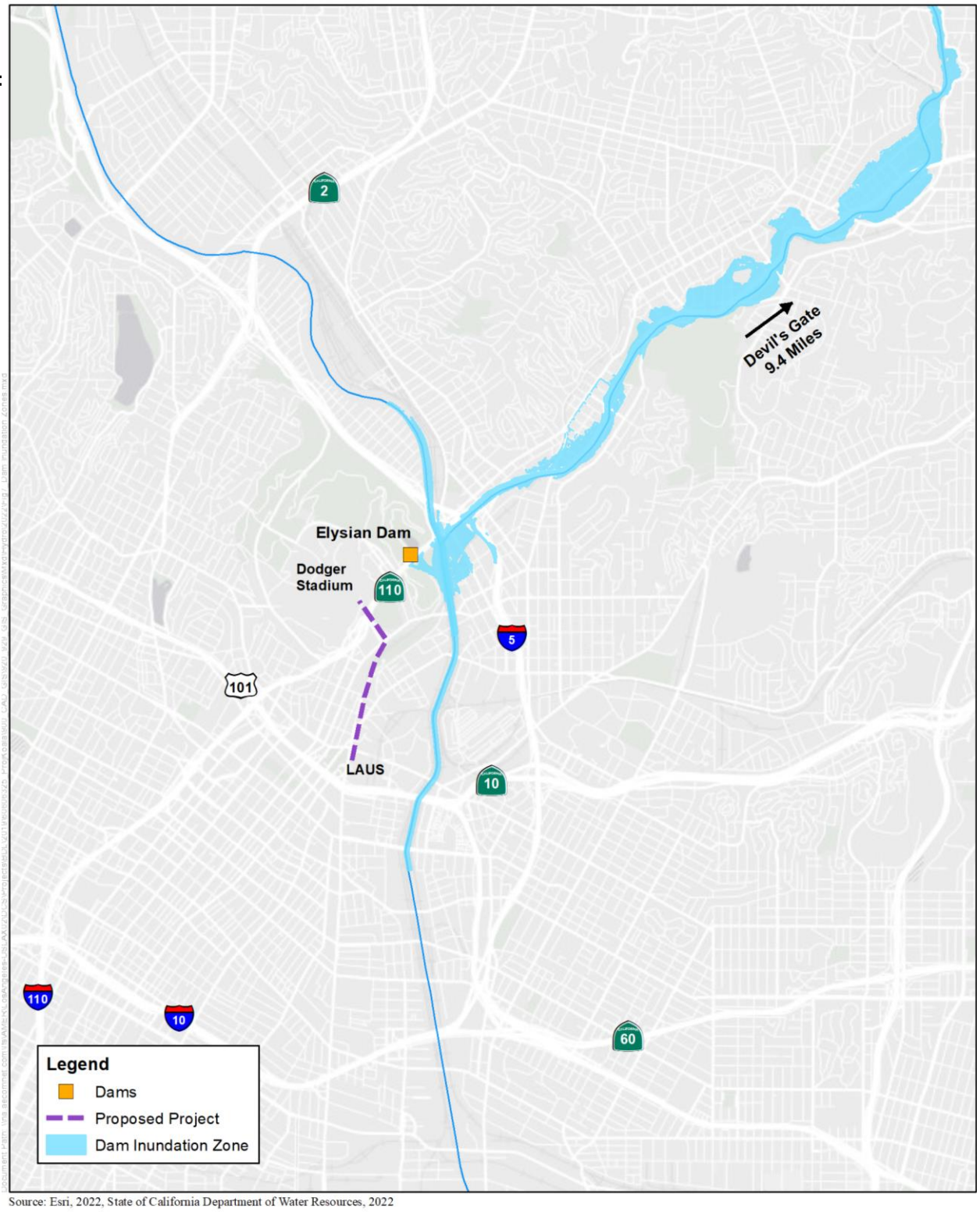


Source: Esri, 2020, LA County, National Hydrography Dataset, FEMA.

0 1 2 Miles

Figure 6

100-Year Flood Zones



Source: Esri, 2022, State of California Department of Water Resources, 2022

Figure 7

Dam Inundation Zones

located approximately 0.4 mile northeast of the proposed project site (Figure 7). The Elysian Dam is owned by City of Los Angeles Water and Power. The inundation boundary runs south along the Los Angeles River and includes the area to the east of Dodger Stadium, portions of the 110 freeway, N. Spring Street, and N. Broadway. The Devil's Gate Dam is over nine miles north east of the proposed Project; if a breach were to occur, the waters would generally follow the Los Angeles River. The Silver Lake Dam is approximately 2.5 miles northwest of the proposed Project. The proposed Project is not in the inundation zones for these dams. Dams in California are monitored by government agencies such as the US Army Corps of Engineers and the State of California Division of Safety of Dams to protect against the threat of dam failure. Dams in California are monitored by government agencies such as the US Army Corps of Engineers and the State of California Division of Safety of Dams to protect against the threat of dam failure.

4.1.8 Seiches and Tsunamis

Seiches are seismically or wind induced tidal phenomena that occur in enclosed bodies of water. Seismic seiches occur when seismic waves from an earthquake pass through the area. Wind induced seiches are waves caused by strong winds and rapid changes in atmospheric pressure pushing water from one end to another within a body of water. When the wind stops, the water bounces back to the other side of the enclosed area and continues to oscillate back and forth.

The proposed Project alignment is located inland at elevations ranging from approximately 515 to 280 feet above msl. The proposed Project study area is located in a seismically active area. There are two standing bodies of water within 1-mile of the proposed Project alignment. One is Solano Reservoir, located approximately 0.10 miles northeast of the proposed Dodger Stadium Station. This body of water is at an elevation of approximately 600 feet, approximately 80 feet higher than the proposed Dodger Stadium Station, and is concrete lined, covered with an aluminum roof. [31] A wind induced seiche on the Solano Reservoir is unlikely because it is covered; however, a seismically induced seiche could be generated which could affect the proposed Dodger Stadium Station because the Solano Reservoir is at a higher elevation than the proposed station.

The next closest body of water is the Elysian Reservoir located approximately 0.4 miles northeast of the proposed Dodger Stadium Station. The Elysian Reservoir is at an elevation of 460 feet, an elevation of approximately 60 feet lower than the proposed Dodger Stadium Station. A wind induced seiche on the Elysian Reservoir is unlikely because it is covered with an aluminum roof. A seismically induced seiche would not affect the proposed Project because the reservoir is at a lower elevation and water generated from the seiche would not reach the proposed Project footprint.

Tsunamis are large ocean waves which are generated by major seismic events with the potential of causing flooding in low lying coastal areas. The proposed Project is located approximately 14 miles northeast of the Pacific Ocean and outside of the areas that would be potentially impacted by a tsunami.

[31] University of California Libraries. 2022. Los Angeles Public Library. Department of Water and Power Photo Collection: Solano Reservoir. Available at: https://calisphere.org/item/3f413ecf3009034d6f503455292bc7de/, accessed June 2022.

4.1.9 Municipal Supply

Water in the region is provided by the Los Angeles Department of Water and Power (LADWP). Primary sources of water for the LADWP water supply include the Los Angeles Aqueduct system, local groundwater resources, recycled water from local water reclamation facilities for irrigation and industrial uses, and imported State Water proposed Project water supplied by the Metropolitan Water District of Southern California. The Metropolitan Water District of Southern California has supplied the LADWP with the majority of the water used annually in the region in recent years.[32]

4.2 Groundwater

The proposed Project study area is located within the South Coast Hydrologic Region, which covers approximately 11,100 square miles in Southern California and includes portions of Los Angeles County.[33] The South Coast Hydrologic Region is divided into alluvial groundwater basins, which are subdivided into subbasins. The proposed Project study area is located within the Central Basin (basin number 4-11.04) of the Coastal Plain of Los Angeles Groundwater Basin (basin number 4-11), within the South Coast Hydrologic Region.[34]

The Coastal Plain of Los Angeles Groundwater Basin covers approximately 836 square miles and comprises four groundwater subbasins. The Coastal Plain of Los Angeles Groundwater Basin is bounded on the north by the Hollywood Fault, the Santa Monica Mountains, and the Repetto, Merced, Puente, Elysian, and Chino Hills; on the east by the Santa Ana Mountains; on the south by the San Joaquin Hills and the Pacific Ocean; and on the west by the Pacific Ocean.

4.2.1 Groundwater Basin

The Central Basin which underlies the majority of the proposed Project study area occupies approximately 277 square miles in the southeastern portion of the Coastal Plain of Los Angeles Groundwater Basin (Figure 8).[35] The remaining portion of the proposed Project is underlain by less permeable rocks of the Elysian Hills and is not located within a mapped groundwater basin. The Central Basin is bounded on the northeast and east by the Elysian, Repetto, Merced and Puente Hills; on the southeast by Coyote Creek, which forms a drainage divide between the Central Basin and the Orange County Groundwater Basin; on the southwest by the Newport-Inglewood fault system; and on the north by a surface divide known as the La Brea high.

Groundwater in the Central Basin generally occurs in Holocene and Pleistocene age unconsolidated and semi-consolidated sediments at relatively shallow depths and enters the basin through surface flow through Whittier Narrows and subsurface flow from the San Gabriel Valley, as well as direct

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[32] Los Angeles Department of Water and Power. 2015. Urban Water Management Plan. Available online at, https://www.ladwp.com/ladwp/faces/wcnav_externalId/a-w-sos-uwmpln?_adf.ctrl-state=16nsdjhm6j_4&_afrLoop=1526108879947429&_afrWindowMode=0&_afrWindowId=11nzwb7bfo_26#%40%3F_afrWindowId%3D11nzwb7bfo_26%26_afrLoop%3D1526108879947429%26_afrWindowMode%3D0%26_adf.ctrl-state%3Do7f35ucqn_4. Accessed June 2022.

[33] State of California Natural Resources Agency. 2015. *California's Groundwater Update 2013.* April. https://cawaterlibrary.net/document/californias-groundwater-update-2013-south-coast-hydrologic-region/. Accessed May2022.

[34] State of California Natural Resources Agency. 2015. *California's Groundwater Update 2013.* April. https://cawaterlibrary.net/document/californias-groundwater-update-2013-south-coast-hydrologic-region/. Accessed May2022.

[35] California Department of Water Resources. 2004. *Bulletin 118. Coastal Plain of Los Angeles Groundwater Basin, Central Subbasin*. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/4_011_04_CentralSubbasin.pdf. Accessed May2022.

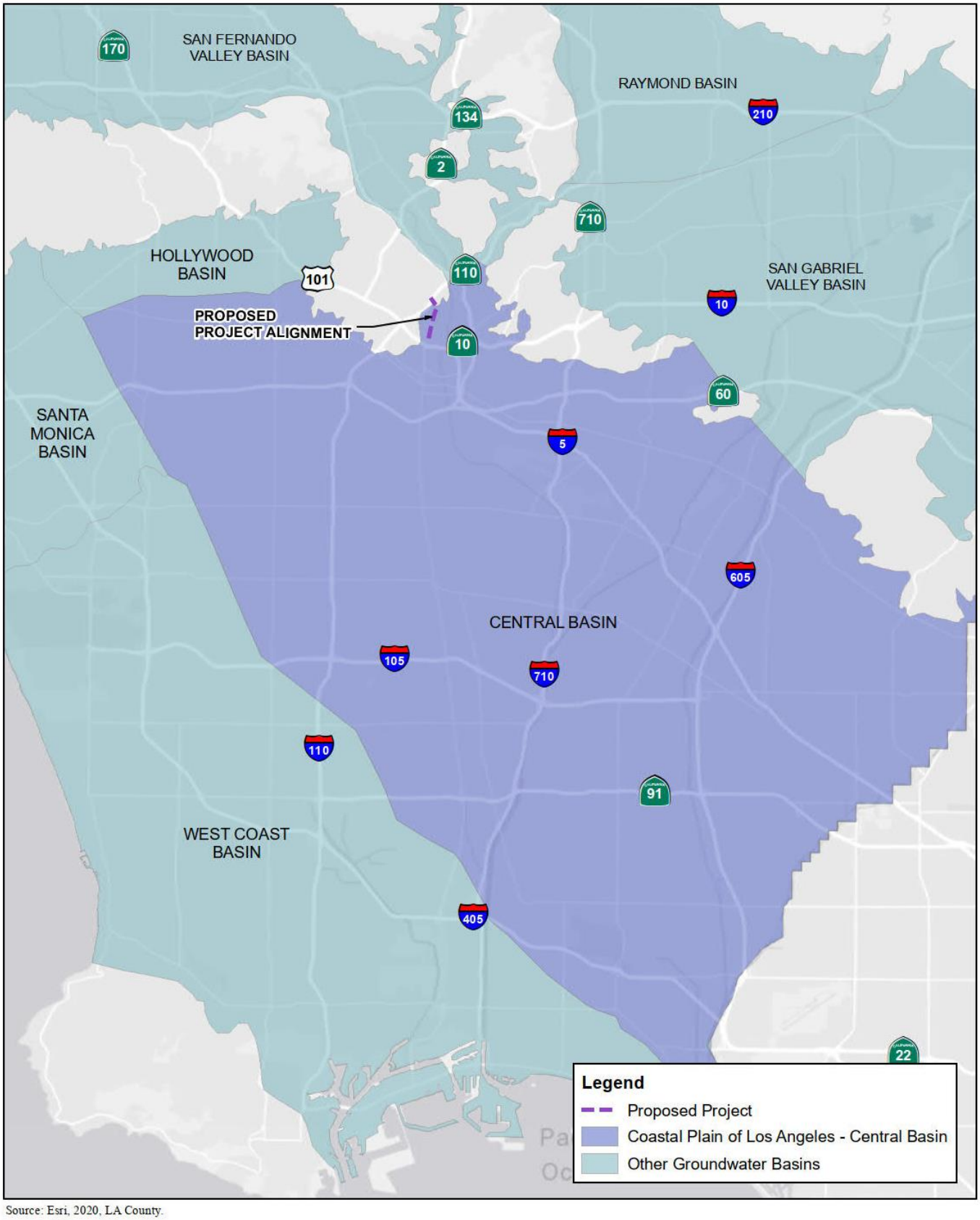

Figure 8

Groundwater Basin - Central Basin

https://www.wrd.org/sites/pr/files/GBMP_FinalReport_Text%20and%20Appendicies.pdf. Accessed May2022.

The primary aquifers in the Central Basin are the Holocene age Gaspur aquifer, and the Pleistocene age Gardena, Gage, Silverado, Lynwood, and Sunnyside aquifers, which are primarily permeable sands and gravels separated by thick, semi-permeable to impermeable aquitards composed of sandy clay to clay. Vertical percolation into the deeper age aquifers from the surface is generally restricted by the presence of the Bellflower aquiclude, creating local semi-perched groundwater conditions.[38] The main sources of potable groundwater in the Central Basin are the deeper Pleistocene age aquifers.[39] The uppermost aquifer beneath the proposed Project study area is the Gaspur aquifer, which consists of coarse sand and gravel and extends to a thickness of approximately 120 feet.[40] Total storage capacity of the Central Basin is estimated at approximately 13.8 million acre-feet,[41] with approximately 330 thousand acre-feet available for storage.[42]

Groundwater levels in the proposed Project study area generally range from depths of approximately 20 to 60 feet below ground surface (bgs).[43, 44] Groundwater levels range from 20 to 25 feet bgs in the vicinity of LAUS, 25 feet bgs near the intersection of North Alameda Street and North Main Street, 27 to 35 feet bgs in the vicinity of the southern portion of the Los Angeles State Historic Park, more than 60 feet bgs in the vicinity of the intersection of North Broadway and Bishops Road, and estimated at 60 feet bgs below the proposed Dodger Stadium Station.[45]

4.2.2 Uses

The Basin Plan identifies beneficial uses for the Central Basin as those uses deemed necessary for the survival or well-being of humans, plants, and wildlife.[46] The existing beneficial uses for the Central Basin identified in the Basin Plan are summarized in Table 4-3.

[38] California Department of Water Resources. 2004. *Bulletin 118. Coastal Plain of Los Angeles Groundwater Basin, Central Subbasin.* https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/4_011_04_CentralSubbasin.pdfAccessed May2022.
[39] The Metropolitan Water District of Southern California. 2016. *Potential Regional Recycled Water Program Feasibility Study.* November. https://www.ocwd.com/media/4888/wic05xcarson-rrwp-feasibility-main-report.pdf. Accessed May2022.
[40] State of California Natural Resources Agency. 2015. *California's Groundwater Update 2013.* April. https://cawaterlibrary.net/document/californias-groundwater-update-2013-south-coast-hydrologic-region/. Accessed May2022.
[41] California Department of Water Resources. 2004. *Bulletin 118. Coastal Plain of Los Angeles Groundwater Basin, Central Subbasin.* http://206.169.56.138/sites/default/files/file_attach/pdf/uwmp/UWMP2015/3.%20DWR%20Bulletin%20118%20Basin%20Description%20Central%20Basin.pdf. Accessed May2022.
[42] Water Replenishment District of Southern California. 2016. *Groundwater Basins Master Plan.* September. https://www.wrd.org/sites/pr/files/GBMP_FinalReport_Text%20and%20Appendicies.pdf. Accessed May2022.
[43] Los Angeles Department of Public Works. 2020. Groundwater Wells Online Data. Interactive map available at: https://dpw.lacounty.gov/general/wells/. Accessed May2022.
[44] State Water Resources Control Board. 2020. GeoTracker. Interactive map available at: https://geotracker.waterboards.ca.gov/map/. Accessed May2022.
[45] ENGEO Incorporated. 2022. DRAFT Los Angeles Aerial Rapid Transit, Los Angeles, California, Geotechnical Document in Support of the Environmental Impact Report, June 5. Accessed May2022.
[46] Los Angeles Regional Water Quality Control Board. 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.* September. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Accessed May 2022

Table 4-3: Groundwater Beneficial Uses for the Central Basin

Use	Code	Description
Municipal and Domestic Supply	MUN	Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
Industrial Service Supply	IND	Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.
Industrial Process Supply	PROC	Uses of water for industrial activities that depend primarily on water quality.
Agricultural Supply	AGR	Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

Source: Los Angeles Regional Water Quality Control Board. 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.* September. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Accessed May 2022.[47]

4.2.3 Nearby Wells

Based on the Los Angeles County Department of Public Works Groundwater Well Data website, there is one active drinking water and groundwater extraction well located within 1 mile of the proposed Project alignment (2772E; located approximately 0.81 miles northeast of the Dodger Stadium Station).[48] There are also several inactive wells located within 1 mile of the proposed Project alignment.

4.2.4 Quality

Regional groundwater basin water quality is poor in some areas due to natural conditions resulting in high TDS levels, while in other areas groundwater quality has been degraded due to infiltration from commercial and industrial discharges, agricultural chemical application, and contaminants from urban runoff.[49] Deterioration of water quality in some areas has occurred due to inadequate storage, handling, and disposal of chemicals resulting in releases to groundwater. The groundwater in the portions of the Central Basin is known to contain elevated levels of TDS, VOCs, perchlorate, nitrate, iron, manganese, and chromium. [50]

[47] Los Angeles Regional Water Quality Control Board. 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.* September. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Accessed May 2022

[48] Los Angeles Department of Public Works. 2020. Groundwater Wells Online Data. Interactive map available at: https://dpw.lacounty.gov/general/wells/. Accessed May 2022

[49] Greater Los Angeles County Integrated Regional Water Management Region. 2014. The Greater Los Angeles County Integrated Regional Water Management Plan, 2013 Update. Available at: https://dpw.lacounty.gov/wmd/irwmp/FileList.aspx?path=docs\2014%20Public%20IRWMP%20Update, accessed May 2022.

[50] Greater Los Angeles County Integrated Regional Water Management Region. 2014. The Greater Los Angeles County Integrated Regional Water Management Plan, 2013 Update. Available at: https://dpw.lacounty.gov/wmd/irwmp/FileList.aspx?path=docs\2014%20Public%20IRWMP%20Update, accessed May 2022.

There are multiple records for the proposed Project study area at which commercial and industrial activities resulted in documented releases; these cases are generally overseen by the SWRCB, LARWQCB, and/or California Department of Toxic Substances Control cleanup programs.[51] [52]

There are three properties in the proposed Project alignment identified with release cases (Figure 9), two of which are listed as closed cases: the location of the Broadway Junction at 1201 North Broadway property is identified as a completed-closed leaking UST (LUST) case as of 2001;[53] and one of the proposed locations for construction support space and vertical circulation elements for the Alameda Station at Los Angeles Union Station (800 North Alameda Street) is listed with a closed Cleanup Program Sites-Spills, Leaks, Investigations, and Cleanups (CPS-SLIC) case as of 1996.[54]

The other property in the proposed Project alignment is the Cornfield Yard Site and Union Pacific Railroad (UPRR) – Cornfield Yard Site at 1245 North Spring Street, which is the location of the Chinatown/State Park Station.[55, 56] This 50-acre site is the former Southern Pacific Railroad (now UPRR) Company's Freight Yards, and included transfer station and storage yard activities. It has been converted to use for the Metro L Line (Gold) (10-acre easement), Los Angeles State Historic Park (32-acre portion), and a vacant area that is planned for residential development (8-acre portion along the 40-foot-high escarpment along North Broadway). Historic operations at the former railroad transfer station and storage yard resulted in impacts to soil and groundwater. Soil removal action has been completed in portions of the Los Angeles State Historic Park site, but additional removal action is required in the northeastern portion, outside of the proposed Project site. Annual groundwater monitoring has been ongoing at this site since 2001 at the request of the LARWQCB, and groundwater monitoring wells are situated throughout the site. The 2021 "Annual Report," filed by Arcadis U.S., Inc. (Arcadis) on behalf of UPRR, reports the 2021 Annual Report was the most recent monitoring report available on GeoTracker (dated January 2022); and at that time, depth to groundwater at the site ranged from 27.95 feet bgs to 60.07 feet bgs. The Annual Report stated that concentrations of fuel-related petroleum hydrocarbons and benzene, toluene, ethylbenzene, and xylenes (BTEX) had generally decreased compared to the previous annual groundwater monitoring events; however, concentrations of benzene were detected in groundwater above the California maximum contaminant level (MCL) in 2021.[57] The construction and operation of the proposed Project's Chinatown/State Park Station would not interfere with existing groundwater monitoring wells, and the wells should remain accessible during and after construction activities.

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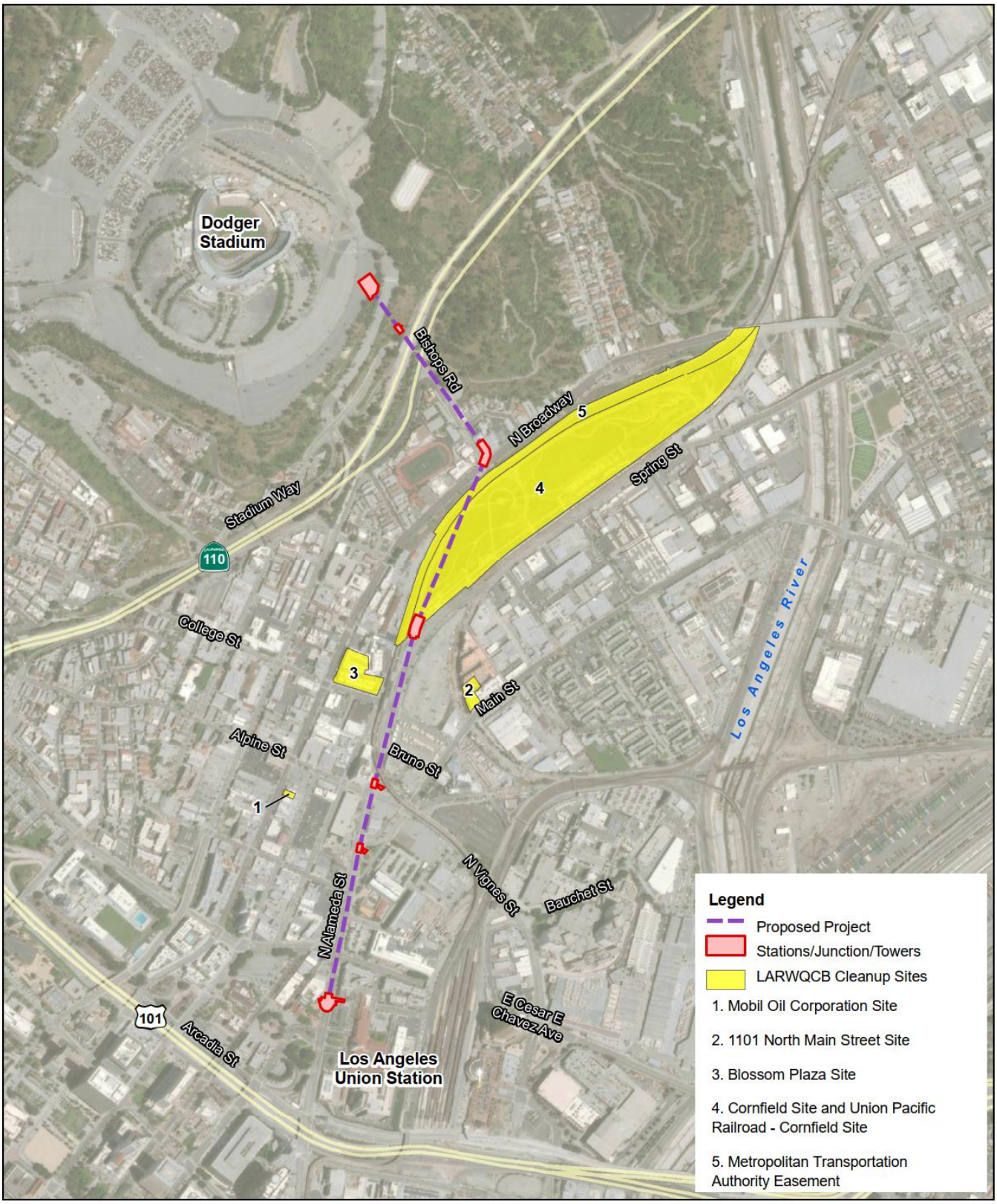
[51] State Water Resources Control Board. 2020. GeoTracker. Interactive map available at: https://geotracker.waterboards.ca.gov/map/. Accessed May 2022.
[52] California Department of Toxic Substances Control. 2022. EnviroStor. Search engine available at: https://www.envirostor.dtsc.ca.gov/public/.
[53] State Water Resource Control Board, 2020. GeoTracker, Domenich Basso, Inc. (T0603790010). Accessed at: https://geotracker.waterboards.ca.gov/profile_report?global_id=T0603790010. Accessed May 2022.
[54] State Water Resource Control Board, 2022. GeoTracker. Metro Rail Union Station (SLT43207205). Accessed at https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT43207205. Accessed May 2022.
[55] State Water Resource Control Board, 2020. GeoTracker, Union Pacific - Cornfield Yard (2047T1683). Accessed at: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL2047T1683. Accessed May 2022.
[56] California Department of Toxic Substances Control. 2022. EnviroStor, Cornfield Site (19400013). Accessed at: https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=19400013. Accessed May 2022.
[57] State Water Resources Control Board. 2022. GeoTracker, Union Pacific – Cornfield Yard (2047T1683), 2021 Annual Groundwater Monitoring Report. Available at: https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/2092456221/SL2047T1683.PDF. Accessed May 2022.



Source: Esri, 2020.

0 750 1,500 Feet

Figure 9
Los Angeles Regional Water Quality Control Board Cleanup Sites Near the Project Alignment

There are 10 properties within approximately 500 feet of the proposed Project alignment that are identified with release cases; of the 10 properties, nine are identified with a Closed Case status. The one remaining open case within 500 feet of the proposed Project is at 1060 North Vignes Street, and is listed as inactive as of March 7, 2022.[58] Based on information available on the online GeoTracker, this site was recently referred to the LARWQCB by the Los Angeles Fire Department (LAFD), due to post-UST removal soil sample results exceeding LARWQCB and LAFD action levels, and historical groundwater data indicating that groundwater at the site had been impacted by total petroleum hydrocarbons.

Although the groundwater quality in the proposed Project study area is not specifically known, due to the available information for the proposed Project study area, it is anticipated that the area may contain elevated levels of constituents such as petroleum hydrocarbons and VOCs resulting from commercial and industrial discharges from surrounding uses, in addition to potentially elevated TDS and metals related to natural conditions. The proposed Project may require the removal of nuisance water that seeps into boreholes during construction; however, the proposed Project does not involve the extraction and/or use of groundwater.

4.2.5 Adjudication Status

The Central Basin was adjudicated in 1965, and the judgment was subsequently amended in 1991. The judgment set out the annual pumping rights of each of the listed parties, and appointed the DWR as Watermaster for the Central Basin.[59] The judgment was amended again in 2013, leading to the retirement of DWR as Watermaster, and creation of a new Watermaster composed of three bodies, including a Water Rights Panel, an Administrative Body, and a Storage Panel.[60]

[58] State Water Resources Control Board. 2022. GeoTracker, Los Angeles County Department of Public Works (T10000018616). Available at: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000018616. Accessed May 2022.
[59] US Department of the Interior Bureau of Reclamation. 2014. Los Angeles Basin Groundwater Adjudication Summary. Available at: https://www.usbr.gov/lc/socal/basinstudies/LA%20Adjudication%20Dec%202014.pdf. Accessed May 2022.
[60] Central Basin Watermaster. 2020. *Central Basin Watermaster Website.* Available at: http://www.cbwatermaster.org/about.html. Accessed May 2022.

5 Methodology

To establish the baseline conditions presented in Section 4, Existing Conditions, AECOM performed a search of publicly accessible databases and information from various sources. The data sources used in this document are listed in footnotes throughout this document.

To assess potential impacts, proposed Project activities have been divided into construction activities and operations activities. Preconstruction and post-construction drainage conditions in the proposed Project study area were reviewed, and stormwater management BMPs were identified to avoid or minimize proposed Project impacts on hydrology and water quality. Procedures and practices that would be applied to reduce potential for proposed Project-related impacts on drainage systems and stormwater management were also considered as part of the evaluation.

Potential project impacts were determined by evaluating the proposed Project changes to existing conditions with respect to the significance criteria presented below. The changes were then evaluated for significant impacts based on the State significance thresholds, if relevant, and taking into account required compliance with applicable regulations.

5.1 Thresholds of Significance

For purposes of this Draft EIR, the checklist questions contained in Appendix G of the CEQA Guidelines have been utilized as the thresholds of significance. The proposed Project would be considered to have a significant impact with regard to hydrology and water quality if the proposed Project would:

A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:

    i Result in substantial erosion or siltation on- or off-site;

    ii Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

    iii Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

    iv Impede or redirect flood flows.

D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

6 Impact Analysis

This analysis of the potential for the proposed Project to result in impacts to hydrology and water quality is based on physical changes to the environment that modify existing baseline conditions.

Impact HYD-A: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

Construction

Construction of the proposed Project components would include site preparation and installation of foundations and columns; erection of stations, towers, and the junction; replacement or restoration of paving, sidewalk, and landscaping; and cable and cabin installation.

Construction activities associated with foundations would involve general earthwork and concrete work to prepare the foundations, with excavations for foundations at depths ranging between 7 and 42 feet bgs, and piles to be installed at depths between 55 feet and 125 feet below pile depth. Groundwater levels in the proposed Project study area generally range from depths of approximately 20 to 60 feet bgs, with deeper groundwater depths occurring below the Dodger Stadium parking lot in the area of the proposed Dodger Stadium Station at approximately 60 feet bgs; therefore, the proposed Project may require the removal of nuisance water that seeps into boreholes during construction. Water removed from the boreholes would be containerized and analyzed to determine the proper disposal method.

Groundwater levels range from 20 to 25 feet bgs in the vicinity of LAUS. The foundations for the Alameda Station would be at a depth of 10 feet bgs. Based on these anticipated depths to groundwater, it is considered unlikely groundwater would be encountered during construction of the foundations; however, piles would be drilled to 125 feet below pile depth, and may require removal of nuisance water that seeps into boreholes during installation of the piles of this station.

Groundwater occurs at a depth of approximately 25 feet bgs near the intersection of North Alameda Street and North Main Street. The foundations for the Alameda Tower and the Alpine Tower would be at a depth of 10 feet bgs. Based on these anticipated depths to groundwater, it is considered unlikely groundwater would be encountered during construction of the foundations. However, piles for the Alameda Tower and the Alpine Tower would be drilled to 120 feet below pile depth and may require removal of nuisance water that seeps into boreholes during installation of the piles of these towers.

Groundwater levels range from 27 to 35 feet bgs in the vicinity of the southern portion of Los Angeles State Historic Park. The foundations for the Chinatown/State Park Station would be at a depth of 10 feet, with piles drilled to 80 feet below pile depth. Based on these anticipated depths to groundwater, it is considered unlikely groundwater would be encountered during construction of the foundations for the Chinatown/State Park Station. However, because the proposed piles at this station would be drilled to 80 feet below pile depth, removal of nuisance water that seeps into boreholes during construction may be required for pile installations at the Chinatown/State Park Station.

Groundwater occurs at depths of more than 60 feet bgs in the vicinity of the intersection of North Broadway and Bishops Road. The foundations for the Broadway Junction would be at a depth of seven feet. Based on these anticipated depths to groundwater, it is considered unlikely groundwater would be encountered during construction of the foundations for the Broadway Junction; however, piles would be drilled to 120 feet bgs, and may require removal of nuisance water that seeps into boreholes during installation of the piles at this junction.

Groundwater in the southeastern portion of the Dodger Stadium property occurs at approximately 60 feet bgs. The foundation for the Stadium Tower would be at a depth of 7 feet, with piles drilled to 120 feet below pile depth. The foundations for the Dodger Stadium Station would be at a depth of 42 feet, with piles drilled to 55 feet below pile depth. Based on these anticipated depths to groundwater, it is considered unlikely groundwater would be encountered during construction of the foundations for the Stadium Tower and Dodger Stadium Station. However, the proposed piles for the Stadium Tower would be drilled to 120 feet below pile depth. Additionally, although not anticipated, it is possible that groundwater may be encountered during installation of piles at the Dodger Stadium Station. Therefore, removal of nuisance water that seeps into boreholes during construction may be required for the pile installations of the Stadium Tower and the Dodger Stadium Station.

Based on groundwater depths, none of the proposed excavations for foundations are anticipated to encounter groundwater; however, removal of nuisance water that seeps into boreholes during construction may be required for the pile installations at each of the components. Groundwater may be encountered during installation of piles, and any nuisance water removed would need to be analyzed prior to disposal. Detections of TPH and VOCs including BTEX are known to be present in groundwater at the Los Angeles State Historic Park property, which is directly beneath the proposed Project alignment.[61] Although the groundwater quality in the remainder of the proposed Project study area is not specifically known, it may contain elevated levels of constituents such as petroleum hydrocarbons and solvents resulting from commercial and industrial discharges, in addition to potentially elevated TDS and metals related to natural conditions. Uncontrolled discharge of groundwater carrying these potential pollutants could result in degradation of groundwater and surface water if it is not properly managed during construction activities. Nuisance seepage water removed from the boreholes would be containerized and analyzed consistent with existing applicable regulations to determine the proper disposal method. Additionally, as stated in the Phase I Environmental Site Assessment prepared for the proposed Project, a Soil and Groundwater Management Plan would be prepared to specify methods for handling and disposal in the event contaminated groundwater is encountered during construction.

Because Project construction would require grading and excavation activities, there is the potential that excavation in certain areas would encounter groundwater; therefore, dewatering would be required. Dewatering operations are practices that discharge groundwater that must be removed from a work location into the storm drain system to proceed with construction. Discharges from dewatering operations can contain high levels of fine sediments, which, if not properly treated, could lead to exceedance of the NPDES requirements. Therefore, if required, temporary pumps and filtration would be used in compliance with the NPDES permit. The temporary system would comply

[61] Arcadis. 2009. Summary of Site Conditions and Request for Closure, Former Cornfield Yard, 1245 North Spring Street, Los Angeles, California, SLIC Site SL2047T1683, January 13. Accessed at: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL2047T1683. Accessed May 2022.

with all relevant NPDES requirements related to construction and discharges from dewatering operations. If dewatering is required, the treatment and disposal of the dewatered water would occur in accordance with the requirements of LARWQCB's 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 activities such as demolition of existing site structures and excavation for foundations would temporarily expose bare soil at each proposed Project component, which would be at increased risk for erosion. Exposed or stockpiled soils would also be at increased risk for erosion. Sediments resulting from erosion might accumulate, blocking storm drain inlets and causing downstream sedimentation. Erosional sediments might be carried by stormwater runoff into storm drain inlets, which ultimately empty into the Los Angeles River.

In addition to sediments, trash, concrete waste, and petroleum products, including heavy equipment fuels, solvents, and lubricants, and landscape fertilizers and pesticides, could degrade water quality and contribute to water pollution. The use of construction equipment and other vehicles during proposed Project construction could result in spills of oil, brake fluid, grease, antifreeze, or other vehicle-related fluids that could contribute to water pollution. Improper handling, storage, or disposal of fuels and vehicle-related fluids or improper cleaning and maintenance of equipment could result in accidental spills and discharges that could contribute to water pollution.

Uncontrolled erosion and discharge of sediments and other potential pollutants could result in adverse effects to water quality in the Los Angeles River, violating water quality standards and waste discharge requirements if not appropriately managed.

As part of the proposed Project, the Project Sponsor would be required to comply with all applicable federal, State, regional, and local agency water quality protection laws and regulations, as well as commonly used industry standards. These would include CWA of 1972 (including 1977 and 1987 Amendments); Antidegradation Policy of 1968; Porter-Cologne Water Quality Control Act of 1969; State of California Antidegradation Polices – SWRCB Resolution 68-16; 3.2.540 CFR 131.38 – California Toxics Rule; NPDES General Construction Permit requirements; the MS4 Permit; the City of Los Angeles LID Ordinance; the LAMC; and all other applicable regulations for all construction activities. The existing Construction Stormwater General Permit expired on September 2, 2014, and is administratively extended until the effective date of a reissued permit; the proposed Project would comply with the CGP in effect at the time of construction.

In accordance with the CGP, the proposed Project would be required to prepare and submit a construction SWPPP, which must be submitted to the SWRCB prior to construction, and adhered to during construction. The construction SWPPP would identify the BMPs that would be in place prior to the start of construction activities and during construction. BMP categories would include erosion control, sediment control, tracking control, wind erosion, stormwater and non-stormwater management, and materials management. Although specific temporary construction-related BMPs would be selected at the time of the SWPPP preparation, potential BMPs would likely include fiber rolls, bonded-fiber matrix hydroseeding, soil furrowing, water bars, and check dams for erosion control, inlet protection (sand/gravel bags and geotextiles) silt fencing, sediment traps/basins for sediment controls, soil berming around disturbed areas, phasing of soil disturbance during the wet

season (i.e., limiting widespread grading), and effective Rain Event Action Plans in accordance with CGP/SWPPP requirements.

With adherence to these laws, regulations, and permit requirements, impacts related to surface or groundwater quality during construction activities would be less than significant.

The construction SWPPP would identify the BMPs that would be in place prior to the start of construction activities and during construction. BMPs would include, but not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs.

With adherence to these laws, regulations, and permit requirements, impacts related to surface or groundwater quality during construction activities would be less than significant.

Operations

During operations, the proposed Project would not result in a significant increase in impervious surfaces because most of the land surfaces in the Project study area are developed, and covered by existing impervious surfaces (see Table 4-4 for existing and new impervious surface areas at each of the Project component sites). Components that would increase the existing impervious surface area include the Alameda Station, Alameda Tower, Chinatown/State Park Station, Stadium Tower, and Dodger Stadium Station. The actual footprint of the proposed Project at the ground level would be covered only by column footings and vertical circulation elements. However, to be conservative, the analysis includes aboveground elements of these components, including the station canopies and platforms, and tower cantilever structures, to calculate the total impervious area created by the Project components. The footprints of proposed Project components are nominal when compared to the area of the groundwater basin. Table 4-4 lists the estimated total impervious surface areas created, total footprint at ground level, existing impervious surface areas, and amount of new impervious surfaces added by Project component.

During operations, the cabins would travel on a continuous loop between the Alameda Station and the Dodger Stadium Station. The proposed Project would require routine maintenance that would be performed by the system operator. Oil and grease used during proposed Project operations and maintenance could contribute to water pollution if not properly stored or disposed. Maintenance activities associated with system operation, such as lubrication, would occur at each of the proposed Project component locations, while maintenance of the cabins would occur at the subterranean maintenance facility proposed at the Dodger Stadium Station. Uncontrolled discharge of runoff carrying these potential pollutants could result in adverse effects to water quality in the Los Angeles River, violating water quality standards and waste discharge requirements if not appropriately managed.

Table 4-4: New Impervious Surface Area

Component	Existing Impervious Surface Area at Component Site	Total Footprint of Project at Ground Level	Amount of New Impervious Surface Area Added by Project	Total Impervious Area Created by Component
Alameda Station	20,339 sf	1,980 sf	642 sf	20,981 sf
Alameda Tower	2,776 sf	900 sf	1,113 sf	3,889 sf
Alpine Tower	3,433 sf	1,030 sf	0 sf	3,433 sf
Chinatown/State Park Station	18,420 sf[c]	4,080 sf[b]	11,331 sf[d]	29,751 sf[a]
Broadway Junction	13,331 sf	1,460 sf	0 sf	13,331 sf
Stadium Tower	0 sf	870 sf	1,907 sf	1,907 sf
Dodger Stadium Station	62,956 sf	27,770 sf	12,868 sf	75,824 sf
Total	**121,255 sf**	**38,090 sf***	**27,861 sf**	**149,116 sf**

Note: sf = square feet

***** The total footprint of the Project component at ground level is provided for informational purposes only.

a. Including 5,840 sf of Park Amenities.

b. Including 1,508 sf of Park Amenities.

c. Including 4,357 sf of Park Amenities.

d. Including 1,483 sf of Park Amenities.

The proposed Project would be designed to incorporate several sustainability features, and would be in compliance with the LID Handbook. It would also comply with all applicable federal, State, regional and local agency water quality protection laws and regulations, water quality control and/or sustainable groundwater management plans, including the Basin Plan and City of Los Angeles General Plan, as well as commonly used industry standards. The proposed Project would comply with the City of Los Angeles Municipal Code and all other applicable regulations for all operational activities, including adherence to an approved LID Plan, as applicable, which would identify the BMPs for proposed Project operations. The types of LID designs to be incorporated would be determined during the design phase. Although final design would dictate actual stormwater management aspects of the proposed project, potential BMPs could include, but not be limited to, depressed landscape gardens for runoff retention and infiltration, pervious pavements to reduce runoff volume, hardscape replacement with pervious or planted substitutions, bioswales or artistic water features that creatively convey runoff into planted or pervious areas, roof downspout discharges to vegetated areas, replacement of native soils with engineered soil mixtures for optimum pollutant removal (e.g., perolite/zeolite/compost additives), and infiltration characteristics that also promote healthy plant growth and moisture retention, and favoring drought-tolerant plant species to reduce irrigation use and potential dry-weather discharges.

The LID Plan would identify the BMPs for the proposed Project's post-construction design, as applicable (i.e., operational characteristics to control/treat runoff). The proposed Project would incorporate BMPs to ensure the treatment of first flush, or the equivalent of the greater between the

85th percentile storm and first 0.75 inch of rainfall for any storm event. Each drainage area on the Project site would include design elements that serve to capture and re-use stormwater in accordance with current LID requirements—thereby minimizing the potential for both on- and off-site erosion, siltation, and flooding, while simultaneously providing irrigation supply and reducing potable water consumptive use. LID design features slow (detain or retain) stormwater, which reduces the runoff volume discharged from the proposed Project and decreases the peak runoff discharge velocity for design storms—also ultimately reducing the amount of stormwater runoff burden into the City's stormwater conveyance systems. As a result, less flow with fewer pollutants would be transported through the conveyance systems, and ultimately into surface waters, including ancillary exfiltration to the groundwater table.

If the proposed Project requires IGP coverage[62], an IGP SWPPP would be prepared and submitted to the SWRCB prior to operations, and adhered to during operations. IGP SWPPP BMPs could include, but not be limited to good housekeeping, prevention and maintenance activities, material handling and waste management, erosion and sediment controls, training, and recordkeeping. Other BMPs may also be employed, as appropriate, such as indoor/covered areas for gondola maintenance, approved flammable/hazmat storage lockers for lubricants and other industrial liquids, drip/spill protection in maintenance areas and similar BMPs when conducting tower maintenance, dry clean-up practices, and dedicated enclosed areas for metal working, painting, and welding.

Mitigation Measures

No mitigation measures are required because the proposed Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

With adherence to applicable federal State, regional, and local laws and regulations, construction and operation of the proposed Project would not result in a significant impact related to the violation of any water quality standards or waste discharge requirements or substantial degradation of surface or groundwater quality. The level of impact would be less than significant.

Impact HYD-B: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Construction

Construction activities associated with foundations would include excavation and concrete work, and installation of drilled piles. As previously discussed, excavations for foundations would occur at depths ranging between 7 feet and 42 feet, and piles to be installed at depths between 55 feet and 125 feet below pile depth. Groundwater levels in the proposed Project study area generally range from depths of approximately 20 to 60 feet bgs, with deeper groundwater depths occurring below the Dodger Stadium parking lot in the area of the proposed Dodger Stadium Station at approximately 60 feet bgs. The proposed Project may require the removal of nuisance water that seeps into

[62] The IGP, if applicable to ultimate project build-out, would apply to those portions of the proposed Project that are exposed to stormwater contact (i.e., outside and uncovered) that are defined as industrial activities, such as maintenance and equipment cleaning areas without treatment systems, mechanical repair areas, and storage of industrial materials.

boreholes during construction. Nuisance water and seepage encountered during construction would be removed from the boreholes, containerized, and analyzed consistent with existing applicable regulations to determine the proper disposal method. Volumes generated would not be expected to be significant, and would be limited to the constructed phase only. No large volumes of groundwater would be extracted during construction that could decrease groundwater supplies. Additionally, as previously discussed, most of the existing surfaces at the proposed Project component sites are currently covered with impervious surfaces. Therefore, construction activities are not anticipated to interfere substantially with groundwater recharge, groundwater resource supplies, or groundwater quality.

As part of the proposed Project, the Project Sponsor would be required to comply with all applicable federal, State, regional and local agency water quality protection laws and regulations, as well as commonly used industry standards. These would include State of California Constitution, Article X, Section 2; Porter-Cologne Water Quality Control Act of 1967; Sustainable Groundwater Management Act; LARWQCB Basin Plan; City of Los Angeles One Water LA 2020 Plan; and all other applicable regulations for all construction activities.

Due to the limited amount of nuisance seepage water anticipated to be encountered, and with adherence to existing regulations, potential impacts to groundwater supply and recharge during construction would be less than significant.

Operations

Operation of the proposed Project would not result in groundwater extraction or use of groundwater supply. During operation, the proposed Project would not result in a significant increase in impervious surfaces because most of the land surfaces in the proposed Project study area are developed, and covered by existing impervious surfaces. Components that would result in an increase in the existing impervious surface area include the Alameda Station, Alameda Tower, Chinatown/State Park Station, Stadium Tower, and Dodger Stadium Station. The total impervious area created by the proposed Project components includes the station canopies and platforms and tower heads that would be above ground level. It should be noted that the actual footprint of the proposed Project at the ground level would be less than the total amount of impervious surface area created by the proposed Project components. The footprints of proposed Project components are nominal when compared to the area of the groundwater basin. Table 4-4 lists proposed impervious surface areas by proposed Project component (see operations analysis for Impact HYD-A).

The proposed Project would be designed to incorporate several sustainability features (i.e., City of Los Angeles LID requirements), such as pervious pavement, landscaped stormwater conveyance, and other appropriate and applicable design features. These measures and practices would be incorporated at all applicable component sites along the proposed Project alignment. Additionally, operation of the proposed Project would not involve the extraction of any groundwater. Therefore, the proposed Project would not result in a decrease in groundwater supplies or interfere substantially with groundwater recharge to the extent that the proposed Project may impede sustainable groundwater management of the basin. Depending on final design features, exfiltration from LID BMPs may improve groundwater recharge characteristics of the area. No impact would occur.

Mitigation Measures

No mitigation measures are required because the proposed Project would not result in a decrease in groundwater supplies or interfere substantially with groundwater recharge to the extent that the proposed Project may impede sustainable groundwater management of the basin.

Impacts would be less than significant because the proposed Project would not result in a substantial decrease in groundwater supplies, or interfere substantially with groundwater recharge to the extent that the proposed Project may impede sustainable groundwater management of the basin.

Impact HYD-C: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:

I. **Result in substantial erosion or siltation on- or off-site;**
II. **Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;**
III. **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**
IV. **Impede or redirect flood flows.**

Construction

There are no natural water or drainage features that coincide with the proposed Project alignment. Current flow of stormwater runoff from the southern portion of the proposed Project alignment between the Alameda Station and the area just southwest of the southernmost portion of the Los Angeles State Historic Park property is collected in storm drain inlets along Alameda Street and drains into a 120-inch reinforced-concrete pipe in East Cesar E. Chavez Avenue, which ultimately discharges to the Los Angeles River. Runoff from the northern portion of the proposed Project study area between the Los Angeles State Historic Park property and Dodger Stadium is collected in storm drain inlets along North Spring Street and neighboring roads, including Broadway and Bishops Road, and Academy Road and Stadium Way near Dodger Stadium, and drains into a 96-inch reinforced-concrete pipe that follows street alignments to Leroy Street before ultimately discharging to the Los Angeles River.

The majority of Alameda Station, as well as the Alpine Tower and the Broadway Junction, would be constructed on parcels that currently contain existing asphalt and concrete pavement on and/or adjacent to the road ROW, and surrounded by existing development and structures. Construction on these sites would expose soils in areas that are completely developed with impervious surfaces, which could increase the rate of runoff from these sites. Additionally, placement of construction equipment and materials may temporarily affect existing drainage patterns.

The Alameda Tower, Chinatown/State Park Station, and Dodger Stadium Station sites are developed with existing impervious surfaces and pervious groundcover. The Alameda Tower site and the Chinatown/State Park Station site include landscaped areas; and the Dodger Stadium Station would

be partially constructed on an existing landscaped berm. The existing pervious surfaces could help reduce the rate of runoff from these sites; however, placement of construction equipment and materials may temporarily affect existing drainage patterns.

The Stadium Tower would be constructed on a site that currently consists of pervious surfaces. The existing pervious surfaces would help reduce the rate of runoff from these sites; however, placement of construction equipment and materials may temporarily affect existing drainage patterns.

Construction of the proposed Project components would be conducted in several phases, including site preparation and installation of foundations and columns; erection of structural steel and gondola equipment; and construction of ancillary components including replacement or restoration of paving, sidewalk, and landscaping. Following completion of the ancillary components, the gondola system, which consists of installation of cables and cabins, would be installed.

Construction activities such as demolition of existing site structures and excavation for foundations would temporarily expose bare soil, which would be at increased risk for erosion. Exposed or stockpiled soils would also be at increased risk for erosion. Sediments resulting from erosion might accumulate, blocking storm drain inlets and causing downstream sedimentation. Erosional sediments might be carried by stormwater runoff into storm drain inlets, which ultimately empty into the Los Angeles River.

In addition to sediments, trash, concrete waste, and petroleum products, including heavy equipment fuels, solvents, and lubricants, could contribute to water pollution. The use of construction equipment and other vehicles during proposed Project construction could result in spills of oil, brake fluid, grease, antifreeze, or other vehicle-related fluids that could contribute to water pollution. Improper handling, storage, or disposal or fuels and vehicle-related fluids or improper cleaning and maintenance of equipment could result in accidental spills and discharges that could contribute to water pollution.

Uncontrolled erosion and discharge of sediments and other potential pollutants could result in adverse effects to water quality in the Los Angeles River, violating water quality standards and waste discharge requirements and substantial erosion or siltation, if not appropriately managed.

As previously discussed, the proposed Project would be required to comply with all applicable federal, State, regional, and local agency water quality protection laws and regulations, as well as commonly used industry standards. These would include CWA of 1972 (including 1977 and 1987 Amendments); Antidegradation Policy of 1968; Porter-Cologne Water Quality Control Act of 1967; State of California Antidegradation Polices – SWRCB Resolution 68-16; NPDES General Construction Permit regulations; LARWQCB Basin Plan; City of Los Angeles General Plan; City of Los Angeles Municipal Code; City of Los Angeles Water Quality Compliance Master Plan; and all other applicable regulations for all construction activities.

In accordance with the CGP, the proposed Project would be required to prepare and submit a construction SWPPP, which must be submitted to the SWRCB prior to construction, and adhered to during construction. The construction SWPPP would identify the BMPs that would be in place prior to the start of construction activities and during construction. BMPs categories would include, but not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs. Although specific temporary construction-related BMPs would be selected at

the time of the SWPPP preparation, potential BMPs would likely include fiber rolls, bonded-fiber matrix hydroseeding, soil furrowing, water bars, and check dams for erosion control, inlet protection (sand/gravel bags and geotextiles) silt fencing, sediment traps/basins for sediment controls, soil berming around disturbed areas, phasing of soil disturbance during the wet season (i.e., limiting widespread grading), and effective Rain Event Action Plans in accordance with CGP/SWPPP requirements.

With adherence to these laws and regulations, impacts related to substantial erosion or siltation, substantial increase in the rate or amount of surface runoff, creation of runoff that would exceed drainage system capacity or provide additional sources of polluted runoff, and impeding or redirecting flood flows would be less than significant.

Operations

Operation of the proposed Project would not result in a substantial increase in impervious surfaces because most of the land surfaces in the proposed Project study area are developed, and covered by existing impervious surfaces, including the footprints of proposed Project components. Components that would increase the existing impervious surface area include the Alameda Station, Alameda Tower, Chinatown/State Park Station, Stadium Tower, and Dodger Stadium Station. Table 4-4 lists proposed impervious surface areas by proposed Project component (see operations analysis for Impact HYD-A).

The proposed Project alignment and components would generally be in the public ROW and on impervious/paved surfaces, with the exception of the Stadium Tower and the Dodger Stadium Station, which would be constructed on an undeveloped hillside and at the Dodger Stadium parking lot, respectively. Additionally, each proposed Project component would be on parcels containing some existing pervious surfaces, except for the Alpine Tower and the Broadway Junction. The total impervious area created by the proposed Project components includes the station canopies, platforms, and tower heads that would be above ground level. However, the actual footprint of the proposed Project at the ground level would be less than the total amount of impervious surface area created by the proposed Project components. The footprints of the proposed Project components are nominal when compared to the area of the groundwater basin.

As described above, the proposed Project would be designed to incorporate several sustainability features and would be in compliance with the LID Handbook. It would also comply with all applicable federal, State, regional, and local agency water quality protection laws and regulations, water quality control and/or sustainable groundwater management plans including the Basin Plan, City of Los Angeles General Plan, the MS4 Permit, as well as commonly used industry standards. The proposed Project would comply with the City of Los Angeles Municipal Code and all other applicable regulations for all operational activities, including adherence to an approved LID Plan, which would identify the BMPs for proposed Project operations.

The LID Plan would identify the BMPs for the proposed Project's post-construction design as applicable (i.e., operational characteristics to control/treat runoff). The proposed Project would incorporate BMPs to ensure the treatment of first flush or the equivalent of the greater between the 85th percentile storm and first 0.75-inch of rainfall for any storm event, as applicable. Each drainage area on the Project site would include design elements that serve to capture and re-use stormwater

in accordance with current LID requirements—thereby minimizing the potential for both on- and off-site erosion, siltation, and flooding while simultaneously providing irrigation supply and reducing potable water consumptive use. LID design features slow (detain or retain) stormwater, which reduces the runoff volume discharged from the proposed Project and decreases the peak runoff discharge velocity for design storms—also ultimately reducing the amount of stormwater runoff burden into the City's stormwater conveyance systems. As a result, less flow with fewer pollutants would be transported through the conveyance systems, and ultimately into surface waters, including ancillary exfiltration to the groundwater table.

If the proposed Project requires IGP coverage, an IGP SWPPP would be prepared and submitted to the SWRCB prior to operations, and adhered to during operations. IGP SWPPP BMPs could include, but not be limited to, good housekeeping, prevention and maintenance activities, material handling and waste management, erosion and sediment controls, training, and recordkeeping. Other BMPs may also be employed as appropriate, such as indoor/covered areas for gondola maintenance, approved flammable/hazmat storage lockers for lubricants and other industrial liquids, drip/spill protection in maintenance areas and similar BMPs when conducting tower maintenance, dry clean-up practices, and dedicated enclosed areas for metal working, painting, and welding.

Therefore, operation of the proposed Project would not result in substantial erosion or siltation or a substantial increase in stormwater runoff in comparison to the existing stormwater runoff; would not exceed the capacity of the existing stormwater drainage system; and would not impede or redirect flood flows. With adherence to existing laws and regulations, the impact resulting from operation of the proposed Project would be less than significant.

Mitigation Measures

No mitigation measures are required because the proposed Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces.

With adherence to applicable federal, State, regional, and local laws and regulations, construction and operation of the proposed Project would not result in a significant impact related to the alteration of existing drainage patterns and runoff. The level of impact would be less than significant.

Impact HYD-D: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

Construction and Operations

The proposed Project would be constructed outside of the FEMA-designated 100-year floodplain, and would be in an inland area that is not in close proximity to the ocean, so the risk of inundation by a tsunami is considered low. There are two standing bodies of water within one mile of the proposed Project alignment. The Solano Reservoir is approximately 0.10 mile northeast of the proposed Dodger Stadium Station. This body of water is at an elevation of approximately 600 feet, approximately 80 feet higher than Dodger Stadium Station, and is covered. Significant adverse impacts from wind-induced seiches at Solano Reservoir are not anticipated because the reservoir has a permanent protective cover. The Los Angeles Department of Public Works is responsible for the flood protection of the public and environment surrounding Solano Reservoir, which would be

expected to be integrated into the design of the reservoir's protective cover. Should potable water be inadvertently released from the reservoir during a seismic event due to the reservoir's high elevation, spillage would be infiltrated and buffered by the dense vegetation surrounding the reservoir. Due to its flat position on a hilltop, spillover would be expected to discharge from the facility from all sides, and not likely in a concentrated flow regime that would be expected to cause significant damage to the proposed Dodger Stadium Station. Therefore, given the Project's distance from the Solano Reservoir and the reservoir's protective cover, any oscillation and subsequent release of water in the reservoir as part of a seiche would not inundate the Project. Therefore, there would be no potential for risk of release of pollutants due to inundation by seiche.

The Elysian Reservoir is approximately 0.4 mile northeast of the proposed Dodger Stadium Station. The Elysian Reservoir is at an elevation of 460 feet, an elevation approximately 60 feet lower than the proposed Dodger Stadium Station. This reservoir has a floating cover; therefore, a wind-induced seiche on the Elysian Reservoir is unlikely. A seismically induced seiche on the Elysian Reservoir would not affect the proposed Project because the reservoir is at a lower elevation, and water generated from the seiche would not reach the proposed Project footprint.

The proposed Project alignment is not depicted in the California Dam Breach and Inundation Maps as being in the footprint of a dam failure inundation zone (Figure 7). Dams in California are monitored by government agencies such as the U.S. Army Corps of Engineers and the State of California Division of Safety of Dams to protect against the threat of dam failure.

Due to the regulatory monitoring of dams and typical flood control measures that are currently in place, the impact of inundation due to upstream dam failure is not considered a significant constraint to the proposed Project. Potential impacts are considered less than significant.

Mitigation Measures

No mitigation measures are required because the release of pollutants from the proposed Project due to inundation from a flood, tsunami, or seiche is less than significant.

With adherence to applicable federal, State, regional, and local laws and regulations, construction and operation of the proposed Project would not result in significant impacts to flood hazards, tsunami, seiche zones, or risk of release of pollutants due to proposed Project inundation. The level of impact would be less than significant, and no mitigation measures would be necessary.

Impact HYD-E:Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Construction

The proposed Project alignment is near Reach 2 of the Los Angeles River, as designated by the Basin Plan. Tables 4-2 and 4-3 provide beneficial uses for Reach 2 of the Los Angeles River and for the Central Basin, as identified by the Basin Plan. Surface water beneficial uses for Reach 2 of the Los Angeles River include municipal and domestic supply, industrial service supply, groundwater recharge, recreation, and water that supports various habitats and ecosystems. Groundwater beneficial uses for the Central Basin include water supply for municipal, domestic, industrial process, and agricultural uses.

Construction of the proposed Project components would be conducted in several phases, including site preparation and installation of foundations and columns; erection of structural steel and gondola equipment; and construction of ancillary components, including replacement or restoration of paving, sidewalk, and landscaping. Following completion of the ancillary components, the gondola system, which consists of installation of cables and cabins, would be installed.

The majority of Alameda Station, as well as the Alpine Tower and the Broadway Junction, would be constructed on parcels that currently contain existing asphalt and concrete pavement on and/or adjacent to the road ROW, and surrounded by existing development and structures. The Alameda Tower, Chinatown/State Park Station, and Dodger Stadium Station sites are developed with existing impervious surfaces and pervious groundcover. The Stadium Tower would be constructed on a site currently consisting of pervious surfaces. The existing asphalt and concrete pavement on and adjacent to the Alameda Station, Alpine Tower, and Broadway Junction sites could increase the rate of runoff from these sites. Additionally, placement of temporary construction equipment and materials may affect existing drainage patterns in the short term.

Construction of the proposed Project has the potential to impact the water quality of the Los Angeles River if applicable and appropriate BMPs are not implemented. Construction activities such as demolition of existing site structures and excavation for foundations would temporarily expose bare soil, and temporarily increase erosion. Exposed or stockpiled soils would also be at increased risk for erosion. Sediment transport, as a result of improper erosion controls, could cause storm drain blockage and possibly downstream sedimentation in the Los Angeles River.

In addition to sediments, trash, concrete waste, and petroleum products (e.g., heavy equipment fuels, solvents, and lubricants) could contribute to stormwater pollution. The use of construction equipment and other vehicles during proposed Project construction could result in spills of oil, brake fluid, grease, antifreeze, or other vehicle-related fluids, which could contribute to water quality impacts. Improper handling, storage, or disposal or fuels and vehicle-related fluids or improper cleaning and maintenance of equipment could result in accidental spills and discharges that could contribute to water pollution.

Uncontrolled erosion and discharge of sediments and other potential pollutants could result in adverse effects to water quality in the Los Angeles River, violating water quality standards, as defined in the Basin Plan, and waste discharge requirements, if not appropriately managed.

Nuisance groundwater may be encountered during installation of piles for each of the components, which may result in degradation of groundwater quality if not addressed properly. Additionally, potentially impacted groundwater may result in degradation of surface water if it is not properly managed during construction activities. However, construction activities are not anticipated to interfere substantially with groundwater recharge, groundwater resource supplies, or groundwater quality.

As discussed previously, the proposed Project would be required to comply with all applicable federal, State, regional, and local agency water quality protection laws and regulations, water quality control and/or sustainable groundwater management plans, including the Basin Plan and City of Los Angeles General Plan, as well as commonly used industry standards. The proposed Project would comply with NPDES General Construction Permit regulations; the MS4 Permit; the City of Los

Angeles LID Ordinance; the City of Los Angeles Municipal Code, and all other applicable regulations for all construction activities. In accordance with CGP, the proposed Project will have a construction SWPPP, which must be submitted to the SWRCB prior to construction, and adhered to during construction. The construction SWPPP would identify the BMPs that would be in place prior to the start of construction activities and during construction. The BMPs categories would include, but not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs. Although specific temporary construction-related BMPs would be selected at the time of the SWPPP preparation, potential BMPs would likely include fiber rolls, bonded-fiber matrix hydroseeding, soil furrowing, water bars, and check dams for erosion control, inlet protection (sand/gravel bags and geotextiles) silt fencing, sediment traps/basins for sediment controls, soil berming around disturbed areas, phasing of soil disturbance during the wet season (i.e., limiting widespread grading), and effective Rain Event Action Plans in accordance with CGP/SWPPP requirements.

With adherence to these laws and regulations, impacts related to implementation of a water quality control plan or sustainable groundwater management plan during construction would be less than significant.

Operations

During operations, the cabins would travel on a continuous loop between the Alameda Station and the Dodger Stadium Station. The proposed Project would require routine maintenance that would be performed by the system operator. Oil and grease used during proposed Project operations and maintenance could contribute to water pollution. Uncontrolled discharge of runoff carrying these potential pollutants could result in adverse effects to water quality in the Los Angeles River, violating federal, State, and local water quality standards and waste discharge requirements, if not appropriately managed. As discussed above, the Project Sponsor would comply with all applicable federal, State, regional, and local agency water quality protection laws and regulations, water quality control and/or sustainable groundwater management plans, including the Basin Plan and City of Los Angeles General Plan, as well as commonly used industry standards.

Los Angeles City ordinances related to stormwater control and its LID requirements for sustainability contain compliance provisions for and BMPs that must address water infiltration, filtering, treatment and peak-flow discharge. The City provides guidance to developers of newly developed projects for compliance with regulatory standards through the LID Handbook.[63] The Project is also in the jurisdiction of the Water Quality Compliance Master Plan for Urban Runoff, which was developed by the City's Department of Public Works, and includes in its provisions the description of BMPs required by the City for stormwater quality management.

The proposed Project would incorporate into its design an on-site drainage system that would meet regulatory requirements of the applicable plans for the protection of water resources.

As described above, the proposed Project would be designed to incorporate several sustainability features, and would be in compliance with the LID Handbook. It would also comply with all applicable federal, State, regional, and local agency water quality protection laws and regulations, water quality

[63] City of Los Angeles, LID Handbook. 2016.

control and/or sustainable groundwater management plans, including the Basin Plan and City of Los Angeles General Plan, the MS4 Permit, as well as commonly used industry standards. The proposed Project would comply with the LAMC and all other applicable regulations for all operational activities, including adherence to an approved LID Plan that would identify the BMPs for proposed Project operations, as applicable.

The LID Plan would identify the BMPs for the proposed Project's post-construction design, as applicable (i.e., operational characteristics to control/treat runoff). The proposed Project would incorporate BMPs to ensure the treatment of first flush or the equivalent of the greater between the 85th percentile storm and first 0.75-inch of rainfall for any storm event, as applicable. Each drainage area on the Project site would include design elements that serve to capture and re-use stormwater in accordance with current LID requirements—thereby minimizing the potential for both on- and off-site erosion, siltation, and flooding while simultaneously providing irrigation supply and reducing potable water consumptive use. LID design features slow (detain or retain) stormwater, which reduces the runoff volume discharged from the proposed Project and decreases the peak runoff discharge velocity for design storms—also ultimately reducing the amount of stormwater runoff burden into the City's stormwater conveyance systems. As a result, less flow with fewer pollutants would be transported through the conveyance systems, and ultimately into surface waters, including ancillary exfiltration to the groundwater table.

If the proposed Project requires IGP coverage, an IGP SWPPP would be prepared and submitted to the SWRCB prior to and adhered to during operations. IGP SWPPP BMPs could include, but not be limited to good housekeeping, prevention and maintenance activities, material handling and waste management, erosion and sediment controls, training, and recordkeeping. Other BMPs may also be employed as appropriate, such as indoor/covered areas for gondola maintenance, approved flammable/hazmat storage lockers for lubricants and other industrial liquids, drip/spill protection in maintenance areas and similar BMPs when conducting tower maintenance, dry clean-up practices, and dedicated enclosed areas for metal working, painting, and welding.

With adherence to these laws and regulations, and groundwater management plans, impacts related to implementation of a water quality control plan or sustainable groundwater management plan during operations would be less than significant.

Mitigation Measures

No mitigation measures are required because the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

With adherence to applicable federal, State, regional, and local laws and regulations, construction and operation of the proposed Project would not result in a significant impact related to the implementation of a water quality control plan or sustainable groundwater management plan. The level of impact would be less than significant.

7 Conclusion

Construction and operation of the proposed Project could result in adverse effects to surface water and groundwater quality in the Los Angeles River and Central Basin, and violate water quality standards and waste discharge requirements, if not appropriately managed. However, adherence to applicable federal, State, regional, and local laws and regulations would result in less than significant impacts.

Additionally, the proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Although the proposed Project would add impervious surfaces to the proposed Project study area, it would not substantially alter the existing drainage pattern of the area in a manner that would result in substantial erosion or siltation, increase the rate or amount of surface runoff, exceed the capacity of stormwater drainage systems, or impede or redirect flood flows. Although the proposed Project would result in increases to impervious surfaces, the additional impervious surface areas are nominal, and all proposed Project components would comply with the LID ordinance as applicable, thereby reducing runoff. Impacts would be less than significant.

The proposed Project would not risk release of pollutants due to proposed Project inundation in any flood hazard, tsunami, or seiche zones. Dams in California are monitored by government agencies to protect against the threat of dam failure. Due to the regulatory monitoring of dams and typical flood control measures that are currently in place, the impact of inundation due to upstream dam failure or a seiche is not considered a significant constraint to the proposed Project. Impacts would be less than significant.

The proposed Project could potentially conflict with or obstruct implementation of water quality control or sustainable groundwater management plans. Although construction and operation of the proposed Project would potentially impact the water quality of the Los Angeles River and Central Basin due to discharge of sediments and equipment pollutants into runoff, adherence to applicable federal, State, regional, and local laws and regulations would ensure the proposed Project would comply with all federal, State, and local water quality control or sustainable groundwater management plans. Impacts would be less than significant.

The proposed Project could have potential adverse impacts related to hydrology and water quality; however, with adherence to applicable federal, State, regional, and local laws and regulations, significant impacts would be less than significant level. The proposed Project would not result in any significant impacts related to hydrology and water quality.