Arroyo Seco Water Reuse Project

CITY OF PASADENA



Environmental Impact Report | May 2026

Volume 1

PSOMAS

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EXECUTIVE SUMMARY

INTRODUCTION

The California Environmental Quality Act (CEQA) (Section 21000 et. seq. of the *California Public Resources Code*) requires that lead agencies consider the potential environmental consequences of projects over which they have discretionary approval authority prior to taking approval action on such projects. An Environmental Impact Report (EIR) is a public document designed to provide the Lead Agency, trustee and responsible agencies, the general public, and other interested parties with an analysis of potential environmental consequences of a project and to support informed decision making by the Lead Agency. The City of Pasadena (Pasadena) is the Lead Agency under CEQA and is responsible for preparing the EIR. This determination is made in accordance with Sections 15051 and 15367 of the State CEQA Guidelines, which define the Lead Agency as the public agency that has the principal responsibility for carrying out or approving a project.

This EIR has been prepared to identify, analyze, and mitigate, to the extent feasible, the potential environmental effects associated with implementation of the Arroyo Seco Water Reuse Project (Project). This EIR has been prepared pursuant to the requirements of CEQA and the Guidelines for the Implementation of CEQA (State CEQA Guidelines) (Title 14, *California Code of Regulations,* Chapter 3, Sections 15000 et. seq.).

This Executive Summary has been prepared in accordance with Section 15123(a)(b) of the State CEQA Guidelines, which states that an EIR should contain a brief summary of the proposed actions and its consequences and should identify (1) each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; (2) areas of controversy known to the Lead Agency; and (3) issues to be resolved, including the choice among alternatives and whether or how to mitigate significant effects.

PROJECT LOCATION

The Project encompasses a total of approximately 3.6 acres on two sites in the Lower Arroyo Seco that are situated adjacent to the Arroyo Seco Channel–the northern, San Rafael site (1.4 acres) in the City of Pasadena; and the southern, San Pascual site (2.2 acres) in the cities of South Pasadena (South Pasadena, 1.7 acres) and Los Angeles (Los Angeles, 0.5 acre) and both sites are with the County of Los Angeles (County). A proposed off-site water harvester and related infrastructure would be installed within the existing, gated, approximately 1,375-square-foot (sf), irregularly-shaped maintenance yard at the Arroyo Seco Golf Course in South Pasadena. Exhibit 2-1, Regional Location and Local Vicinity, and Exhibit 2-2, Aerial Photograph, in Section 2.0, Environmental Setting and Project Description, illustrates the Project site locations and surrounding uses.

The San Rafael site is situated southwest of the San Rafael Avenue overpass of the Arroyo Seco Channel, on the west side of the Channel, and adjacent to Pasadena's southern boundary. The San Rafael site includes a linear feature that is within the limits of the San

Rafael Creek easement under LACFCD jurisdiction. The San Pascual site is situated southeast of the San Pascual Avenue overpass of the Arroyo Seco Channel and on the east side of the Channel. The San Pascual site is bound by San Pascual Avenue on the north and Stoney Drive on the east. Both sites are named for the Channel overpass located nearby.

Local vehicular access is provided via San Rafael Avenue, South Arroyo Boulevard, San Pascual Avenue, and Stoney Drive. The sites are regionally accessible via State Route 134 (SR-134), which is located approximately 1.25 miles north of the San Rafael site; and SR-110, which is located approximately 0.10 mile south of the San Pascual site.

PROJECT SUMMARY

The proposed Project seeks to provide water quality benefits for multiple jurisdictions within the 5,005-acre drainage area in which the San Pascual and San Rafael site are located. The Project would develop two regional stormwater capture and treatment facilities (man-made treatment wetlands and infiltration basins) located within existing open space-zoned areas near the Arroyo Seco Channel. Treatment wetlands are constructed ecosystems that remove pollutants by mimicking natural processes to slow, detain, capture, and absorb and infiltrate water in a manner that protects, enhances, and/or restores habitat, green space, and usable open space. The San Rafael and San Pascual sites would each have diversion structures with maximum diversion rates of 10 and 15 cubic feet per second (cfs), respectively, for a total Project diversion rate of 25 cfs. Diversion structures generally apply to 'off-line' regional projects where stormwater is diverted from a major water conveyance and directed to that project at a predetermined maximum rate. Additionally, as part of the Project, an off-site water harvester and related infrastructure would be installed within the existing, gated maintenance yard at the public Arroyo Seco Golf Course in South Pasadena.

Other components of the BMPs include post-treatment filtration systems, infiltration basins, inlets, outlets, drains, new or restored trails, new pedestrian bridge/cap (over San Rafael Creek), native landscaping, and hardscape elements including reclaimed wood log benches, post-and-rail fencing, concrete seat walls, and informational signs. Existing paths along the edge of the Channel would be rehabilitated and expanded as needed to provide vehicular access to the diversion structures for operation and maintenance activities, and additional trails would be established at both sites. The Project would also create a watershed education opportunity regarding its contributions towards protecting the water quality in the Arroyo Seco. An estimated two to three informational signs, total for both sites, would be installed in and around the new treatment wetlands and improved trails to provide park user education. The Project would also expand the existing trail network to enhance regional trail connectivity through the Lower Arroyo Seco.

The Project sites are located within the Upper Los Angeles River (ULAR) Watershed. Runoff from this watershed drains to and runs through over 50 linear miles of the Los Angeles River and then to the Pacific Ocean. The Arroyo Seco Channel is a major tributary to the Los Angeles River. On July 9, 2010, the Los Angeles Regional Water Quality Control Board (RWQCB) adopted resolution No. R10-007 incorporating a total maximum daily load (TMDL) for indicator bacteria in the Los Angeles River watershed. A TMDL is the calculation of the

maximum amount of a pollutant allowed to enter a waterbody and not affect that waterbody's ability to meet and maintain water quality standards. Outfalls along the Arroyo Seco Channel were modeled for indicator bacteria and the San Rafael Creek outfall was identified as a priority outfall; these outfalls have routine problematic discharges that drive the total bacteria load. Runoff in San Rafael Creek would be diverted into the San Rafael site, pre-treated, and a portion of this runoff infiltrated for groundwater recharge. The portion not infiltrated would be treated, discharged into the Channel, and then diverted downstream into the San Pascual site for infiltration and additional treatment prior to discharge back to the Channel. The operation of these two regional stormwater management sites would result in an annual average water supply benefit of 320 acre-feet (af). Of this, there would be approximately 258 af of groundwater recharge and approximately 30 af (or less than 10 percent of captured water) would be captured off-site for irrigation reuse at the golf course to reduce potable water demand.

PROJECT ALTERNATIVES

Section 15126.6 of the State CEQA Guidelines requires an evaluation of the comparative effects of a reasonable range of alternatives to the proposed Project that would feasibly attain most of the proposed Project objectives and would avoid or substantially lessen any of the significant impacts of the proposed Project. A feasible alternative is one that can be accomplished successfully in a reasonable period of time, taking economic, legal, social, and technological factors into consideration. The range of alternatives is governed by the "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasonable choice.

In accordance with Section 15126.6 of the State CEQA Guidelines, Section 4.0, Alternatives, of this EIR addresses alternatives to the proposed Project. Section 4.0 provides a description of each alternative; a comparative analysis of the potential environmental effects of each alternative to those associated with the proposed Project; a discussion of each alternative's ability to meet the Project Objectives; and a discussion of the environmentally superior alternative. For complete description of all Project alternatives analyzed in this EIR, refer to Section 4.0. The following is a summary description of the alternatives evaluated in this EIR:

- **Alternative 1: No Project Alternative.** This alternative addresses one of the two types of "No Project" alternatives identified by CEQA. The "No Project" alternative is defined as the circumstance under which the Project does not proceed and a comparison of the environmental effects of the site remaining in its existing state against the environmental effects associated with the Project. Accordingly, the No Project Alternative assumes that the Project would not be adopted and no improvements to the Lower Arroyo Seco would occur. This Alternative assumes the Project site would continue to remain in its existing state without site improvements, and the continued use and operation of the existing land uses present at the time the NOP was distributed in May of 2025.
- **Alternative 2: San Pascual Park Tree Conservation Alternative.** Alternative 2 assumes the San Pascual site is developed with the same man-made wetland BMPs as the Project, but in a configuration that conserves a large majority of the mature trees

located along the eastern and western site boundary, and maintains some of the recreational amenities on-site, such as the pedestrian path located around the perimeter of the proposed wetland area. Alternative 2 would have a diversion structure with a maximum diversion rate of 15 cfs, which would divert water from the Arroyo Seco Channel, funnel through the pre-treatment device with hydrodynamic separator, and pump the water via pump station to the two sequential natural treatment wetlands with 3.46 AF of storage capacity. Filtered water discharge (7.8 cfs) would then be channeled via underground connection pipes to the existing Arroyo Seco Golf Course water supply line located south of the Alternative 2 site.

- **Alternative 3: San Pascual Park Baseball Field Conservation Alternative.** Alternative 3 assumes the San Pascual site is developed with the same man-made wetland BMPs as the Project, but in a configuration that conserves the existing baseball field located on the western portion of the Project site, and maintains some of the recreational amenities on-site, such as the pedestrian path located around the perimeter of the proposed wetland area. Alternative 3 would have a diversion structure with a maximum diversion rate of 15 cfs, which would divert water from the Arroyo Seco Channel, funnel through the pre-treatment device with hydrodynamic separator, and pump the water via pump station to the two sequential natural treatment wetlands with 3.46 AF of storage capacity. Filtered water discharge (7.8 cfs) would then be channeled via underground connection pipes to the existing Arroyo Seco Golf Course water supply line located south of the Alternative 3 site.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

AREAS OF CONTROVERSY

Section 15123(b)(2) of the State CEQA Guidelines indicates that an EIR summary should identify areas of controversy known to the Lead Agency, including issues raised by the public agencies and the public. This EIR has taken into consideration the written comments received from the public and various agencies in response to the Notice of Preparation (NOP) distributed on May 13, 2025 (for a 30-day public review period from May 13, 2025 through June 13, 2025), and comments received during the public scoping meeting held on May 28, 2025 at the South Pasadena Community Room, 1115 El Centro Street, South Pasadena, California, 91030.

On June 3, 2025, the City of Pasadena distributed an NOP Extension, in both English and Spanish, extending the end of the comment period from June 13, 2025, to June 30, 2025. This notice was sent to all those on the NOP mailing list as well as all those who attended the scoping meeting but were not already on the mailing list.

A total of 135 responses to the NOP were received from 125 agencies, organizations, and individuals. A copy of the NOP and all comments received in response to the NOP are provided in Appendix A of this EIR. A summary of issues raised in response to the NOP is presented in Table 1-1 in Section 1.0, Introduction, of this EIR.

The primary environmental areas of controversy known to the City of Pasadena that have been raised to date include aesthetics (visual character and light pollution); air quality and greenhouse gas emissions (construction-related dust and criteria pollutants); biological resources (removal of mature and native trees, loss of riparian and wetland habitat, impacts to wildlife movement corridors, nesting birds, bats, and special-status species); cultural and tribal cultural resources (Native American consultation, protection of Indigenous cultural landscapes, archaeological and paleontological resources, and historic equestrian and multi-use corridors); hydrology and water quality (water diversion, water rights, treatment of contamination at the source, downstream effects, and impacts to groundwater and surface waters); water supply and long-term operation and maintenance; land use and planning consistency (Project context, scale, and compatibility with Arroyo Seco restoration efforts and adopted plans); transportation (traffic, trail conflicts, equestrian and pedestrian safety); noise (noise pollution); park and recreational resources; wildfire hazards; public outreach; adequacy of alternatives analysis, including nature-based, no-build, and off-site alternatives; and cumulative impacts. These issues have been discussed and analyzed in detail in the respective sections of the EIR.

SUMMARY OF SIGNIFICANT ENVIRONMENTAL EFFECTS

Pursuant to Sections 15126.2 and 15126.4 of the State CEQA Guidelines, a Draft EIR is required to identify any potentially significant adverse impacts and recommend mitigation measures that would eliminate or reduce these impacts to levels of less than significant.

Based on the determination in Section 1.0, Introduction, of this EIR, as well as comments received by Pasadena in response to the NOP, the Project has the potential to impact the following environmental topics, which are further addressed in this EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural and Paleontological Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services and Recreation
- Tribal Cultural Resources
- Wildfire

Table ES-1, Summary of Threshold of Significance, Project Impacts, Mitigation, and Level of Significance after Mitigation, beginning on the following page, presents a summary of significant environmental impacts identified in Sections 3.1 through 3.11 of this EIR; Mitigation Measures (MMs) that reduce identified significant impacts; and the level of significance of each impact after mitigation.

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TABLE ES-1
SUMMARY OF THRESHOLDS OF SIGNIFICANCE, PROJECT IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

Thresholds of Significance	Level of Significance Before Mitigation	Mitigation Measures (MMs)	Level of Significance After Mitigation
Section 3.1 – Aesthetics			
Threshold 3.1a: Would the project have a substantial adverse effect on a scenic vista?	Less Than Significant Impact	No mitigation measures are required	Less Than Significant Impact
Threshold 3.1b: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	No Impact	No mitigation measures are required	No Impact
Threshold 3.1c: In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less Than Significant Impact	No mitigation measures are required	Less Than Significant Impact
Threshold 3.1d: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No Impact	No mitigation measures are required	No Impact
Section 3.2– Air Quality			
Threshold 3.2a: Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.2b:: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.2c: Would the project expose sensitive receptors to substantial pollutant concentrations?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.2d: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Section 3.3 – Biological Resources			
Threshold 3.3a: Would the project Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.?	No Impact	No mitigation measures are required	No Impact

TABLE ES-1
SUMMARY OF THRESHOLDS OF SIGNIFICANCE, PROJECT IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

Thresholds of Significance	Level of Significance Before Mitigation	Mitigation Measures (MMs)	Level of Significance After Mitigation
Threshold 3.3b: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Less Than Significant Impact	**MM BIO-1 Trees.** All trees to be preserved on-site during the construction process shall have the following measures implemented: • Prior to initiation of construction activities, protective fencing shall be placed around the critical root zone (five feet outside the outer canopy) of all trees that are in the Project construction area and are intended to remain in place. No ground disturbance or storage of construction materials should occur within the critical root zone during construction. • A Certified Arborist shall be retained to monitor construction activities of any ground disturbance planned within or adjacent to the critical root zone for any tree to be preserved during construction.	Less Than Significant Impact
Threshold 3.3c: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.3d: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Potentially Significant Impact	**MM BIO-2 Nesting Birds/Raptors.** The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and *California Fish and Game Code*. To avoid impacts on active nests for common and special status birds and raptors, no vegetation removal or ground-disturbing activities shall occur during avian breeding season which generally runs from February 1 through September 15 (as early as January 1 for some raptors). The applicant shall schedule vegetation clearing during the non-breeding season (i.e., September 16 to December 31) to the extent feasible. If Project timing requires that vegetation clearing occur between February 1 and September 15, the applicant or its designee shall retain a qualified Biologist to conduct a pre-construction survey for nesting birds and raptors. The pre-construction survey shall be conducted by a qualified Biologist within three days prior to vegetation clearing. The pre-construction nesting bird survey area shall include the Project impact area (i.e., disturbance footprint) plus a 250-foot buffer to search for nesting birds and a 500-foot buffer to search for nesting raptors. If no active nests are found, no further mitigation would be required. If an active nest is located in the pre-construction nesting bird survey area, the Biologist shall delineate an appropriate buffer to protect the nest based on the sensitivity of the species. A 300-foot no disturbance buffer shall be used around each active bird nest. A protective buffer of 500 feet shall be used to protect nesting raptors. A Biologist may make adjustments to the buffer size based on site topography, existing disturbance, sensitivity of the	Less than Significant Impact with Mitigation Incorporated

TABLE ES-1
SUMMARY OF THRESHOLDS OF SIGNIFICANCE, PROJECT IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

Thresholds of Significance	Level of Significance Before Mitigation	Mitigation Measures (MMs)	Level of Significance After Mitigation
		individuals (established by observing the individuals at the nest), and the type of construction activity. Personnel working on the Project, including all contractors working on site, shall be instructed on the presence of nesting birds, area sensitivity, and adherence to no-disturbance buffers. No construction activities shall be allowed in the designated buffer until the Biologist determines that nesting activity has ended. Construction may proceed within the buffer once the Biologist determines that nesting activity has ceased (i.e., fledglings have left the nest or the nest has failed). The designated buffer will be clearly marked in the field and will be mapped as Environmentally Sensitive Areas (ESAs) on construction plans. Prior to the initiation of construction activities, an email summary of the results shall be submitted to the City of Pasadena with a map of any active nests found and their designated buffers. Construction shall be allowed to proceed if appropriate buffer distances are employed for all active nests. The Biologist shall then prepare a formal Letter Report describing methods used, results of the survey, recommended buffers, and/or justification for buffer reductions. The Letter Report shall be submitted to the City of Pasadena within one week of completion of the survey. If an active nest is observed during the survey, the Letter Report shall include a map showing the designated protective buffer. **MM BIO-3** **Bats.** A two-step tree removal process shall be implemented to prevent bat mortality. Prior to tree removal, a qualified biologist shall conduct a pre-construction bat habitat assessment. If the tree potentially supports roosting bats, at the direction of the biologist, some level of disturbance (e.g., trimming of lower branches of trees) shall be applied three days prior to removal to allow bats to escape. The trees shall be removed on day three (i.e., there shall be no less or more than two nights between initial disturbance and the tree removal). On each of the three days of the tree removal process, the tree to be removed will be visually inspected by a qualified biologist to confirm no bats are roosting immediately prior to removal.	
Threshold 3.3e: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant Impact	**MM BIO-4** **Biological Monitoring.** Prior to initiation of Project construction activities, a qualified Biologist shall ensure the limits of construction are clearly marked in the field in the vicinity of natural resources to avoid impacts to special status natural resources being protected in place during construction. Field marking shall include 4-foot high, orange, construction safety fencing (snow fencing) staked at sufficient intervals to prevent failure. Safety fencing shall be maintained throughout the construction phase by the Contractor and replaced or moved as needed. The biologist shall monitor work activities on	Less than Significant Impact with Mitigation Incorporated

TABLE ES-1
SUMMARY OF THRESHOLDS OF SIGNIFICANCE, PROJECT IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

Thresholds of Significance	Level of Significance Before Mitigation	Mitigation Measures (MMs)	Level of Significance After Mitigation
		the first day of construction, during all vegetation removal, and on an as-needed basis thereafter. **MM BIO-1** also applies.	
Threshold 3.3f: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	No Impact	No mitigation measures are required	No Impact
Section 3.4 – Cultural and Paleontological Resources			
Threshold 3.4a: Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	No impact	Even though no impact to the hitching post at the northern most portion of San Pascual site would result, the City of Pasadena has voluntarily included mitigation to ensure this feature is not inadvertently damaged during construction activities: **MM CUL-1** Prior to initiation of Project construction activities at the San Pascual site, the Contractor shall ensure the limits of construction around the arroyo stone hitching post are clearly marked in the field, to avoid inadvertent damage to this feature being protected in place during construction. Field marking shall include 4-foot high, orange, construction safety fencing (snow fencing) staked at sufficient intervals to prevent failure. Safety fencing shall be maintained throughout the construction phase by the Contractor and replaced or moved as needed.	No impact
Threshold 3.4b: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines?	Potentially Significant Impact	**MM CUL-2** Prior to the initiation of any earthmoving activity in which native soil is disturbed, the City of Pasadena shall be responsible for retaining a qualified Archaeologist to observe grading activities and to salvage and catalogue archaeological resources, as necessary. The Archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the City of Pasadena or its designee, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of any discovered artifacts as appropriate. If archaeological resources are found to be significant pursuant to Section 15064.5 of the State CEQA Guidelines, the Archaeologist shall determine appropriate actions, in cooperation with the City of Pasadena or its designee, for exploration and/or recovery. The Archaeologist shall also prepare a report of findings. The report shall include the period of inspection, an analysis of any artifacts found, and the present repository of the artifacts. The Archaeologist shall prepare excavated material to the point of identification and curation. The City of Pasadena or its designee shall pay curatorial fees associated with the cost of curation.	Less than Significant Impact with Mitigation Incorporated

TABLE ES-1
SUMMARY OF THRESHOLDS OF SIGNIFICANCE, PROJECT IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

Thresholds of Significance	Level of Significance Before Mitigation	Mitigation Measures (MMs)	Level of Significance After Mitigation
Threshold 3.4c: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.4d: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant Impact	**MM CUL-3** In the event that paleontological resources are inadvertently unearthed during excavation activities at the San Rafael and San Pascual sites, the Contractor shall immediately cease all earth-disturbing activities within a 100-foot radius of the area of discovery and the Contractor shall contact the City of Pasadena immediately. The Contractor shall retain a qualified professional paleontologist to evaluate the significance of the find, and in consultation with the City of Pasadena, determine an appropriate course of action. If the paleontological resources are found to be significant, the paleontologist, in consultation with the City of Pasadena, shall determine appropriate actions for exploration and salvage. After the find has been appropriately avoided or mitigated, work in the area may resume.	Less than Significant Impact with Mitigation Incorporated
Section 3.5 – Greenhouse Gas Emissions			
Threshold 3.5a: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.5b: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Section 3.6 – Hydrology and Water Quality			
Threshold 3.6a: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.6b: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	No Impact	No mitigation measures are required.	No Impact
Threshold 3.6c: Would the project 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 which 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 offsite?	Less than Significant Impact (3.6c[i-iii]) No Impact (3.6c[iv])	No mitigation measures are required.	Less than Significant Impact (3.6c[i-iii]) No Impact (3.6c[iv])

TABLE ES-1
SUMMARY OF THRESHOLDS OF SIGNIFICANCE, PROJECT IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

Thresholds of Significance	Level of Significance Before Mitigation	Mitigation Measures (MMs)	Level of Significance After Mitigation
(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? (iv) impede or redirect flows?			
Threshold 3.6d: In flood hazards, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.6e: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact	No mitigation measures are required.	No Impact
Section 3.7 – Land Use and Planning			
Threshold 3.7a: Would the project physically divide an established community?	No Impact	No mitigation measures are required.	No Impact
Threshold 3.7b: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No Impact	No mitigation measures are required.	No Impact
Section 3.8 – Noise			
Threshold 3.8a: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Potentially Significant Impact	**MM NOI-1** Prior to initiation of Project construction activities at the San Pascual site, the Construction Contractor shall be responsible for erecting a temporary noise barrier along the east side of the San Pascual site at heights that block the line of sight to receptors standing within Arroyo Park, and along the north side of the San Pascual site at heights that block the line of sight to receptors standing at the single-family residences across San Pascual Avenue. To be effective, the temporary noise barrier must be continuous without gaps and made of massive enough materials to minimize transmission of sound waves through the material itself such that there is at least a five dBA L_{eq} reduction in construction noise levels. Acceptable materials include any outdoor weather-resistant solid material that is dense and heavy enough to meet the minimum sound transmission loss, such as 16-gauge steel, minimum 1-inch thick plywood, loaded curtain, or any reasonable thickness of concrete. The Construction Contractor shall be responsible for inspecting and maintaining the noise barrier throughout the San Pascual site construction period. The City of Pasadena Department of Public Works shall be responsible for ensuring the noise barrier is installed, meets specifications, and is properly maintained.	Less than Significant Impact with Mitigation Incorporated

TABLE ES-1
SUMMARY OF THRESHOLDS OF SIGNIFICANCE, PROJECT IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

Thresholds of Significance	Level of Significance Before Mitigation	Mitigation Measures (MMs)	Level of Significance After Mitigation
Threshold 3.8b: Would the project generate excessive groundborne vibration or groundborne noise levels?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.8c: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact	No mitigation measures are required.	No Impact
Section 3.9– Public Services and Recreation			
Threshold 3.9a: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities, need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks?[1]	No Impact	No mitigation measures are required.	No Impact
Threshold 3.9b: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.9c: Would the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	Potentially Significant Impact	**MM CUL-1** through **MM CUL-3**; and **MM TCR-1** through **MM TCR-3** are applicable.	Less than Significant Impact with Incorporation of Mitigation
Section 3.10 – Tribal Cultural Resources			
Threshold 3.10a: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (i) Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k)?	No Impact	No mitigation measures are required.	No Impact

[1] Potential impacts to the other public services, including police protection, fire protection, schools, and libraries are discussed in Section 1.0, Introduction, of this EIR.

TABLE ES-1
SUMMARY OF THRESHOLDS OF SIGNIFICANCE, PROJECT IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

Thresholds of Significance	Level of Significance Before Mitigation	Mitigation Measures (MMs)	Level of Significance After Mitigation
Threshold 3.10a: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American.	Potentially Significant Impact	**MM TCR-1** **Retain a Native American Monitor Prior to Commencement of Ground Disturbing Activities:** Prior to the commencement of any ground disturbing activities at the two project sites, the project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The tribal monitor will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the tribe as activities that may include demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching within the project areas. The tribal monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including type of construction activities performed, location of activities, soil types, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the project sites are completed, or when the tribal monitor has indicated that all upcoming ground-disturbing activities at the project sites have little to no potential for impacting Tribal Cultural Resources. Copies of the monitor logs will be provided to the lead agency upon written request to the consulting tribe. **MM TCR-2** **Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial):** Upon discovery of any Tribal Cultural Resources, all construction activities shall cease in the immediate vicinity of the discovery (not less than the surrounding 50 feet) and shall not resume until the find can be assessed. All Tribal Cultural Resources unearthed by Project activities shall be evaluated by the tribal monitor and a qualified Archaeologist if one is present. If the resources are Native American in origin, the consulting tribe will retain it/them in the form and/or manner the tribe deems appropriate, for educational, cultural, and/or historic purposes. **MM TCR-3** **Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects:** If human remains and/or grave goods are discovered or recognized at the Project sites, all ground disturbance shall immediately cease, and the County coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue in other parts of the Project sites while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). Preservation in place (i.e., avoidance) is the preferred manner of treatment for human remains and/or burial goods. If preservation in place is not feasible, treatment may include	Less than Significant Impact with Incorporation of Mitigation

TABLE ES-1
SUMMARY OF THRESHOLDS OF SIGNIFICANCE, PROJECT IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

Thresholds of Significance	Level of Significance Before Mitigation	Mitigation Measures (MMs)	Level of Significance After Mitigation
		implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any discovery of human remains/burial goods that are Native American in origin shall be kept confidential to prevent further disturbance. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.	
Section 3.11 – Wildfire			
Threshold 3.11a: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.11b: Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.11c: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Threshold 3.11d: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact

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1.0 INTRODUCTION

1.1 PURPOSE OF THIS ENVIRONMENTAL IMPACT REPORT

This document is the Environmental Impact Report (EIR) for the proposed Arroyo Seco Water Reuse Project (Project). A detailed description of the proposed Project is provided in Section 2.0, Environmental Setting and Project Description, of this EIR.

The California Environmental Quality Act (CEQA) (*California Public Resources Code* [PRC], Section 21002.1) states that the purpose of an environmental impact report (EIR) is to identify the significant effects of a project on the environment; to identify feasible alternatives to the project; and to indicate the manner in which those significant impacts can be mitigated or avoided.

In accordance with Section 15121(a) of the State CEQA Guidelines, this EIR is an informational document that will inform public agency decision-makers and the general public of (1) the significant environmental effects of the Project; (2) possible ways to minimize the significant effects; and (3) reasonable alternatives to the Project. Decision-makers are required to consider the information in the EIR, as one factor in determining whether to approve, deny, or modify the Project.

Section 15051 of the CEQA Guidelines identifies the Lead Agency as the public entity with the greatest responsibility for carrying out or approving the Project as a whole. The City of Pasadena (Pasadena or City) has the primary authority to approve and, if approved, subsequently implement, the Arroyo Seco Water Reuse Project. As such, the City Pasadena is serving as the Lead Agency under CEQA and is responsible for preparing this EIR. Pasadena, as the Lead Agency, will review and consider this EIR in its decision to approve, revise, or deny the proposed Project.

1.2 PROJECT APPLICANTS AND CONTACT PERSON

The Project Applicants are:

City of Pasadena, Department of Public Works (CEQA Lead Agency)
100 North Garfield Avenue, 3rd Floor
Pasadena, CA 91101

City of South Pasadena Department of Public Works
1414 Mission Street
South Pasadena, CA 91030

All inquiries regarding the Project and the EIR should be directed to:

Christina Monde, P.E.
Project Manager
City of Pasadena Public Works Department
100 North Garfield Avenue
Pasadena, CA 91101
CMonde@cityofpasadena.net

1.3 ENVIRONMENTAL REVIEW PROCESS

1.3.1 REVIEW OF AN EIR

Pasadena, as the Lead Agency, which has the principal authority for approving the proposed Project, along with other public agencies with direct interest in the Project (e.g., responsible and trustee agencies) may use this EIR in their decision-making or permitting processes and would consider the information in this EIR in combination with other information that may be presented during the CEQA process. In addition, this EIR provides the analysis in support of the Mitigation Monitoring and Reporting Program that would be implemented as part of the proposed Project, if approved.

In accordance with CEQA, public agencies are required to make appropriate findings for each potentially significant environmental impact identified in the EIR if they decide to approve a project. If the EIR identifies significant environmental impacts that cannot be mitigated to a less than significant level through the adoption of mitigation measures or project alternatives, the Lead Agency (and responsible agencies using this CEQA document for their respective permits or approvals) must decide whether the benefits of the development project outweigh any identified significant environmental effects that cannot be mitigated to below a threshold of significance. If the Lead Agency, trustee agency, or responsible agency decides that the project benefits outweigh the unavoidable impacts, then that agency is required to adopt a Statement of Overriding Considerations, which states the reasons that support their actions. The Lead Agency's actions involved in implementation of the proposed Project are described in Section 2.0, Environmental Setting and Project Description. Other agencies that may have discretionary approval over the Project, or its components, including responsible and trustee agencies, are also described in Section 2.0.

1.3.2 NOTICING AND PUBLIC MEETINGS

In compliance with Section 15082 of the State CEQA Guidelines, Pasadena oversaw preparation of the Notice of Preparation (NOP) of the Draft EIR for the proposed Project to solicit comments on the scope of the EIR and to inform agencies and the public of the proposed Project. The NOP, in both English and Spanish, was distributed on May 13, 2025, to the Governor's Office of Land Use and Climate Innovation, State Clearinghouse (State Clearinghouse/SCH); the Los Angeles County Registrar-Recorder/County Clerk; responsible and trustee agencies; other relevant federal, State, regional, and local government agencies; organizations and interested parties; and all parties who requested notice in accordance

with CEQA. Additionally, although not required for an NOP, the English/Spanish NOP was directly mailed to the owners and occupants of properties within a 750-foot radius of both the San Rafael and San Pascual sites based on the latest tax assessment roll; published in English for one day in the Pasadena Star-News; and posted on the City's website on May 15, 2025, at https://www.cityofpasadena.net/planning/arroyo-seco-water-reuse-project/.

The NOP was distributed for a 30-day scoping period extending from May 15, 2025, through June 13, 2025. The proposed Project and its location were described in the NOP; and the potential environmental effects were identified. A copy of the NOP is provided in Appendix A of this EIR.

Pasadena held a public scoping meeting for the EIR for the Project from 6:00 PM to 8:00 PM on Wednesday, May 28, 2025, at the South Pasadena Community Room, 1115 El Centro Street, South Pasadena, California, 91030. The purpose of the scoping meeting was to receive input on the environmental issues that should be addressed in the EIR.

On June 3, 2025, the City of Pasadena distributed an NOP Extension, in both English and Spanish, extending the end of the comment period from June 13, 2025, to June 30, 2025. This notice was sent to all those on the NOP mailing list as well as all those who attended the scoping meeting but were not already on the mailing list.

A total of 135 responses to the NOP were received from 125 agencies, organizations, and individuals, and are provided in Appendix A of this EIR. All sensitive personal information (e.g., email, address, phone numbers) has been redacted in the NOP comment letters. The comments and issues raised by the response letters are summarized in Table 1-1, Summary of Responses to the Notice of Preparation, beginning on the following page. NOP comment letters are listed alphabetically by last name in Table 1-1. Letters from the same individual and/or organization are listed with a numeral in parentheses after the name to differentiate the submissions.

In addition to the CEQA-required notices and public scoping meeting, Pasadena has held one stakeholder meeting and two community meetings as of the preparation of this EIR; and maintained and updated a Project-specific website with detailed information and a submission form for questions or comments.

TABLE 1-1
SUMMARY OF RESPONSES TO THE NOTICE OF PREPARATION

Commentor	Comments/Issues Raised
Agencies and Tribes	
State and Regional	
California Department of Fish and Wildlife	Comments and recommendations to assist in identifying and/or mitigating impacts to biological resources (rare plants; bats; reptiles and amphibians; fish habitat; lake and streambed alteration; water rights). General comments regarding disclosure; project description and alternatives; biological baseline assessment; biological resources impacts; cumulative impacts; nesting birds; translocation/salvage of plants and animal species; scientific collecting permit; wetland resources; native plants and trees
Los Angeles Regional Water Quality Control Board	Recommendations for the EIR to include analysis/discussion of (1) identification of affected waters (2) avoidance and minimization analysis, and (3) analysis of diversion of flows; adequate public outreach, including the community, tribes and City of Los Angeles engagement
Native American Heritage Commission	Native American consultation under AB 52 and SB 18; cultural resource assessment recommendations.
South Coast Air Quality Management District	Guidelines for air quality analysis, permits, and mitigation measures
Local	
City of Los Angeles Council District 14 (Ysabel Jurado)	Raises concerns about tree removal, habitat loss, water use impacts, lack of City of Los Angeles involvement, need for interagency coordination, equitable community outreach, and inclusion of alternatives aligned with climate and environmental goals
Tribes	
Gabrieleño Band of Mission Indians-Kizh Nation (Chief Salas)	Consultation with Kizh Nation under AB 52 and CEQA.
Gabrieleño Band of Mission Indians-Kizh Nation (Ricardo Montijo, MSc.)	Tribal resources within and near Project sites, biological resources/habitat impacts, hydrologic and water quality impacts, EIR recommendations
Organizations and Individuals	
Support	
Katrina Alexy (1)	Support for the Project
Katrina Alexy (2)	Support for the Project
Russell Campbell	Support for the Project
John Collinson	Support for the Project
Robi Inserra	Support for the Project
Jens Jonason	Support for the Project
Casey Law	Support for the Project
Jeff Leon	Support for the Project
Noel McCarthy	Support for the Project; public outreach; project description/presentation
Lesley Meyer	Support for the Project
Pilar Reynaldo	Support for the Project; would like to know if maintenance of the two areas is built into the cost of the Project
Jennifer Trotoux	Support for the Project
Julie Williams	Support for the Project; EIR should address public involvement; tribal consultation (Kizh Nation); data on current and projected water use; contamination sources; mitigation related to construction noise and dust and light pollution from baseball fields for residents near San Pascual Park

TABLE 1-1
SUMMARY OF RESPONSES TO THE NOTICE OF PREPARATION

Commentor	Comments/Issues Raised
Comment Letter Template and Related Comments	
Kenneth A	Loss of mature trees, parkland, water access, wildlife, wildlife habitat, wildlife corridor; air, noise, and light pollution; climate and carbon impacts; cumulative impacts; tribal consultation; nature-based alternatives, alternative with no diversion to Arroyo Seco Golf Course; alternative sites; source pollution control, and transparency on water allocation and contamination data; legality of granting Los Angeles land; long-term maintenance issues; water diversion to the Arroyo Seco Pasadena Golf Course
J Alejandro	
Gabriel Alforoso	
Isabella Alvarez	
Tom B	
Adora Ble	
Nathan Bignell	
Holly Brix	
Robert Burreszia	
Wendy Carrillo	
Mike Estrada	
John Gallogly (1)	
Sebastian Garcia	
Brittany Herrera	
Katie Herrera	
Thomas Lee	
Rob Lucero	
Lena M	
Richard Maquez	
Rob McDermott	
Annmarie Monroe	
Vincent Montalvo	
No Name, No Date (1)	
Janis Ortega	
Yael Pardess (1)	
Richard Petrey	
Citlah Pineda	
Constantia Rhinehart	
Rosa Rivas	
Jesse Rotas	
Andrew Seymour	
Gloria Sierra	
John Smith (1)	
Veronica Smith	
Clara Solis (1)	
Emily Spokes	
Via Trujillo	
Rod Ulanday	
John Urquia	
Grisel Villalobos	
Nicholas Villalobos	
Aja Volkman	

TABLE 1-1
SUMMARY OF RESPONSES TO THE NOTICE OF PREPARATION

Commentor	Comments/Issues Raised
Sylvia Bedell	Above comments and suggests Pasadena should give Los Angeles parkland
John Gallogly (2)	Above comments and disagrees that Project is beneficial
Sylvia Blackstone	Above comments; plumbing will need continuing maintenance; trees do not mature in 15 years; not enough water to prevent sediment clogging poorly designed project
Angelo Gladding (1)	Above comments and infiltration basin should be placed under golf course and used for fire suppression
Robyn Haley	Above comments and lack of green space compared to population
Jeffery Hernandez	Above comments and annual maintenance cost
Remaining Comments	
Laurel Brigham	Concerns regarding biological resources and lack of discussion about long-term maintenance and monitoring of proposed landscaping in the IS/MND. Maintenance and monitoring should be addressed in EIR and included in budget and thoroughly coordinated between agencies
Samuel Brown	Cultural/historic significance of multi-use and equestrian corridors; conflict with County and State-adopted trail standards and land use planning; indigenous and working-class mobility and recreation; air pollution; tribal consultation (Kizh Nation); long-term maintenance; green infrastructure alternatives
Vicky Bermudez	Impacts to environment, community, and cultural heritage; destruction of natural habitat and mature trees; environmental justice and community outreach; water diversion for private use; indigenous heritage; lack of transparency; alternative solutions not considered
Elizabeth Buck	Impacts to wildlife related to existing water source in San Rafael site, provide temporary water source
Monica Charles	Alternatives (nature-based, upstream pollution control, no project); biological resources (biological surveys, wildlife usage, cumulative habitat loss, tree removal, realistic timelines for replacement habitat); hydrology, water quality, and water rights (current data, downstream impacts, legal authority, source pollution control); long-term O&M (requirements, costs, protocols); construction impacts; projects that fit with Arroyo restoration and other watershed plans; tribal consultation (Kizh Nation); no explanation how Pasadena plans to treat water before diverting to another community's parkland; alternative solutions ignored
Teddi Chichester	Impacts to equestrian and recreation users; tree removal
Sue Choi	Opposition to removing the park to water a golf course; removal of historic trees; indigenous land
Steve Crouch	Conflict of interest related to EIR preparers; loss of wildlife and habitat; tree removal; use of alternative sites
Dianne Domingo-Foraste	Confirm existing equestrian fencing will be replaced along roadway; confirm that existing shared benches along equestrian trail will be set apart from equestrian trails; requests reconfiguring plan to separate pedestrian and equestrian users
Barbara Eisenstein (1)	Site cleanup alternative; current water quality data; nature-based solutions; impacts to wildlife
Barbara Eisenstein (2)	EIR must include nature-based alternatives; biological resources impacts; cumulative projects and conflicts with Arroyo Seco restoration projects; hydrology, water quality and water rights; restoration and long-term operation and maintenance; construction impacts; tribal consultation (Kizh Nation); community engagement
Barbara Eisenstein (3)	Aesthetics; increased involvement from other local jurisdictions; conflict with the Arroyo Seco Watershed Habitat Restoration Project; new EIR preparers
James Eisenstein	EIR must address alternatives; habitat degradation; long-term O&M; water rights; climate change

TABLE 1-1
SUMMARY OF RESPONSES TO THE NOTICE OF PREPARATION

Commentor	Comments/Issues Raised
Genette Foster	Degradation of Lower Arroyo; impacts to recreation facilities; nature-based alternative and restoration of Lower Arroyo
Monica Gonzalez	Concerns related to removal of equestrian trails
Angelo Gladding (2 and 3)	Existing cattails; trees 326 and 335; tree replacement plan; Mexican fan palms are California fan palms; bat habitat; shrubs and adolescent trees; account for fire damage; water quality/infiltration system; wildlife impacts; aesthetics (12' access road)
Barbara Guerra-Torres	Better alternatives; impacts to wildlife & trees; water rights and water quality; long-term O&M; air and noise pollution; disrupt park users; introducing infrastructure contrary to Arroyo Seco Restoration Study; baseline resources; enforceable mitigation measures
Bob Gutzman and Marcie Chan	Nature-based alternative and restoration of Arroyo Seco
Joaquin Hernandez-Solis	Requests to receive all notices related to the Project
Jessica	Removal and replacement of mature native trees with young trees (reduced shade, fire resistance, and wildlife habitat)
Tani Kaye	Removal of mature trees (shade, wildlife habitat removal) and length of time for regrowth; removal of water source for wildlife through redirecting to golf course; restore the river and reintroduce steelhead trout
Monica Kelly	Nature-based alternatives
Wendy Kerfoot	Requests EIR analysis of alternatives (nature-based), biological resources impacts (tree removal), water quality and rights, construction and operational impacts, regional coordination and cumulative impacts, tribal consultation (Kizh Nation), and source pollution control
Samantha Kirkeby	Raises concerns related to threats to historic equestrian and multi-use trails, tree removal, trail safety, and cultural impacts; urges compliance with trail standards, protection of Indigenous corridors, and alternatives that preserve access and environmental integrity
Mark Forbes	Requests EIR evaluation of alternatives that don't involve the golf course (including no-build); concerns about recontamination from golf course runoff, source of pollution, groundwater impacts, water diversion to golf course, legal water rights, and overall need for Project if upstream mitigation is effective
Elaine Livesey-Fassel	EIR should include better alternatives; wildlife and habitat impacts; water rights and water quality; long-term O&M costs; air and noise pollution; regional planning
Elaine Lomas	Public outreach/input; hopes for removal of concrete; impacts of Project design related to natural appearance of the Arroyo, trees and vegetation, wildlife, and flow of the river
Michael Long	EIR should include impacts to wildlife and habitat; nature-based alternatives; long-term O&M costs
Laura Mason	Loss of trees; water removal from river; loss of Los Angeles parkland; removal of water source, riparian habitat; loss of animals during construction; noise, air, and light pollution with tree removals; heat island for 15 years; water loss from evaporation; downstream habitats; tribal consultation (Kizh Nation); nature-based alternatives (stream restoration, connectivity and habitat preservation, reintroduce steelhead trout); source pollution cleanup; current contamination sources; alternative sites; transparency on water allocation and contamination data; no-build alternative; long-term maintenance; benefits for LA residents; how much water LA will receive; amount golf course paying for water; comprehensive biological survey; archaeological and paleontological (fossilized) study; proof of State Water Rights for diversion to South Pasadena

TABLE 1-1
SUMMARY OF RESPONSES TO THE NOTICE OF PREPARATION

Commentor	Comments/Issues Raised
Julian Angel Ibanez Mandujano	Impacts to equestrian corridor by tree removal, destabilizing soils, increasing dust and erosion, and narrowing or obstructing trail alignments; not consistent with *Los Angeles County Trails Manual* and *California State Parks Trail Handbook*, as cited; concerns about diverting 175 million gallons water annually from Arroyo Seco largely to irrigate golf course; erasing cultural infrastructure; protections for safe equestrian access before, during, and after any work
Tarrie Mercer	EIR should include bird/nesting bird impacts; golf course runoff contaminants; vegetation removal and biodiversity; noise, dust, and light pollution; long-term maintenance; natural no-build alternative; primary source of bacterial pollution in the Arroyo Seco
Patricia Morton	Restoration of Arroyo Seco; will destroy wetland habitat; artificial and unsustainable; long-term maintenance funding; natural alternative
Amy Nettleton	EIR should include better alternatives; wildlife and habitat impacts; long-term O&M costs; air and noise pollution during construction; Project doesn't fit with Arroyo Seco restoration plans
Robin Newquist	Develop program to improve conditions for wildlife, habitat, and people
No Name, No Date (Save San Pascual Park) (1)	Tree removal; psychological impact from loss of parkland and water access; loss of wildlife habitat and corridor; noise, light, air pollution; heat island effect; not in compliance with Los Angeles' *Major Equestrian and Hiking Trails Plan*; downstream habitat effects; water loss; transparency on water allocation and contamination data; source pollution cleanup; alternate methods to meet bacteria reduction goal; alternatives without habitat destruction; proof of State Water Rights for diversion to South Pasadena; hydrology and water use details; amount golf course paying for water; stable and consistent project description; nature-based alternatives and no build alternative; cost-benefit analysis of each alternative; tribal consultation; address all written comments; scoping meeting and outreach poor, outreach required within a minimum 3-mile radius and options for verbal or written input; Project is burden on community with no benefits; consult with other environmental organizations; long-term maintenance; legality and compensation; palm tree species; archaeological and paleontological (fossilized) study; preservation of historic integrity and hitching post
No Name, No Date (Save San Pascual Park) (2)	Tree removal; psychological impact from loss of parkland and water access; loss of wildlife habitat and corridor; noise, light, air pollution; heat island effect; downstream habitat effects; water loss; transparency on water allocation and contamination data; source pollution cleanup; alternate methods to meet bacteria reduction goal; alternatives without habitat destruction; proof of State Water Rights for diversion to South Pasadena; hydrology and water use details; amount golf course paying for water; stable and consistent project description; nature-based alternatives and no build alternative; cost-benefit analysis of each alternative; tribal consultation; address all written comments; scoping meeting and outreach poor, outreach required within a minimum 3-mile radius and options for verbal or written input; Project is burden on community with no benefits; consult with other environmental organizations; long-term maintenance; legality and compensation; palm tree species; archaeological and paleontological (fossilized) study; preservation of historic integrity and hitching post
Yael Pardess (2)	Tree removal; loss of parkland, water access, and wildlife habitat and corridor; loss of animals during construction; noise, light, air pollution; heat island for 15 years; downstream habitat effects; tribal consultation; nature-based alternatives (stream restoration, connectivity and habitat preservation, reintroduce steelhead trout); source pollution cleanup; current contamination sources; alternative sites; transparency on water allocation and contamination data; long-term maintenance; legality; benefits for LA residents; how much water LA will receive; amount golf course paying for water; comprehensive biological survey

TABLE 1-1
SUMMARY OF RESPONSES TO THE NOTICE OF PREPARATION

Commentor	Comments/Issues Raised
Yael Pardess (3)	Verbal comments; MND inaccurate, EIR to be objective and accurate; transparency on water contamination data; source pollution cleanup; wildlife corridor loss; downstream habitat effects; alternative sites with no tree removal; EIR should include/discuss site-specific water contamination data; treating pollution at the source; impacts from tree removal (wildlife habitat and ecosystem); alternative sites without tree removal; existing river restoration plans
Pamela Perkins	Unclear on whether the existing horse passage would be safe during Project construction; concerns about the safety of pedestrian and equestrian trail users, requests additional signage on trails prohibiting bicycles
Katharine Pinney	Safety concerns regarding proposed shared path for equestrians and pedestrians
Mary Renaker	Nature-based alternative to the Project involving restoration of the Arroyo Seco
Marcus Renner	Project should be presented as a step towards eventual restoration of the Arroyo Seco; public outreach and education related to historic uses; Project design should consider inflow from Garfias Springs to both sites; EIR should address measures implemented during construction related to soil compaction; impacts of new walkways on wildlife; water access accommodations for wildlife; water contamination into San Rafael Creek
Bianca Richards	Nature-based alternatives; tree/habitat removal and wildlife; water rights and quality; long-term O&M; air and noise pollution; Project doesn't fit with Arroyo Seco restoration plans; tribal consultation (Kizh Nation)
Cate River	Wildfire hazards; wildlife and riparian habitat; health and safety; construction-related air and noise pollution; light pollution; tree removal; water supply; climate change; tribal consultation; pollution sources; alternatives; long-term O&M; pollution at the source
Jim Round	Concerns regarding impacts to biological resources (tree removal), pollution (air and noise), and loss of parkland; requests the EIR include evaluation of nature-based alternatives, current water quality and contamination source data, cumulative impacts, and tribal consultation (Kizh Nation)
Catherine Round	Cumulative impacts; Project design and scope; nature-based alternatives
Aerienne Russell	EIR should provide comprehensive analysis of Project alternatives; biological resources; hydrology, water quality, and water rights; long-term O&M; construction impacts; Project doesn't fit with Arroyo Seco restoration plans; tribal consultation
Save San Pascual Park (3)	EIR must address impacts resulting from tree removal; water loss; treatment of water pollutants; water diversion; nature-based alternatives; tribal consultation; public comments; community input; long-term O&M; biological surveys; archaeological impacts; preservation of historic integrity
Jerry Schneider	Better alternatives; wildlife and habitat impacts; water rights and water quality; long-term O&M costs; air and noise pollution during construction; Project doesn't fit with Arroyo Seco restoration plans
Richard Schneider	Nature-based solutions; Project should be abandoned
Beatrice and Ed Simpson	Nature-based alternatives; tree/habitat removal and wildlife; water rights and quality; long-term O&M; air and noise pollution during construction; Project doesn't fit with Arroyo Seco restoration plans; tribal consultation (Kizh Nation)
John Smith (2)	Palms on San Pascual site are California Palms (*Washingtonia filifera*) instead of Mexican Fan Palms (*Washingtonia robusta*); EIR should include evaluation performed by biologist or arborist who specializes/is familiar with California palms and explore history of how and when these trees were introduced
Clara Solis (2)	EIR should include bat study conducted at both sites; nature-based stream restoration currently being studied by LA County for the Arroyo Seco; contribution of water contamination from golf course; better alternatives

TABLE 1-1
SUMMARY OF RESPONSES TO THE NOTICE OF PREPARATION

Commentor	Comments/Issues Raised
Clara Solis (3)	Raises extensive concerns about environmental justice, air and noise pollution, tree removal, habitat loss, cultural and historic resources, public access, equestrian trail impacts, and long-term maintenance; urges robust alternatives analysis, source pollution control, and full CEQA compliance with meaningful public and tribal consultation
Clara Solis (4)	Greenhouse gas emissions; benefits of protecting riparian habitat and trees due to carbon sequestration should be quantified in the EIR; submitted report from Center for Biological Diversity for consideration
Kathy Spencer	Safety concerns related to project design and narrow equestrian trail shared with pedestrians; hazards related to bench locations along trail that will disrupt equestrian trail users; accommodations for equestrians during construction (signage)
Stewards of the Arroyo Seco (Timothy Brick)	Project should include green infrastructure and nature-based alternative encompassing the Arroyo Restoration Corridor (enhance nature and biodiversity of the Arroyo Seco, verify current conditions, water quality, community engagement, water rights, remove barriers to fish passage, habitat protection, consultant with experience in nature-based stream restoration and pollution prevention)
Kathy Sturdevant	Nature-based alternatives; preservation of trees; address current pollution sources; costs of long-term O&M
Taj Sullivan	Impacts to equestrian corridor by tree removal, destabilizing soils, increasing dust and erosion, and narrowing or obstructing trail alignments; not consistent with *Los Angeles County Trails Manual* and *California State Parks Trail Handbook*, as cited; concerns about diverting 175 million gallons water annually from Arroyo Seco largely to irrigate golf course; erasing cultural infrastructure; protections for safe equestrian access before, during, and after any work
Diane Suzuki	Tribal consultation (Kizh Nation); nature-based alternatives (stream restoration, connectivity and habitat preservation, reintroduce steelhead trout); source pollution cleanup; alternative sites; transparency on water allocation and contamination data; long-term maintenance; legality; benefits to LA residents; how much water LA will receive; amount golf course paying for water; comprehensive biological survey; tree removal; loss of parkland, water access, and wildlife habitat and corridor; loss of animals during construction; noise, light, air pollution; heat island for 15 years; downstream habitat effects
Jane Tsong	Inclusion of nature-based solutions, consistency with other publicly funded initiatives along Los Angeles River and Arroyo Seco, and analysis of tree removal, carbon impacts, and long-term maintenance; emphasizes alignment with biodiversity and climate goals.
West Pasadena Residents Association (Carlos Javelera)	EIR should address aesthetics, air quality, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, land use and planning, noise, public services (parks), recreation, tribal cultural resources, and wildfire; support analysis of all Pasadena's adopted policies concerning the Arroyo Seco; discussion of studies to restore the Arroyo Seco; consideration of various alternatives including nature-based; mitigation measures; and thorough analysis of cumulative impacts from water-related projects for the Arroyo Seco
Rachel Wing	Unclear project purpose and goals; environmentally sustainable alternatives; reduced tree canopy; permanent removal of quasi-natural woodland on San Rafael site; EIR should explain history and need for the project; Barbara Eisenstein transcript

1.3.3 ISSUES TO BE ADDRESSED IN THE EIR

The scope of the EIR is based on a preliminary review using the CEQA Environmental Checklist Form (CEQA Guidelines Appendix G) and input received from the agencies and the public as part of the scoping process. The EIR addresses all environmental topics with potential to result in significant effects. As discussed above, although an Initial Study was not prepared and distributed along with the NOP for the Project EIR, the environmental issues with no potential for significant impact are identified in this section of the EIR and focused out from further analysis.

Based on the determination in this section, as well as the comments received by Pasadena in response to the NOP, this EIR analyzes the following environmental topics:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural and Paleontological Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services (Parks only)
- Recreation
- Tribal Cultural Resources
- Wildfire

1.3.4 EFFECTS NOT FOUND TO BE SIGNIFICANT

Using the topics and thresholds questions within each topic of the CEQA Environmental Checklist Form, the following issues below are assessed as "No Impact" or "Less Than Significant Impact" requiring no further evaluation or mitigation in this EIR. Therefore, in accordance with Section 15128 of the State CEQA Guidelines, these are identified as topical areas or issues within topical areas that would not receive further evaluation in this EIR:

Agriculture and Forestry Resources

Would the Project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The entirety of the Arroyo Seco, south of Devil's Gate Dam, is identified as Urban and Built-Up Land on the most recent maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation (FMMP 2024). The Project sites are zoned as Open Space by Pasadena, South Pasadena, and Los Angeles. The sites are not used or zoned for agricultural purposes; are not subject to Williamson Act contracts; and does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. There are no forest lands (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or Timberland Production (as defined by Government Code section 51104[g]) areas within the Arroyo Seco, including the San Rafael and San Pascual sites. A total of 136 trees would be removed as part of the Project, with most removals at the San Pascual site due to the density of existing vegetation. However, neither this site nor any part of the Arroyo Seco is managed to produce timber or other forest products, nor would the Project result in the conversion or loss of forest land or conversion to non-forest land. This topic will not be carried forward as a section in this EIR.

Energy

Would the Project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction of the Project would result in energy consumption related to construction equipment use and vehicle trips, including worker trips, equipment delivery, and export of demolition debris and excavated soil. Fuel energy consumed during construction would be temporary, finite, and would not represent a substantial demand on energy resources. Furthermore, there are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of California. Operation of the Project would use nominal amounts of energy from infrequent, inspection- and maintenance-related vehicle trips. In addition, electricity would be used for a small flow pump that would be used year-round, other pumps that would be used during rainy days and once every three weeks to ensure proper operation, and the water harvester and related infrastructure. Vehicle trips and electricity use is not considered to require the wasteful or inefficient use of energy because it would develop additional water infiltration and treatment for the local area, as well as provide treated stormwater to irrigate Arroyo Seco Golf Course. Therefore, the Project's construction would not result in inefficient, wasteful, or unnecessary fuel consumption. The Project would not involve excessive long-term energy use. As such, the Project would not obstruct

implementation of the City's policies related to increased energy use and, consequently, would neither obstruct nor conflict with City or State policies related to energy use. This topic will not be carried forward as a section in this EIR.

Geology and Soils – *All Thresholds except: "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?"* This issue is analyzed in Section 3.4, Cultural Resources, of this EIR.

Would the Project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

ii) Strong seismic groundshaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The following information is derived from the *Geotechnical Evaluation, San Rafael Treatment Wetland, Arroyo Seco Water Reuse and National Stream Restoration Project, Pasadena, California* (San Rafael Geotechnical Evaluation) and *Geotechnical Evaluation, San Pascual Treatment Wetland, Arroyo Seco Water Reuse and National Stream Restoration Project, Pasadena, California* (San Pascual Geotechnical Evaluation), both dated June 2022 and prepared by Ninyo & Moore (Ninyo & Moore 2022a, 2022b, respectively). These Geotechnical Evaluations are provided in their entirety in Appendices F-1 and F-2 to this EIR.

The San Rafael site is not within an Alquist-Priolo Zone, nor do traces of any known active or potentially active faults traverse through or project toward the site. The San Pascual site is located within an Alquist-Priolo Zone associated with the Raymond fault and is possibly underlain by one or more active splays of this fault. However, it is should be noted that the potential for surface rupture, lurching, or cracking is an existing seismic hazard that affects

the BMP sites, and the Project would not exacerbate this condition. The Project would not involve construction of habitable structures or structures whose height, mass, or materials would pose a hazard in the event of an earthquake that results in ground displacement. The Geotechnical Evaluations concluded implementation of the Project was feasible given the geotechnical recommendations are incorporated into its design and construction (Ninyo & Moore 2022a, 2022b). Earthquake-resistant design and materials used in new construction must meet the current seismic engineering standards of the California Building Code (CBC) requirements in effect at the time of design and construction of the Project. Compliance with these standards would reduce the risk to people and structures to the maximum extent practicable under current engineering. The Geotechnical Evaluations outline the site- and Project-specific requirements for each site to meet CBC standards. The proposed Project would not directly or indirectly cause substantial adverse effects due to surface rupture.

Additionally, the Geotechnical Evaluations concluded the Project area has a high potential to experience strong ground shaking in the event of an earthquake on one of the many active faults in the region; that soil liquefaction is not a design consideration for the Project; and no seismic or soil engineering characteristics have been identified that would result in instability, nor would implementation of the Project cause the site to become unstable. The Seismic Hazard Map shows that the San Pascual site and Arroyo Seco Golf Course are not located in an area identified as susceptible to earthquake-induced landslides. However, the ascending slopes along the north side of the site and west of San Rafael Creek–including the portion of the San Rafael site west of the Creek–are mapped as being susceptible to earthquake-induced landslides. The Geotechnical Evaluation for the San Rafael site notes it is anticipated that excavations made to construct the Project would be shallow in nature (up to a depth of 15 feet) and not extend into the toe of the slope near the San Rafael site. The geologic units underlying the sites consist of sediments consistent with the units identified in the *Pasadena General Plan Safety Element Technical Background Report*, which are in the low to moderately low range for expansion potential (Pasadena 2002).

The potential for surface rupture, lurching, or cracking; strong seismic ground shaking; liquefaction and lateral spreading; landslides; or expansive soil is an existing seismic hazard that affects the sites, and the Project would not exacerbate this condition. The Project would not involve construction of habitable structures or structures whose height, mass, or materials would pose a hazard in the event of an earthquake that results in ground displacement. Regarding landsliding at the San Rafael site, the Geotechnical Evaluation states that detailed plans should be provided to the Geotechnical Engineer for review prior to construction, and that additional analyses could be warranted based on the proposed improvements, their locations to the adjacent slopes, and chosen construction methods. The Geotechnical Evaluations concluded implementation of the Project was feasible given the geotechnical recommendations are incorporated into its design and construction (Ninyo & Moore 2022a, 2022b). Earthquake-resistant design and materials used in new construction must meet the current seismic engineering standards of the California Building Code (CBC) requirements in effect at the time of design and construction of the Project. Compliance with these standards would reduce the risk to people and structures to the maximum extent practicable under current engineering practice. The Geotechnical Evaluations outline the site- and Project-specific requirements for each site to meet CBC standards. There would be

less than significant impacts related to seismic and soil engineering conditions, and no mitigation is required.

Grading and other earthwork associated with Project construction may temporarily expose soils on the Project site to wind and/or water erosion. Since the Project area of earth disturbance is greater than one acre, compliance with the State Water Resources Control Board's (SWRCB's) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities[1] (Construction General Permit) would be required. Once construction is complete, there would not be substantial soil erosion from the site, and the Project would develop either hardscape or landscape areas with appropriate irrigation to ensure there is no loss of topsoil. There would be a less than significant impact related to erosion and loss of topsoil, and no mitigation is required.

The Project would not involve septic tanks or alternative wastewater disposal systems, and the Project would not generate wastewater. There would be no impact, and no mitigation is required.

This topic will not be carried forward as a section in this EIR. Paleontological resources are addressed in Section 3.4, Cultural and Paleontological Resources, of this EIR.

Hazards and Hazardous Materials

Would the Project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?

[1] Order No 2022-0057-DWQ, NPDES No. CAS000002, which became effective on September 1, 2023

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Construction of the Project would involve the use of common hazardous substances such as petroleum-based fuels and hydraulic fluid. However, the level of risk associated with the accidental release of hazardous substances during construction is considered low due to the small volume of hazardous materials that would be used during construction. The construction contractor would be required to use standard construction controls and safety procedures during any transport, use, or disposal of hazardous materials. With Project implementation, the Arroyo Seco would continue operations as a recreational and open space area, which does not use or store hazardous substances other than occasional use of small volumes of materials used for landscape equipment, such as fuels, oils, and solvents. Common materials to maintain water-related infrastructure such as lubricants and solvents would be used as needed. Pasadena and South Pasadena would be required to continue adherence to applicable zoning and fire regulations for the use and storage of any hazardous substances as part of maintenance of the segments of the Arroyo Seco in their respective jurisdictions. As such, the transport, use, and disposal of hazardous substances required for construction and operation of the Project and the risk of release of these substances into the environment would not represent a significant hazard. There would be a less than significant impact, and no mitigation is required.

There is one school within approximately ¼-mile of the San Pascual site–San Pascual STEAM Magnet Elementary School, 815 San Pascual Avenue, Los Angeles–located approximately ¼-mile to the east-northeast at the closest points. As discussed above, construction and operation of the Project would involve the use of common hazardous substances. The remote risk of release of a small volume of fuel or other materials commonly used in construction activity, which are not acutely hazardous, would not pose a potential health hazard to the occupants (e.g., students, staff) of the school to the east of the site. Therefore, construction and operation of the Project would not have potential for emitting hazards emissions or handling hazardous materials such that it would result in impacts on the existing school in proximity to the Project site. There would be a less than significant impact, and no mitigation is required.

The Project sites are not located on the State of California Hazardous Waste and Substances Sites List published by California Environmental Protection Agency (CalEPA) and compiled pursuant to Section 65962.5 of the California Government Code (referred to as the Cortese List) (CalEPA 2025). The Project sites are not within an airport land use plan or within two miles of a public airport or public use airport. The nearest public use airport to the Project sites is the San Gabriel Valley Airport located approximately eight miles southeast of the Project sites. There would be no impact, and no mitigation is required.

Construction staging would not interfere with circulation along San Pascual Avenue, Stoney Drive, or any other nearby roadways. Construction and operation of the Project would not place any permanent or temporary physical barriers on any existing public streets. As such,

the Project would not obstruct any emergency evacuation or response activities. There would be no impact, and no mitigation is required. This topic will not be carried forward as a section in this EIR.

Mineral Resources

Would the Project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No active mining operations exists in Pasadena, South Pasadena, or Los Angeles on or near the Project sites. The Project area is not identified as by the California Geological Survey (CGS) as Mineral Resource Zone (MRZ) 2, which is defined as areas where geologic data indicate that significant Portland Cement Concrete-Grade aggregate resources are present (CGS 1982). Pasadena, South Pasadena, and Los Angeles all have a General Plan land use designation and zoning designation of OS/Open Space for the respective city's portions of the two sites. Therefore, the Project would not result in the loss of an available known mineral resource with value to the region, including concrete aggregate, or a locally-important mineral resource recovery site. There would be no impact, and no mitigation is required. This topic will not be carried forward as a section in this EIR.

Population and Housing

Would the Project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No residential units are included in the Project; therefore, the Project would not directly induce unplanned population growth. Also, the Project is not anticipated to directly increase use of the Lower Arroyo Seco area as a destination. It is expected that existing users of the Arroyo Seco area would use the proposed Project features, as they there are similar to passive and active recreation features existing in the area. Additionally, the Project would not indirectly induce growth, such as through provision of employment or extension of infrastructure. Employment that would be created during construction would be short-term and is anticipated to be performed by the local construction workers. Development of the Project would not require extending or improving infrastructure in a manner that would facilitate off-site growth in Pasadena, South Pasadena, or Los Angeles. The Project sites are designated for open space and recreation uses. Implementation of the Project would maintain the existing open space uses and would not displace established housing.

Therefore, the proposed Project would not induce substantial population growth. Project implementation would not displace substantial numbers of existing people or housing, necessitating replacement housing elsewhere whose construction could result in environmental impacts. There would be no impact, and no mitigation is required. This topic will not be carried forward as a section in this EIR.

Public Services – ***All Thresholds, except for Parks: "Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities, need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks?"***

The topic of Recreation is analyzed under Public Services in this EIR.

Would the Project:

a to e) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or other public facilities?

As discussed above, the Project would not result in direct or indirect population growth. The Project would include construction of water treatment and expanded recreational facilities in the Lower Arroyo Seco. These Project elements would not directly or indirectly alter demand such that additional fire protection facilities, police protection facilities, or other public services (such as libraries) are needed, that could in turn cause adverse environmental impacts (such as building new police or fire stations) would be required. Implementation of the Project may reduce the demand for fire and police protection services on or near the Project sites, given the unauthorized activities that can occur on the Arroyo Seco's open space areas not formally developed as parks and recreation facilities. The Project would not result in increase in school-age children; therefore, there would be no additional demand for school services. There would be no impact, and no mitigation is required. This topic will not be carried forward as a section in this EIR.

Transportation

Would the Project:

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

d) Result in inadequate emergency access?

The following information is derived in part from the *Arroyo Seco Water Reuse Project Traffic Evaluation* (Traffic Evaluation), dated October 27, 2023, and prepared by Psomas (Psomas 2023). The Traffic Evaluation is provided in Appendix H to this EIR.

Construction would not require staging along adjacent public roadways or other areas that would disrupt existing traffic patterns. There may be occasions where large construction equipment or construction materials are transported across Stoney Drive (i.e., between the staging/laydown area and the site), requiring temporary traffic control. Additionally, a two-inch-diameter water line would be installed across Stoney Drive between the San Pascual site and Arroyo Park via trenching. This would involve closure of one lane of the road at a time. However, no street or other lane closures, or street improvements, would be required to implement the Project. The primary access point for construction traffic at the San Rafael site would be via San Pascual Avenue, then north through the paved parking lot at San Pascual Stables and continuing west along the unpaved road immediately north of the stables until it ends at the Channel. A temporary concrete bridge would span the Arroyo Seco Channel at this point to access the west side of the Channel. This temporary bridge is necessary to have access to the San Rafael site that would accommodate the potential weight of all anticipated construction vehicles. The main point of ingress and egress for construction traffic, including private worker vehicles, at the San Pascual site would be via San Pascual Avenue and Stoney Drive. Ingress and egress for construction traffic associated with installation of the water harvester and related infrastructure would be via Lohman Lane.

A safe path for equestrian and pedestrian traffic at the northern (upstream) end of the San Rafael site during construction would be made available to the maximum extent feasible. There would be brief periods where the existing trail alignment on the west side of the Channel at the bridge crossing would be restricted to public access for safety and/or to allow the proposed improvements in this portion of the site to be completed. At least a single lane for vehicular traffic along Stoney Drive at the San Pascual site as well as a safe detour for equestrian and pedestrian traffic would be available at all times throughout the construction period. The City of Pasadena has been in communication with the San Pascual Stables and would continue to communicate regarding equestrian access at both sites throughout the construction period.

The Traffic Evaluation assumes that construction truck trips would be evenly spaced throughout the workday, and that all workers would arrive during the same hour in the morning and would depart in the same hour in the afternoon/evening. Table 1-2, Total Construction Trip Generation, summarizes the total construction traffic expected for all Project activities; and Table 1-3, Peak Day Construction Trip Generation (8th Month), summarizes the peak day (highest) construction trip generation.

TABLE 1-2
TOTAL CONSTRUCTION TRIP GENERATION

Month	Activity	Total Trips	Work Days	Daily Trips	Peak Hour Trips
San Rafael Site					
1	Demolition	6	20	Assumes 2 trips on 3 consecutive days	0
2	Site Preparation	200	20	10	1
3-4	Grading/Excavation	400	40	10	1
5-8	Infrastructure Construction	4	80	Assumes 4 trips in the same day	1
9	Paving	0	20	0	0
Construction worker trips (per day rate only)				20	10
San Pascual Site					
5	Demolition	0	20	0	0
6-7	Site Preparation	400	40	10	1
8-10	Grading/Excavation	800	60	13	2
11-16	Infrastructure Construction	10	120	Assumes 2, 2, and 1 trip on 3 single days distributed through phase	0
17	Paving	0	20	0	0
Construction worker trips (per day rate only)				20	10
Source: Psomas 2023; Appendix H.					

TABLE 1-3
PEAK DAY CONSTRUCTION TRIP GENERATION (8TH MONTH)

Component	Activity	Total Trips	Work Days	Daily Trips	Peak Hour Trips
San Rafael Site	Infrastructure Construction	4	80	4	1
	Construction worker trips (per day rate only)			20	10
San Pascual Site	Grading	800	60	13	2
	Construction worker trips (per day rate only)			20	10
			Peak Day Trips	**57**	**23**
Source: Psomas 2023; Appendix H.					

As shown in Tables 1-2 and 1-3, the peak day construction activity (i.e., worst case) is estimated to occur in the eighth month of construction (counting from the beginning on San Rafael site construction) and would result in an estimated 57 daily trips, including 23 trips in the peak hour. For much of the Project's construction period, the main daily traffic would be generated by the workers and is therefore comprised of personal vehicles. Therefore, even with conservative assumptions about construction traffic for this Project, the level of

construction traffic would not conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

With respect to operational impacts, per Pasadena's *Transportation Impact Analysis Current Practice and Guidelines*, a CEQA transportation analysis shall be conducted for development projects which satisfy any of the following conditions: (1) proposes 50 or more net new residential dwelling units, or (2) project proposes 50,000 or more net new non-residential square feet (Pasadena 2022). The Project is not a development project and does not meet any conditions requiring a CEQA transportation analysis. Further, there would be minimal additional traffic generated because of Project operation. As noted previously, the Project is not anticipated to directly increase use of the Lower Arroyo Seco area as a destination. Long-term maintenance is expected to involve, on average, a single visit to both sites per month by a two- to four- person crew during a one-day (e.g., up to eight-hour) visit. Therefore, no Project-level analysis of CEQA impacts is required. Also, Pasadena does not require analysis of construction traffic part of the CEQA analysis. However, an assessment of construction traffic associated with both Project sites was conducted to be conservative and provide additional information.

Pasadena has set forth policies for public transit, bicycle, and pedestrian facilities in its General Plan. One of the eight guiding principles of the General Plan is that "Pasadena will be a city where people can circulate without cars." More specific policies regarding non-vehicular transportation modes are provided in the Mobility Element of the General Plan. Objective 2 of the Mobility Element is to "Encourage walking, biking, transit and other alternatives to motor vehicles." This objective is supported by policies including: "Continue to strengthen the marketing and promotion of non-auto transportation to residents, employees and visitors," "Ensure that secure and convenient bicycle parking is available at destinations," and "Provide convenient, safe and accessible transit stops" (Pasadena 2015). The Project would not conflict with the City's policies to encourage walking, biking, and transit. The Project would support some of these policies, as it would improve ease of access and safety of alternative transportation (pedestrian) as well as equestrian use within the Lower Arroyo Seco, including in the cities of South Pasadena and Pasadena.

There would be less than significant impacts, and no mitigation is required. This topic will not be carried forward as a section in this EIR.

Utilities and Service Systems – *All Thresholds*

The Project would minimally increase demand for water associated with use of the proposed irrigation system to support the new landscaping. A two-inch-diameter water line would be installed across Stoney Drive between the San Pascual site and Arroyo Park. The water line would have a meter and backflow preventer on site and would connect to an existing six-inch-diameter water line on the east side of Stoney Drive. The purpose of this water line and the water line connection at the San Rafael site would initially be to provide irrigation water to the newly planted landscaping; after the landscaping is established the on-site irrigation infrastructure would be removed but the water line connection would remain in the event of extended drought conditions, "hot spots" in the landscape that require temporary supplemental water, and/or for maintenance needs. However, this long-term water use

beyond initial landscape irrigation is expected to be only periodic. Additionally, a nominal amount of water may be used during construction for dust suppression. However, the Project would result in an estimated water supply benefit of 320 af per year on average, from approximately 258 af of groundwater recharge and approximately 30 af of irrigation reuse at the Arroyo Seco Golf Course. Additionally, the temporary dust suppression water use during construction and long-term, but nominal, irrigation water use on the sites would not result in insufficient water supplies, such that Pasadena (for the San Rafael site) or South Pasadena (for the San Pascual site) would be unable to meet the Project's demands and existing and foreseeable demands for potable water.

The Project would not result in wastewater generation and would not, therefore, result in the need for new or expanded wastewater treatment facilities. There would be no increase in stormwater runoff. The proposed BMPs would include a small extent of new impervious surfaces, such as concrete seat walls and the San Pascual pretreatment infrastructure enclosure that would be partially above ground. However, the treatment wetlands have been designed to optimize infiltration and would facilitate a greater amount of on-site infiltration than in the existing condition. Therefore, the Project would not result in the need for new or expanded stormwater drainage facilities.

Electrical connection for the Project site will be off an existing pole, and no new utility pole is proposed. While operation of the water treatment infrastructure and irrigation system would generate demand for electricity, this demand would not result in the need for new or expanded electric power facilities outside the Project site. Finally, the proposed Project would not require natural gas or telecommunications facilities. Implementation of the Project would not result in the need for water, wastewater, stormwater drainage, electricity, natural gas, or telecommunication facilities, the construction of which could cause significant effects. Impacts on utilities would be less than significant, and no mitigation is required.

Construction of the Project would generate an estimated 600 cy of demolition debris, 3,000 cy of greenwaste, and 6,000 cy of excavated soil. Waste from the Project site would be exported to Scholl Canyon Landfill, located at 3001 Scholl Canyon Road. Section 8.62 et. seq. of the PMC is the City's construction and demolition waste management ordinance (C&D ordinance). However, to provide a conservative analysis, all construction waste generated is considered against the facility's remaining capacity. Therefore, for purposes of this analysis, implementation of the Project would generate an estimated 6,900 cy of construction waste. The Scholl Canyon Landfill has a maximum permitted daily tonnage of 3,400 tons per day (tpd) (5,763 cy) and a remaining permitted capacity of approximately 2.0 million cubic yards (1.2 million tons) (LACPW 2025). The one-time disposal of approximately 6,900 cy would represent approximately 0.3 percent of Scholl Canyon Landfill's remaining permitted capacity. The finite amount of construction waste requiring landfill disposal after diversion efforts would not interfere with attainment of waste management goals pursuant to AB 939, the California Integrated Waste Management Act. As such, the Project would comply with federal, State, and local regulations related to solid waste. Operation of the Project would not generate any additional solid waste compared to existing conditions.

There would be less than significant impacts, and no mitigation is required. This topic will not be carried forward as a section in this EIR.

1.4 ENVIRONMENTAL IMPACT REPORT REVIEW AND APPROVAL PROCESS

The Draft EIR for the Project is being distributed to responsible and trustee agencies, other affected agencies, surrounding cities, interested parties, and all parties who requested a copy of the EIR in accordance with CEQA. During the 45-day public review period, this Draft EIR, including the technical appendices, is available for review online at [https://www.cityofpasadena.net/planning/environmental-notices/] and hard copies are available at the following locations during regular business hours:

- City of Pasadena Permit Center, 175 North Garfield Avenue, Pasadena, CA, 91101;
- San Rafael Branch Library, 1240 Nithsdale Road, Pasadena, CA, 91105;
- Arroyo Seco Regional Branch Library, 6145 North Figueroa Street, Los Angeles, CA; and
- South Pasadena Public Library, 1100 Oxley Street, South Pasadena, CA, 91030.

Comments on the Draft EIR from public agencies, organization, and interested members of the public will be accepted during the 45-day public review period from [MONTH, DAY], 2026 to [MONTH, DAY], 2026. Any time during the public review period, written comments concerning the adequacy of the document can be submitted by interested public agencies and members of the public to:

City of Pasadena Public Works Department
Attention: Christina Monde, P.E.
100 North Garfield Avenue, Suite N306
Pasadena, CA 91101
CMonde@cityofpasadena.net

After the 45-day public review period, written responses to all written comments received during the public review period pertaining to environmental issues will be prepared as part of the Final EIR. All responses to comments submitted on this Draft EIR by agencies will also be provided to those agencies at least ten days prior to potential certification of the EIR, consistent with Section 15088(b) of the CEQA Guidelines.

1.5 REFERENCES

California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP). 2024 (December). *Los Angeles County Important Farmland 2020, Sheet 2 of 2*. Sacramento, CA: FMMP. https://filerequest.conservation.ca.gov/RequestFile/2885927.

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———. 2002. *Technical Background Report to the 2002 Safety Element of the City of Pasadena General Plan*. Pasadena, City of. https://ww5.cityofpasadena.net/planning/wp-content/uploads/sites/56/2017/07/General-Plan-Safety-Element-Technical-Background-Report.pdf.

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2.0 ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The Project encompasses a total of approximately 3.6 acres on two sites in the Lower Arroyo Seco that are situated adjacent to the Arroyo Seco Channel (Channel)–the northern, San Rafael site (1.4 acres) in the City of Pasadena (Pasadena); and the southern, San Pascual site (2.2 acres), in the cities of South Pasadena (South Pasadena, 1.7 acres) and Los Angeles (Los Angeles, 0.5 acre) and both sites are with the County of Los Angeles (County). A proposed off-site water harvester and related infrastructure would be installed within the existing, gated, approximately 1,375-square-foot (sf), irregularly-shaped maintenance yard at the Arroyo Seco Golf Course in South Pasadena. Exhibit 2-1, Regional Location and Local Vicinity, and Exhibit 2-2, Aerial Photograph, illustrates the Project site locations and surrounding uses.

The San Rafael site is situated southwest of the San Rafael Avenue overpass of the Arroyo Seco Channel, on the west side of the Channel, and adjacent to Pasadena's southern boundary. In addition to the property within Pasadena, the San Rafael site includes a linear feature that is within the limits of the San Rafael Creek easement under LACFCD jurisdiction. The San Pascual site is situated southeast of the San Pascual Avenue overpass of the Arroyo Seco Channel and on the east side of the Channel. The San Pascual site is bound by San Pascual Avenue on the north and Stoney Drive on the east. Both sites are named for the Channel overpass located nearby.

Local vehicular access is provided via San Rafael Avenue, South Arroyo Boulevard, San Pascual Avenue, and Stoney Drive. The sites are regionally accessible via State Route 134 (SR-134), which is located approximately 1.25 miles north of the San Rafael site; and SR-110, which is located approximately 0.10 mile south of the San Pascual site.

2.2 PROJECT BACKGROUND AND PURPOSE

Water Quality Regulations and Requirements

The Project site is within the Upper Los Angeles River (ULAR) Watershed. The ULAR Watershed encompasses approximately 485 square miles of largely built-out urban land area. Runoff from this watershed ultimately drains to over 50 linear miles of the Los Angeles River and then to the Pacific Ocean. The Arroyo Seco, including its Reaches 1 and 2, is a major tributary to the Los Angeles River. Los Angeles River Reaches 1 and 2 are immediately downstream of the Arroyo Seco's confluence with the Los Angeles River.

On July 9, 2010, the Los Angeles Regional Water Quality Control Board (RWQCB) adopted resolution No. R10-007 incorporating a total maximum daily load (TMDL) for indicator bacteria in the Los Angeles River watershed; and the Basin Plan Amendment became



Regional Location and Local Vicinity

Exhibit 2-1

Arroyo Seco Water Reuse Project

PSOMAS

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Aerial Photograph

Exhibit 2-2

Arroyo Seco Water Reuse Project

N W E S

0 300 600 Feet

PSOMAS

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effective March 23, 2023 (Bacteria TMDL). Establishing a TMDL is required pursuant to the listing of a waterway on the State's 303(d) List, or Impaired Waters List. During the 1998 Water Quality Assessment, several waters in the Los Angeles Watershed were identified on the 303(d) List due to high coliform (i.e., fecal bacteria) count. The identified impaired waters included Arroyo Seco Reaches 1 and 2, and Los Angeles River Reaches 1 and 2 (LARWQCB 2010).

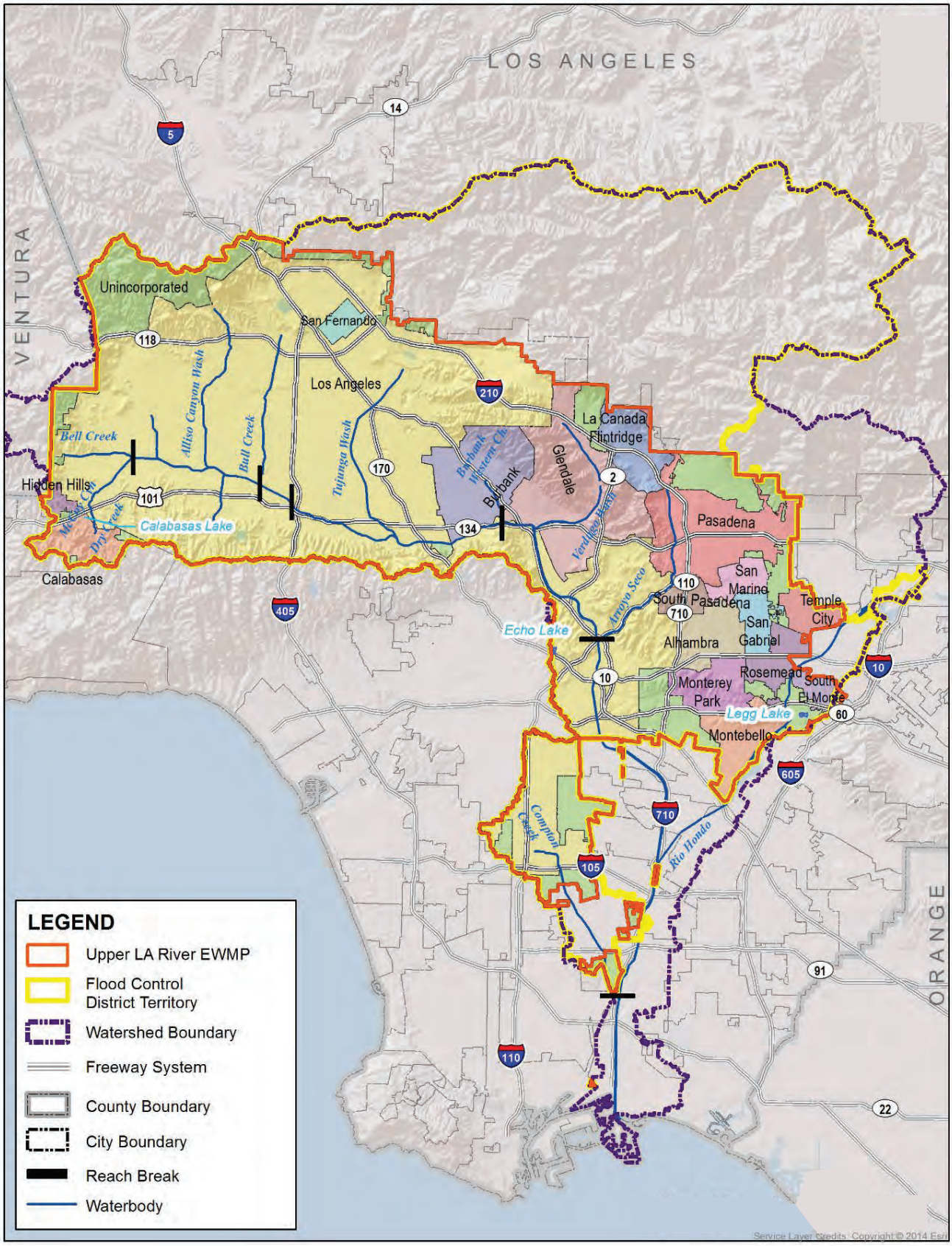
The Municipal Separate Storm Sewer System Permit Order No. R4-2012-0175 (MS4 Permit) for Los Angeles County allows for MS4 Permit compliance to be accomplished through development of Enhanced Watershed Management Programs (EWMP). In December 2012, the requirements of the Bacteria TMDL were incorporated into the MS4 Permit adopted by the Los Angeles RWQCB (ULAR EWMP Group 2016a).

Through a collaborative approach, an EWMP for the ULAR Watershed Management Area, dated January 2016, was developed by the ULAR EWMP Group (ULAR EWMP Group 2016a). EWMPs involve an extensive inventory of stormwater management in each watershed, modeling to establish a baseline understanding of hydrology and water quality dynamics and planning around a Reasonable Assurance Analysis (RAA) to demonstrate that planning will result in adequate receiving water protections to meet the requirements of the MS4 permit including all relevant compliance deadlines (ULAR EWMP Group 2015).

The ULAR EWMP Group is comprised of the following 19 MS4 Permittees: the cities of Los Angeles (lead coordinating agency), Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Cañada Flintridge, Montebello, Monterey Park, Pasadena, Rosemead, San Fernando, San Gabriel, San Marino, South El Monte, South Pasadena, and Temple City; the County of Los Angeles (unincorporated County); and the LACFCD (ULAR EWMP Group 2015). The cities of Pasadena and South Pasadena collectively make up about 46.7 square miles (9.7 percent) of the 485-square-mile ULAR Watershed. Exhibit 2-3, Upper Los Angeles River Watershed and Enhanced Water Management Plan Area, depicts the overlapping geographic boundaries of the ULAR Watershed, LACFCD, and ULAR EWMP Group; and the jurisdictions within the ULAR EWMP Group.

The Arroyo Seco watershed is one of 13 watersheds wholly or partially within the ULAR EWMP area. Of the ULAR EWMP Group agencies, all or a portion of the following seven municipalities drain into the Arroyo Seco: cities of Los Angeles, Glendale, La Canada Flintridge, Pasadena, and South Pasadena; unincorporated County, and LACFCD (ULAR EWMP Group 2016a). Exhibit 2-4, Arroyo Seco Watershed, depicts the Arroyo Seco watershed's boundary, the limits of the EWMP relative to the Arroyo Seco watershed, the jurisdictions associated with the Arroyo Seco watershed, and the general location of outfalls along the Arroyo Seco within the EWMP area.

The EWMP for the ULAR Watershed Management Area utilizes a multi-pollutant approach that maximizes the retention and use of urban runoff as a resource for groundwater recharge and irrigation, while also creating additional benefits for the communities in the ULAR Watershed. State and federal regulations establish compliance timelines to address water quality issues. The Los Angeles River watershed is subject to a Bacteria TMDL, as noted above, that requires compliance by 2037; as well as a TMDL for metals that requires



Source: Upper Los Angeles River Watershed and Enhanced Watershed Management Plan Group 2016

Upper Los Angeles River Watershed and Enhanced Watershed Management Plan Area

Exhibit 2-3

Arroyo Seco Water Reuse Project

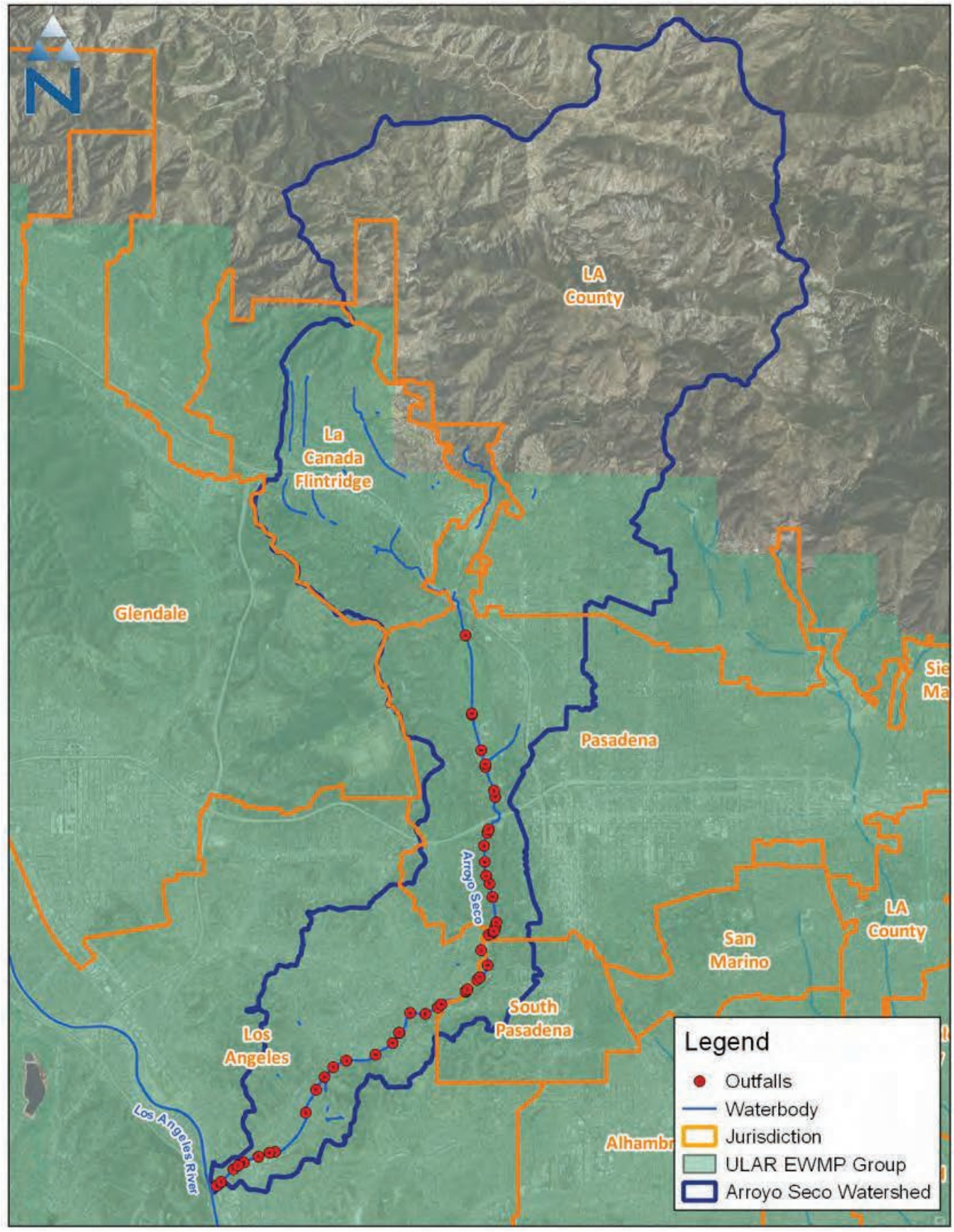
N W E S

Map not to scale

PSOMAS

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Source: Upper Los Angeles River Watershed and Enhanced Watershed Management Plan Group 2016

Arroyo Seco Watershed

Exhibit 2-4

Arroyo Seco Water Reuse Project

Map not to scale

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compliance by 2028. Elevated bacteria concentrations can pose a potential health risk to people that recreate in the watershed (e.g., swimming, fishing); high levels of metals can negatively impact aquatic life (e.g., fish) in the rivers, creeks, and estuary. A key element of each EWMP is the RAA, mentioned above, that is used to quantitatively demonstrate that the implementation strategy will address the water quality priorities and uses a modeling process to identify potential control measures.

For the ULAR EWMP, the RAA was developed based on complying with the applicable criteria for "limiting pollutants" during 90th percentile storm conditions. Limiting pollutants are the pollutants that drive best management practice (BMP) capacity (i.e., control measures that address the limiting pollutant will also address other pollutants). The RAA for ULAR first identifies the control measures to attain zinc limits (during the zinc critical condition) and then identifies additional capacity, if any, needed to achieve Escherichia coli (E. coli) limits (ULAR EWMP Group 2016a).

The MS4 Permittees have the option to develop a Coordinated Integrated Monitoring Program (CIMP) to specify approaches for meeting the Permit's Monitoring and Reporting Program (MRP) objectives; and ULAR elected to prepare a CIMP. The primary purpose of the ULAR CIMP is to outline the process for collecting data to meet the goals and requirements of the MRP; the ULAR CIMP is designed to provide the information necessary to guide water quality program management decisions. The Final CIMP, dated August 2015, provides a discussion of the monitoring locations, constituents, monitoring frequency, and general monitoring approach; and meets the requirements of the MS4 Permit and all associated TMDL monitoring requirements (ULAR EWMP Group 2015b).

Based on testing done prior to and as part of the CIMP, the ULAR Group adopted a Load Reduction Strategy (LRS) to achieve compliant TMDL waste load allocations (WLAs) for each watershed. The schedule for developing and implementing LRSs was phased across the Los Angeles River watershed. For the Arroyo Seco watershed, the schedule requires achievement of the identified WLAs by September 2023. However, because the ULAR EWMP Group elected to use an LRS approach, it qualifies for a second phase of Bacteria TMDL implementation in the Arroyo Seco watershed that would allow achievement of the bacteria WLA by March 2030 (ULAR EWMP Group 2016b).

The Arroyo Seco LRS, dated March 2016, was developed using the outfall-based approach outlined in the Bacteria TMDL, which emphasizes reductions of bacteria loading from storm drain outfalls. The outfalls to be addressed were based on quantitative analysis (i.e., modeling). The Arroyo Seco LRS identifies implementation actions for two categories of outfalls: (1) priority outfalls, which have relatively consistent problematic discharges that drive the total contaminant loading; and (2) outlier outfalls, which have episodic high-loading rate discharges. The Arroyo Seco LRS modeled a total of 50 outfalls and identified a total of 4 priority outfalls in the Arroyo Seco (ULAR EWMP Group 2016b).

One of these is outfall AS-41, which is the San Rafael Creek outfall into the Arroyo Seco Channel. San Rafael Creek runs approximately one-half mile from the outlet of Johnston Lake within a largely earthen-bottom canyon that parallels Laguna Road to the upstream end of the approximately 190-foot-long concrete-lined channel (BI0562-Line F). The naturalized

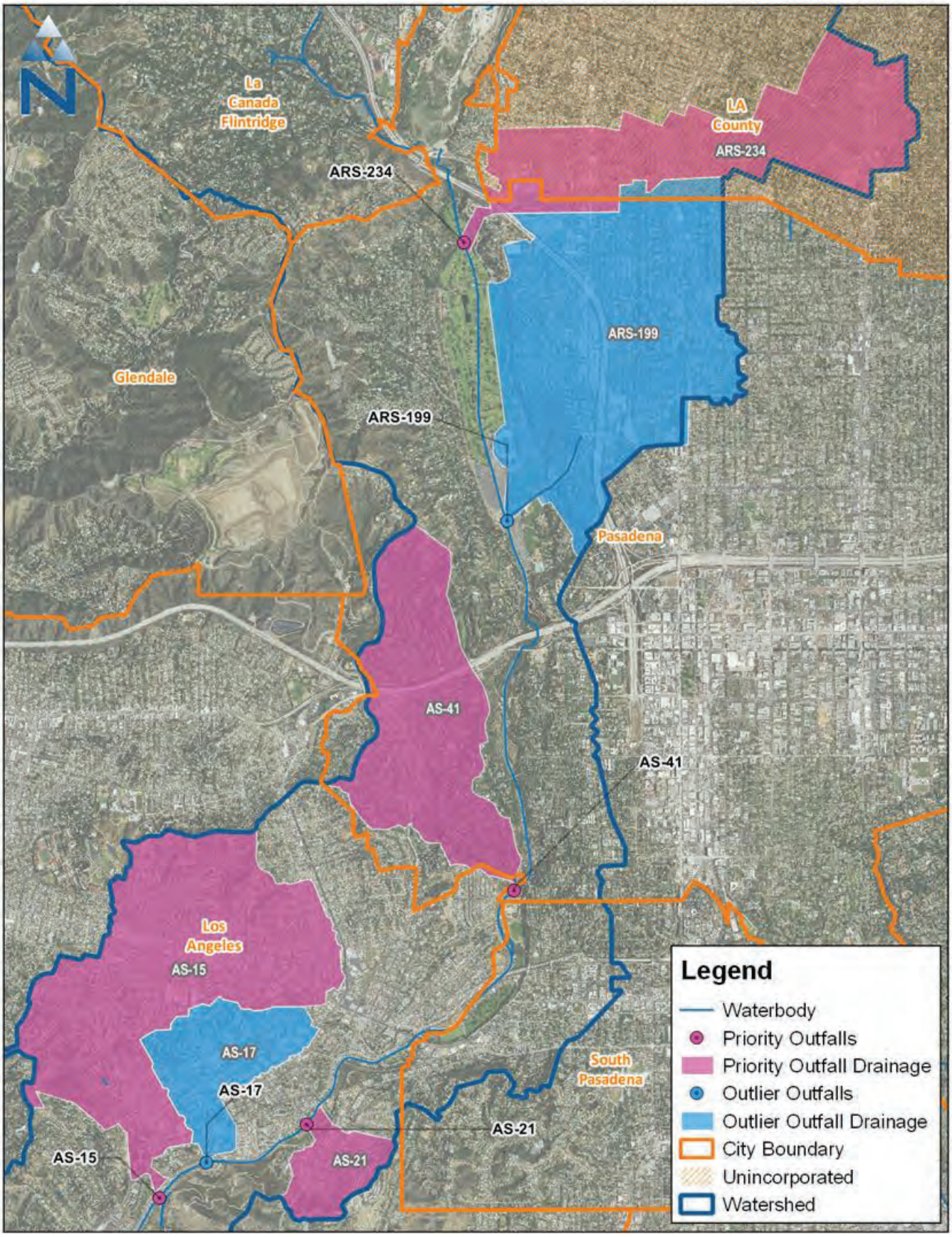
portion of San Rafael Creek is entirely on private lands and the concrete-lined portion is owned by LACFCD and operates as a regional storm drain that discharges into the Arroyo Seco Channel via outfall AS-41. The proposed LRS action for AS-41 is to remove 100 percent of the dry weather flows from discharging directly into the Arroyo Seco Channel. Almost the entire approximately 697-acre AS-41 drainage area (99 percent) is within Pasadena; therefore, the implementation actions to address AS-41 was mandated by the Los Angeles RWQCB to be led by the City of Pasadena (ULAR EWMP Group 2016b). Exhibit 2-5, Arroyo Seco Outfall Drainage Areas, depicts the drainage areas of the priority and outlier outfalls in the Arroyo Seco watershed. Exhibit 2-6, San Rafael and San Pascual Drainage Areas, depicts the total drainage area for the Project and associated jurisdictions.

It is noted that at the same time various jurisdictions within the ULAR EWMP Group are working to meet water quality targets on the required timeline, the Group is pursuing development of an LRS Adaptation Plan. This would be based on data-driven scientific study to improve the LRS and better protect public health and support recreational beneficial use goals related to bacteria. The core elements of the Adaptation Plan will include:

1) Incorporation of existing data gathered through the LRS and other related programs to reprioritize areas of concern to focus implementation actions;
2) Identification of data gaps and additional monitoring needs, including monitoring locations and parameters, such as additional analyses for human markers and specific source identification monitoring; and
3) Within areas of concern, identification of the most effective abatement efforts, focused on source control and feasible/effective locations for structural BMPs and dry weather controls designed to provide multiple benefits.

Recent studies and knowledge gained have shown this requires a focus on human sources; therefore, adaptation of the LRS will focus on prioritizing actions to identify and abate sources of human waste for a more effective implementation plan. The comprehensive screening and targeting of human waste control strategies are expected to result in significant long-term pathogen reduction benefits during both dry and wet weather. The LRS Adaptation Plan will integrate with other ongoing efforts and studies in the ULAR region. The LRS Adaptation Plan will better align implementation actions in order to successfully reduce potential health risks to recreators. The keys benefits are a targeted approach to decrease health risks due to bacteria-related issues in the watershed, which therefore improves water quality conditions for recreators. The ULAR Group, and the Los Angeles region overall, has faced challenges addressing bacteria-related issues (SGCOG 2019). The Project would focus on dry and wet weather structural controls and is designed to provide multiple benefits.

The timeline from establishing a TMDL (here July 2010 for bacteria), conducting the subsequent scientific studies, and implementing appropriate solutions is always extended, sometimes on the order of decades. The identification of AS-41 as a priority outfall and determination of the LRS action was published in 2016. Barring preparation of additional California Environmental Quality Act documentation, the Project would currently be in construction, representing a relatively fast process.



Source: Upper Los Angeles River Watershed and Enhanced Watershed Management Plan Group 2016

Arroyo Seco Outfall Drainage Areas

Exhibit 2-5

Arroyo Seco Water Reuse Project

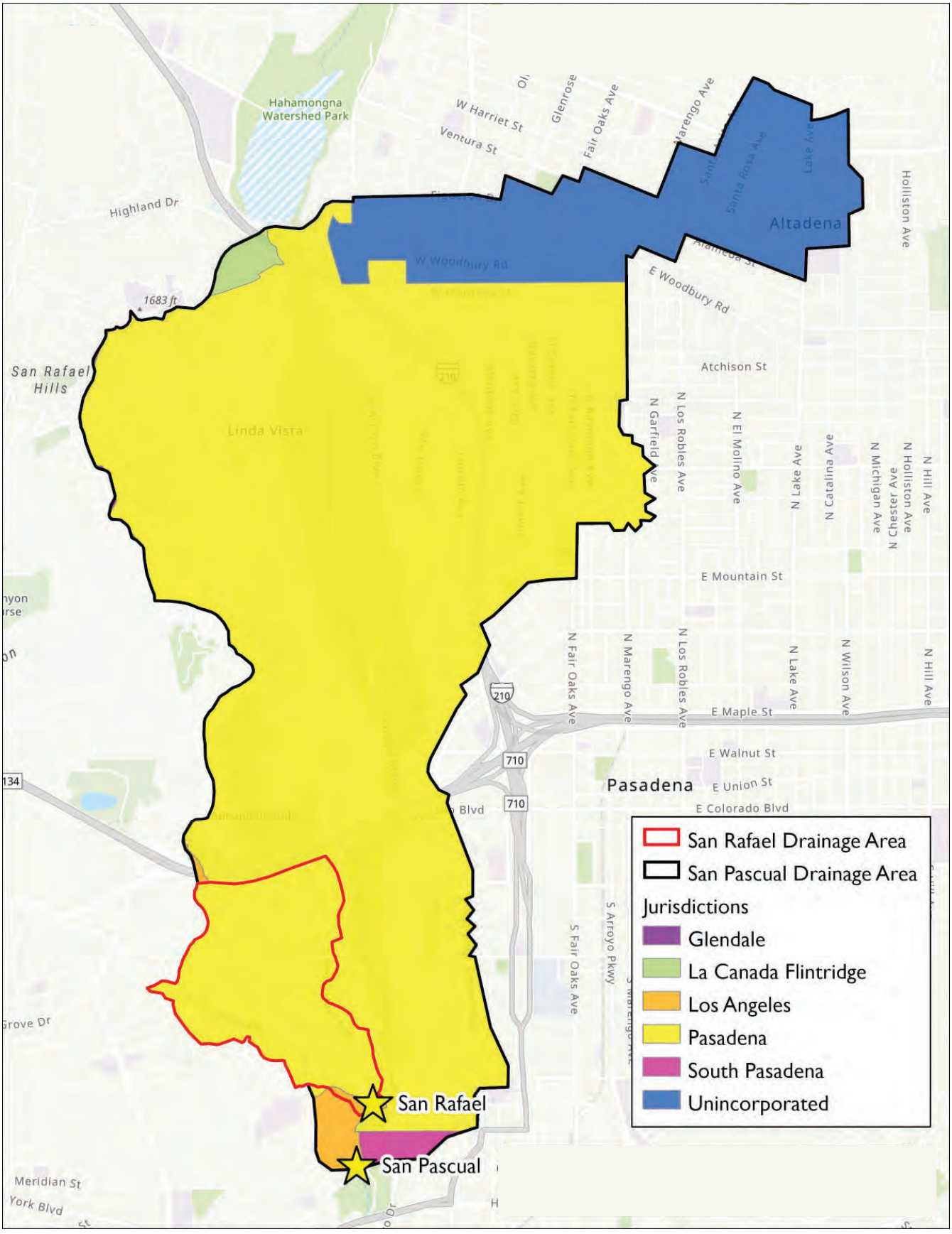
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Source: ULAR Watershed Management Group, City of Pasadena, City of South Pasadena 2022

San Rafael and San Pascual Drainage Areas

Exhibit 2-6

Arroyo Seco Water Reuse Project

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Map not to scale

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The data, including water quality monitoring, used in the CIMP, EWMP, and Arroyo Seco LRS remains valid as all actions necessary to achieve the bacteria TMDL upstream of the San Rafael site have not been implemented. Also, the balance of land uses in the Arroyo Seco Watershed have not substantively changed since the EWMP and Arroyo Seco LRS were published. There is no valid reason to update the water quality monitoring data in the CIMP or Arroyo Seco LRS, nor is the review of AS-41 being designated a priority outfall necessary.

Funding

Under the Bacteria TMDL, addressing the San Rafael Creek outfall (AS-41) became an unfunded State mandate for Pasadena. Pasadena conducted source investigations, video-monitored several storm drains for illicit connections, and performed water quality monitoring and soil percolation tests. The Project would be funded from several different sources, described below.

A grant opportunity became available from Proposition (Prop) 68 (California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access for All) of 2018 funds through the Urban Counties Per Capita Program. Senator Portantino's office become involved in the budget process, as a local project was desired. In the 2019-2020 California State Budget (June 2019), a total of $3.5 million was set aside for a joint project for use in the Arroyo Seco. Pasadena and South Pasadena partnered to pursue a dual-part project between the cities that would better enable achieving compliance with the Los Angeles River TMDLs for both bacteria and metals (zinc). Pasadena and South Pasadena entered into a Memorandum of Understanding (MOU) in October 2020 that defines each city's roles and responsibilities in carrying out the Project, from design to long-term operation.

In 2018, Los Angeles County voters approved Measure W, a special parcel tax funding the Safe, Clean Water Program. This program provides local, dedicated funding to increase local water supply, improve water quality, and protect public health. The cities of Pasadena and South Pasadena jointly developed a scope to submit to the County of Los Angeles to apply for funding from the Safe, Clean Water Program. In September 2021, the Safe, Clean Water Program awarded the Project approximately $4.8 million regional (competitive) funds towards the design and construction phases. Further, the City applied for additional construction funds through the Safe, Clean Water Program's Project Modification Request process. The application was approved, and Pasadena secured an additional $4.5 million in funding for a total of $9.3 million in regional (competitive) funds. Consistent with Safe, Clean Water Program requirements, the Project would provide the following community benefits, in addition to meeting the State-mandated water quality standards: enhanced habitat and park space, improved flood protection, improved waterway access, recreational opportunities, reduced heat island effects, and increased shade and trees. The Project has also been granted $420,000 in local Measure W funds. Finally, South Pasadena and Pasadena would contribute directly toward the Project.

Early Development of Project

In Fall 2019, a site reconnaissance tour was held with attendees from Pasadena, South Pasadena, Arroyo Seco Foundation, and consultants Stillwater Sciences and TRC Companies, to discuss a variety of possible Project elements at both the San Rafael and San Pascual sites. At the time of the 2019 site tour, preliminary concepts for both sites had been considered but site-specific, quantitative modeling of any potential concepts consistent with the LRS had not been performed. Throughout Project development, both sites' construction, maintenance, and public use access; jurisdiction(s); easement(s); existing conditions; feasibility to achieve the TMDL based on current scientific practice; and attainment of grant funding objectives and timelines were considered.

Consideration of different elements as well as pursuit of additional funding continued, although the COVID pandemic limited options for in-person collaboration and on-site activity necessary for a project of this complexity and diverted staff resources in the affected cities. In this time, a feasibility study was prepared and a conceptual design developed providing the basic design components. It is noted that in the preliminary concept, the San Rafael site was located entirely on the east side of San Rafael Creek and included partial removal of concrete to create a gravity-fed soft-bottom drainage as part of the initial runoff diversion.

During preparation of more detailed engineering design on the San Rafael site, it became apparent that the size of the area east of the Creek would not be large enough without encroaching onto private property. Eventually it was determined to move most of the San Rafael facilities to the west side of the Creek. However, this eliminated the stream component paralleling a portion of San Rafael Creek due to engineering constraints, including but not limited to topography on the west side and related space constraints and to also provide safe public access over the Creek. Instead, a rock-lined stream downstream of the diversion point and adjacent to and west of the Creek is proposed.

2.3 PROJECT SETTING AND CHARACTERISTICS

Both sites are comprised of vacant, open space lands primarily within the cities of Pasadena and South Pasadena, respectively, with a small portion of the San Pascual site within Los Angeles. Both sites are immediately adjacent to the concrete Arroyo Seco Channel that is under the jurisdiction of the Los Angeles County Flood Control District (LACFCD). The open space areas were created during the channelization of the Arroyo Seco in the 1930s. The two sites are approximately 850 feet (0.16 mile) apart at the closest points.

The sites are located on public, open space land, which is open daily from sunrise to sunset. The Project areas are fully accessible to the public via public and private transportation routes, and/or by various trails for pedestrians, bicyclists, and equestrians.

Land uses surrounding the San Rafael site include the soft-bottom portion of San Rafael Creek and an undeveloped slope with single-family residential on the hilltop to the north (Los Angeles zoning of R1-1 [One-Family Zone]) at an elevation of approximately 40 feet

above the site; the Arroyo Seco Channel, Arroyo Seco open space, and San Pascual Avenue to the east; San Pascual Stables located at 221 San Pascual Avenue, South Pasadena, to the south and southeast across the Arroyo Seco Channel; and undeveloped slopes and single-family residential (Los Angeles zoning of R1-1) on the hilltop to the west at elevations 160 to 200 feet above the San Rafael site. The nearest sensitive receptors to the San Rafael site are the residences on the hilltop to the north near the South San Rafael Avenue and Laguna Road intersection.

Land uses surrounding the San Pascual site include San Pascual Avenue and single-family residential (Los Angeles zoning of R1-1) on San Ramon Drive to the north; the Burke, Clarich, Nelson Fields (649 Stoney Drive, South Pasadena) and Arroyo Park (614 Stoney Drive, South Pasadena) beyond Stoney Drive to the east; Stoney Drive and the Arroyo Seco Channel to the south; and San Pascual Park (930 San Pascual Avenue, Los Angeles) across the Arroyo Seco Channel to the west; and single-family residential (Los Angeles zoning of R1-1) on North Avenue 67 to the northwest. The nearest sensitive receptors to the San Pascual site are the residences located across San Pascual Avenue approximately 60 ft to the north at the nearest points and approximately 120 ft to the northwest at the nearest points.

Land uses surrounding the water harvester site include the Arroyo Seco Golf Course to the north, east, and west; and Lohman Lane and the Arroyo Seco Channel to the west.

2.4 PROJECT DESCRIPTION

2.4.1 PROJECT CONCEPT

The Project includes use of man-made treatment wetlands as a major feature of both BMPs. Treatment wetlands are constructed ecosystems that remove pollutants by mimicking natural processes to slow, detain, capture, and absorb and infiltrate water in a manner that protects, enhances, and/or restores habitat, green space, and usable open space. The San Rafael and San Pascual sites would each have diversion structures with maximum diversion rates of 10 and 15 cubic feet per second (cfs), respectively, for a total Project diversion rate of 25 cfs. Diversion structures generally apply to 'off-line' regional projects where stormwater is diverted from a major water conveyance and directed to that project at a predetermined maximum rate.

Other components of the BMPs include post-treatment filtration systems, infiltration basins, inlets, outlets, drains, new or restored trails, new pedestrian bridge/cap (over San Rafael Creek), native landscaping, and hardscape elements including reclaimed wood log benches, post-and-rail fencing, concrete seat walls, and informational signs. Existing paths along the edge of the Channel would be rehabilitated and expanded as needed to provide vehicular access to the diversion structures for operation and maintenance activities, and additional trails would be established at both sites. The Project would also create a watershed education opportunity regarding its contributions towards protecting the water quality in the Arroyo Seco. An estimated two to three informational signs, total for both sites, would be installed in and around the new treatment wetlands and improved trails to provide park user education.

According to the United Nations Environmental Assembly, nature-based solutions (NbS) are "actions aimed at protecting, conserving, restoring, and sustainably managing natural or modified terrestrial, freshwater, coastal, and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits". They play a crucial role in achieving sustainable development by enhancing biodiversity, improving water quality, reducing pollution, combating desertification, and restoring degraded land and soil (UN Environment Programme 2024).

Section 502 of the Clean Water Act defines green infrastructure as "...the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspirate stormwater and reduce flows to sewer systems or to surface waters". According to the USEPA, green infrastructure uses filtration, infiltration, and evapotranspiration to treat and soak up rainwater where it falls. It can deliver multiple environmental, social, and economic benefits beyond stormwater management alone. Terms such as nature-based solutions, green stormwater infrastructure, and low-impact development are also used to describe green infrastructure installations, and there is overlap between these concepts (USEPA 2025).

When green infrastructure systems are thoughtfully designed to fit the site-specific, local, or regional needs of the community and environment, they can provide cleaner air and water, protect against flooding and excessive heat exposure, provide diverse habitat, and create beautiful green spaces for all to enjoy. In line with these green infrastructure systems, the proposed Project would provide water quality benefits for multiple jurisdictions within the 5,005-acre drainage area in which the two sites are located. For both sites, the Project would include native landscaping; hardscape elements including reclaimed wood log benches, post-and-rail fencing, and concrete seat walls faced with natural stone; informational signs as a watershed education opportunity; and expand the existing trail network to enhance regional trail connectivity through the Lower Arroyo Seco. More specifically, the Project will include: a net increase in native trees of local origin; over 1,100 native plants and shrubs planted at San Rafael site; and over 2,100 native plants and shrubs planted at San Pascual site.

Additionally, constructed wetlands, a feature of the Project, are considered an NbS by the USEPA, which indicates that "*the term 'nature-based' solutions describe actions that protect, conserve, restore and sustainably manage natural or modified ecosystems. They use natural features or processes to address public health and environmental challenges while providing multiple benefits to people and nature. USEPA also explicitly notes that water reuse projects may incorporate nature-based solutions, such as* ***treatment wetlands***."

Furthermore, the USEPA's position on constructed wetlands and identifying them as NbS are rationalized and explained in the following:

- **Using Natural Features and Processes:** Constructed wetlands use natural features and processes (plants, soils, microbes) to improve water quality, provide habitat, and manage water sustainably.

- **Mimicking Natural Systems**: A constructed wetland is designed to replicate the functions of natural wetlands - slowing water, filtering pollutants, recharging groundwater, and supporting biodiversity. Pipes may convey water into or out of the wetland, but the treatment and benefits occur through natural processes.
- **Multiple Benefits Beyond Treatment**: Unlike buried infrastructure, wetlands provide visible and accessible green space, wildlife habitat, pollinator support, shaded areas, and community educational opportunities. They add value beyond water quality compliance.
- **Climate Resilience**: Wetlands buffer against floods, retain water during dry periods, and help cities meet climate adaptation and water resiliency goals. Pipes alone cannot provide these co-benefits.
- **Community Amenity**: Constructed wetlands are landscape features, not hidden facilities. They can be integrated with trails, interpretive signage, and outdoor classrooms, offering cultural, recreational, and educational value.
- **Regulatory Alignment**: Under the Clean Water Act (40 CFR 120.2(b)(1)), constructed wetlands are recognized as 'waste treatment systems', but when designed for stormwater capture and reuse, they align with USEPA's green infrastructure and NbS policies.

It is noted that in light of above discussion and given the benefits introduced, the Project is considered a green infrastructure system that promotes NbS.

While both the San Rafael and San Pascual sites are separate, they are similar in concept and have been designed to be hydrologically connected. Dry weather runoff and stormwater in San Rafael Creek would be diverted into the San Rafael site and, depending on flows, be discharged into the Arroyo Seco Channel. This water would flow downstream in the Arroyo Seco Channel and be diverted into the San Pascual site. After exiting the San Pascual BMP, the treated water would flow downstream in the Channel. The irrigation water for the Golf Course is supplied via a pipe from the second infiltration basin that connects to an actuated valve, then to a flow meter, and next to the existing outlet pipe within the San Pascual site to the Golf Course. There is separate piping that connects to the levee in overflow conditions to return the water back to the Channel.

South Pasadena has had existing infrastructure (including a concrete dike in the Channel) and has diverted dry weather flows[1] from the Arroyo Seco for irrigation of the golf course for many decades. Although the man-made wetlands created by the diversion are non-functioning, the diversion still provides water for irrigating the Golf Course. The harvested water is stored and reused for irrigation of the Golf Course. The Project would retain the historic use of dry weather flow for irrigation at the Golf Course. It should be noted that the amount of water supplied to the Golf Course for irrigation will remain the same pre- and post-construction. This would reduce reliance on potable water for Golf Course irrigation by South Pasadena.

[1] Dry-weather flows are defined as any flows that occur in a period which is at least 24 hours since the last rainfall occurrence.

The proposed Arroyo Seco Water Reuse Project would develop two regional stormwater capture and treatment facilities (man-made treatment wetlands and infiltration basins) located within existing, underutilized, public open space areas along the Arroyo Seco Channel. Additionally, as part of the Project, an off-site water harvester and related infrastructure would be installed within the existing, gated maintenance yard at the public Arroyo Seco Golf Course in South Pasadena.

To reiterate, the proposed Project with actions and solutions that are nature-based would provide water quality benefits, among others, for multiple jurisdictions within the 5,005-acre drainage area in which the two sites are located.

2.4.2 PROJECT GOALS AND REQUIREMENTS

The combined performance of the two facilities (BMPs) must meet the performance metrics established for the Project in the Safe, Clean Water Program transfer agreement, summarized in Table 2-1, Safe, Clean Water Program Goals and Targets for the Project.

TABLE 2-1
SAFE, CLEAN WATER PROGRAM GOALS AND TARGETS FOR THE PROJECT

Goal	Summary	Target	
1. Improve water quality and attainment of water quality requirements.	The stormwater capture and treatment facility would provide water quality improvements to address water quality requirements described in the Upper Los Angeles River Enhanced Watershed Management Program.	Runoff Treated (average annual)	27 af
2. Increase drought preparedness by capturing more stormwater and/or urban runoff to store, clean, reuse, and/or recharge groundwater basins.	The facility would capture and treat urban runoff and stormwater runoff from the San Rafael Creek and Arroyo Seco Channel.	Zinc Reduction	65%
5. Invest in infrastructure that provides multiple benefits.	This project is a multi-benefit project that improves water quality, provides water supply, and integrates native habitat.	N/A	N/A
6. Prioritize nature-based solutions.	Landscape plans will include additional native trees, shrubs, and grasses to be installed at select spots impacted by the construction throughout the Project sites. The swales will be sized to convey all the flows from the surface drainage.	Landscape Plans	1 each
7. Provide a spectrum of project sizes from neighborhood to regional scales.	The Project would construct a regional stormwater capture facility.	Design Plans	1 each

af: acre-feet; N/A not applicable
Source: Craftwater Engineering, Inc. 2023 (January 10). *Hydrology and Hydraulics Report, San Rafael Treatment Basin Stormwater Capture Project*. Los Angeles, CA: Craftwater Engineering, Inc.

The Project has been designed to address zinc concentrations as the primary pollutant and copper concentrations as the secondary pollutant, and thereby meet the State-mandated (i.e., TMDL) water quality requirements for both bacteria and metals, as zinc is a limiting pollutant for bacteria. The Project would capture and treat 100 percent of the dry-weather flows in accordance with the LRS and Bacteria TMDL. The Project would additionally provide habitat, water conservation, and recreation benefits, while meeting timing and budget constraints. Table 2, Comparison Between Modeled Project Performance and Targeted Performance, summarizes the individual and combined performance to the target metrics in the Safe, Clean Water Program transfer agreement.

TABLE 2-2
COMPARISON BETWEEN MODELED PROJECT PERFORMANCE AND TARGETED PERFORMANCE

Metric	San Rafael	San Pascual	Project Total	SCWP Target
Average Annual Runoff Volume Treated (af)	38.8	534	**572.8**	***27.0***
Average Annual Zinc Load Reduction Compared to Divertible Load	81%	74%	**80%**	***65%***
Average Annual Water Capture for Water Supply (af)	N/A	320	**320**	***100***

af: acre-feet; N/A not applicable; SCWP: Safe, Clean Water Program
Source: Craftwater Engineering, Inc. 2023 (January 10). *Hydrology and Hydraulics Report, San Rafael Treatment Basin Stormwater Capture Project*. Los Angeles, CA: Craftwater Engineering, Inc.

As shown in Table 2-2, the expected performance of the combined San Rafael and San Pascual BMPs meets and exceeds the Safe, Clean Water Program targets.

2.4.3 TREE REMOVALS

The Project was designed to maximize avoidance of trees, particularly native and/or protected species (including native shrubs protected by the South Pasadena Tree Ordinance). The trees protected under each jurisdictions' tree ordinance within the Project site boundaries were surveyed by a Certified Arborist. Additionally, the California Department of Fish and Wildlife (CDFW) asserts jurisdiction over native trees that are within the bed and bank of a streambed or partially overhang a streambed. CDFW jurisdiction can overlap with the other jurisdictions. Trees with CDFW jurisdiction is discussed further in Section 2.4, Biological Resources, related to impacts to jurisdictional features under the Clean Water Act.

Some protected trees can include non-native species and some trees are present on the sites that are not protected due to species, size, or other qualification consistent with the applicable ordinance. The Project engineer and arborist coordinated closely to define the disturbance footprint at each site to reduce tree impacts to the maximum extent feasible. A

total of 201 trees or shrubs (shrubs of a scale or trunk size, dependent on species, that are considered trees) (hereinafter collectively referred to solely as trees) were surveyed within the San Rafael and San Pascual sites as being under the jurisdiction of either Pasadena, South Pasadena, or Los Angeles. Of these, a total of 136 trees, including 29 protected trees and 14 significant trees (i.e., subject to respective city tree ordinances), would be removed or would experience encroachment. Tree encroachment is assumed to result in a tree loss and is therefore considered as an impact for purposes of this EIR. However, in reality, encroachment may or may not result in a tree loss or other negative outcomes. Most of the affected trees are located at the San Pascual site, which has existing dense vegetation. The remaining 65 trees would be protected in place during construction. Table 2-3, Summary of Trees, provides the number of existing trees, total proposed tree removals, total protected tree removals, and required tree replacements broken down by each city within the Project site but not including trees under CDFW jurisdiction.

TABLE 2-3
SUMMARY OF TREES

Jurisdiction	Existing Trees within Site	Total Tree Removals	Protected Tree Removals	Required Tree Replacements	Proposed Tree Replacements
San Rafael Site					
Pasadena	28	6	6	26*	61
Los Angeles	16	0	0	0	0
San Rafael Subtotals	*44*	*6*	*6*	*26*	*61*
San Pascual Site					
South Pasadena	135	119	31**	0***	107
Los Angeles	22	11	6	24	48
San Pascual Subtotals	*157*	*130*	*37*	*24*	*155*
Project Totals	***201***	***136***	***43***	***50***	***216***

Note: Removals include encroachments.
*Replacement quantity based on installation of 24-inch box trees.
**Includes 17 protected trees and 14 significant trees.
***South Pasadena is exempt from the tree replacement requirements of its Tree Ordinance.

Based on application of each city's tree ordinance, the Project is expected to require a total of 50 replacement trees in various sizes ranging from 15-gallon to 36-inch boxes. Additionally, based on anticipated removal of 3 trees under CDFW jurisdiction that do not overlap removals identified for the cities (i.e., would only be regulated by CDFW) an additional 9 replacement trees are expected to be required as part of Clean Water Act permitting, specifically the Streambed Alteration Agreement. This results in an estimated required tree replacement total of 59 trees.

As shown in Table 2-3, there were total of 201 existing trees surveyed within the Project sites. The Project's landscape concept proposes to plant a total of 216 native trees as well as native shrubs and groundcovers as part of landscaping activities. This would result in an estimated net total of 282 trees, including the existing trees to be protected in place, on the San Rafael and San Pascual sites, in addition to new native understory (i.e., shrubs and groundcover) plantings. No trees or other vegetation would be removed or trimmed as part

of water harvester installation. These figures are estimated and would be finalized as part of permitting processes with the affected agencies. However, all required tree replacements to fully meet each agency's requirements would be planted and would be located within the San Rafael and San Pascual sites. Also, it is noted that there were three fires in the last two years at the San Pascual site. The burned trees were of a variety of species. The tree survey was updated in October 2025 to reflect the changes due to the fires.

2.4.4 SAN RAFAEL SITE

The San Rafael and San Pascual sites would each have a diversion structure with maximum diversion rates of 10 cubic feet per second (cfs) and 15 cfs, respectively, for a total of 25 cfs.

The San Rafael site BMP would consist of the following components, which are discussed further below:

- 16-foot-wide cap/bridge over San Rafael Creek;
- Diversion structure at San Rafael Creek;
- Rock-lined stream;
- A 0.25-acre man-made treatment wetland;
- Pipeline(s), meter(s), valve(s), filter(s), and manhole(s); and
- Landscape and hardscape elements, including new trees and other vegetation, trail expansions, and informational signage.

The San Rafael site is situated adjacent to the confluence of AS-41 and the Arroyo Seco Channel. The San Rafael BMP would divert dry weather flows and stormwater from LACFCD's BI0562-Line F reinforced concrete storm drain (San Rafael Creek) into the proposed facilities for treatment before the portion not infiltrated is discharged into the Arroyo Seco Channel. The San Rafael Creek design flow provided by LACFCD is 1,560 cfs. Exhibit 2-7, Bird's Eye View of San Rafael Concept Plan; and Exhibit 2-8, San Rafael Site Plan; provide different views and levels of detail of the proposed BMP at the San Rafael site. Exhibit 2-9, San Rafael Demolition Plan, shows details of existing demolition and grubbing within the site as well as existing features to be protected in place; Exhibit 2-10a and b, San Rafael Grading Plan, shows the limit of grading and the existing and proposed elevations with the Project.

The Project was designed to maximize avoidance of trees, particularly native and/or protected species. As discussed further in "Construction Scenario" below, additional staging and laydown areas are defined beyond the Project footprint; however, these areas were limited to areas without trees. As shown in Table 2-3, a total of 44 trees were surveyed within the disturbance footprint of the San Rafael site, which are within the City of Pasadena and the City of Los Angeles. Implementation of the San Rafael BMP would involve removal of 6 protected trees–all blue elderberry (*Sambucus nigra* ssp. *caerulea*), a native species–and the remaining 38 trees would be protected in place during construction and have been integrated into the site design. The Project's landscape concept proposes planting 61 native trees as well as native shrubs and groundcovers at the San Rafael site. Exhibit 2-11a





Source: MIG, Inc 2023

Bird's Eye View of San Rafael Site Concept Plan

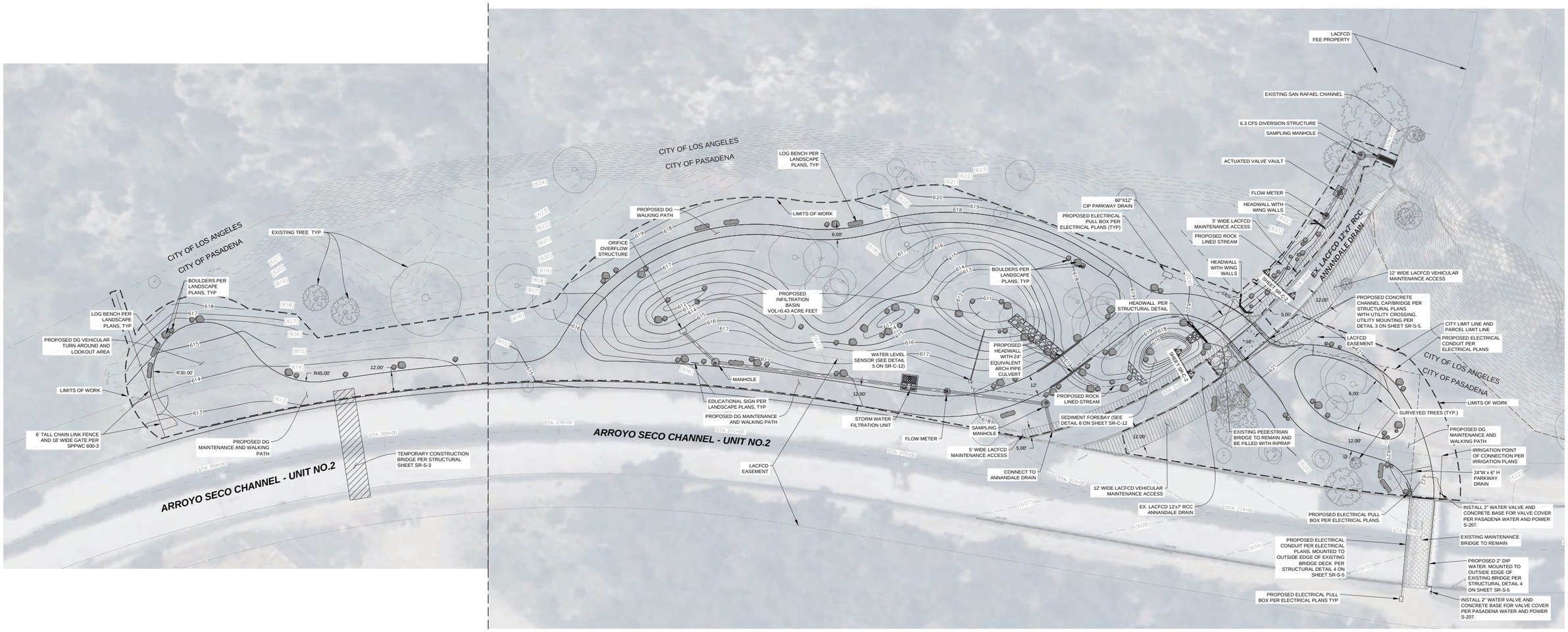
Exhibit 2-7

Arroyo Seco Water Reuse Project

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Source: Craftwater Engineering, Inc 2024

San Rafael Site Plan

Exhibit 2-8

Arroyo Seco Water Reuse Project

Map not to scale

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CONSTRUCTION NOTES:

XX REMOVE

XX REMOVE AND REPLACE PER PLANS

XX EXISTING - PROTECT IN PLACE

1. TREE/SHRUB (SEE NOTES 3,4)
2. CHAINLINK FENCE (SEE NOTE 9)
3. HEADWALL
4. SITE PROTECTION AREA
5. VEGETATED AREA
6. PEDESTRIAN BRIDGE
7. MAINTENANCE ACCESS BRIDGE
8. EQUESTRIAN PATH (SEE NOTE 6)
9. ARROYO SECO CHANNEL

LEGEND:

VEGETATED AREA TO BE CLEARED AND GRUBBED.

LIMIT OF WORK

RIGHT OF WAY (R/W) / PROPERTY LINE

EQUESTRIAN PATH

DEMOLITION NOTES:

1. LOCATION OF EXISTING UTILITIES IS APPROXIMATE AND BASED ON RECORD DRAWINGS. ACTUAL CONDITIONS MAY VARY. CONTRACTOR SHALL FIELD VERIFY. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION, REMOVAL AND/OR REPLACEMENT OF EXISTING UTILITIES SHOWN ON THE PLANS AND AS-BUILTS.
2. EXISTING UNDERGROUND UTILITIES MUST BE PROTECTED IN PLACE UNLESS OTHERWISE SPECIFIED PER PLAN.
3. ALL TREE PROTECTION/REMOVAL SHALL BE PER THE TREE REMOVAL PLAN. SEE SHEET SR-L-1 TO SR-L-4.
4. TREES TO BE REMOVED SHALL BE TAGGED BY CONTRACTOR PRIOR TO DEMOLITION. CONTRACTOR SHALL REMOVE TREES AFTER APPROVAL FROM THE CITY. NEW TREES SHALL BE INSTALLED PER THE LANDSCAPE PLANTING PLANS.
5. CONTRACTOR TO FIELD VERIFY UTILITY LINES.
6. CONTRACTOR TO ENSURE EQUESTRIAN PATH (INDICATED ON PLANS) REMAINS USABLE THROUGHOUT CONSTRUCTION DURATION TO THE MAXIMUM EXTENT TECHNICALLY FEASIBLE. CONTRACTOR TO MAKE ACCOMMODATIONS TO CONTROL ACCESS TO AND ALLOW SAFE TRAVEL THROUGH THE SITE SPECIFICALLY FOR EQUESTRIAN TRAVEL.
7. THE DEMOLITION SHOWN ON THE PLANS IS NOT ALL INCLUSIVE OF EVERYTHING NEEDED TO PROPERLY INSTALL THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL REVIEW AS-BUILTS AND PERFORM AN INVESTIGATION OF EXISTING CONDITIONS TO INCLUDE ALL DEMOLITION REQUIRED IN THE BID.
8. THE CONTRACTOR SHALL RESTORE ANY DAMAGED ITEMS DURING CONSTRUCTION TO ORGINAL CONDITION AT NO ADDITIONAL COST TO THE CITY.
9. REMOVE EXISTING CHAIN LINK FENCE AS NEEDED FOR CONSTRUCTION OF NEW BRIDGE REFER TO DETAIL 3 ON SHEET SR-S-2.

Source: Craftwater Engineering, Inc 2024

San Rafael Demolition Plan

Exhibit 2-9

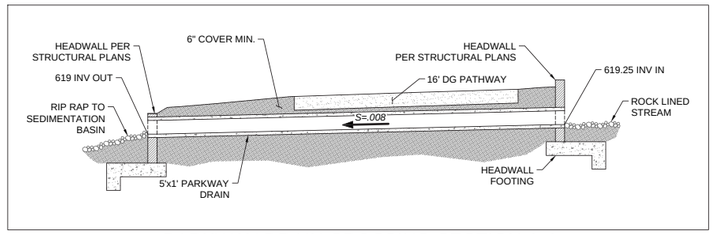
Arroyo Seco Water Reuse Project

Map not to scale

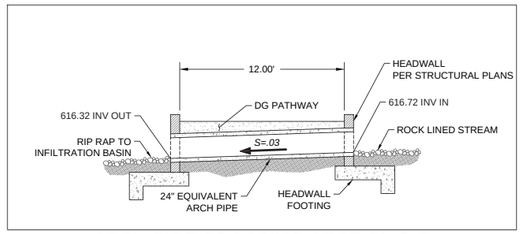
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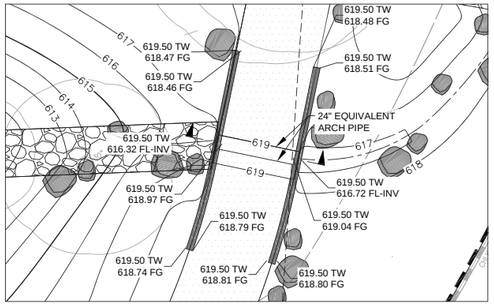
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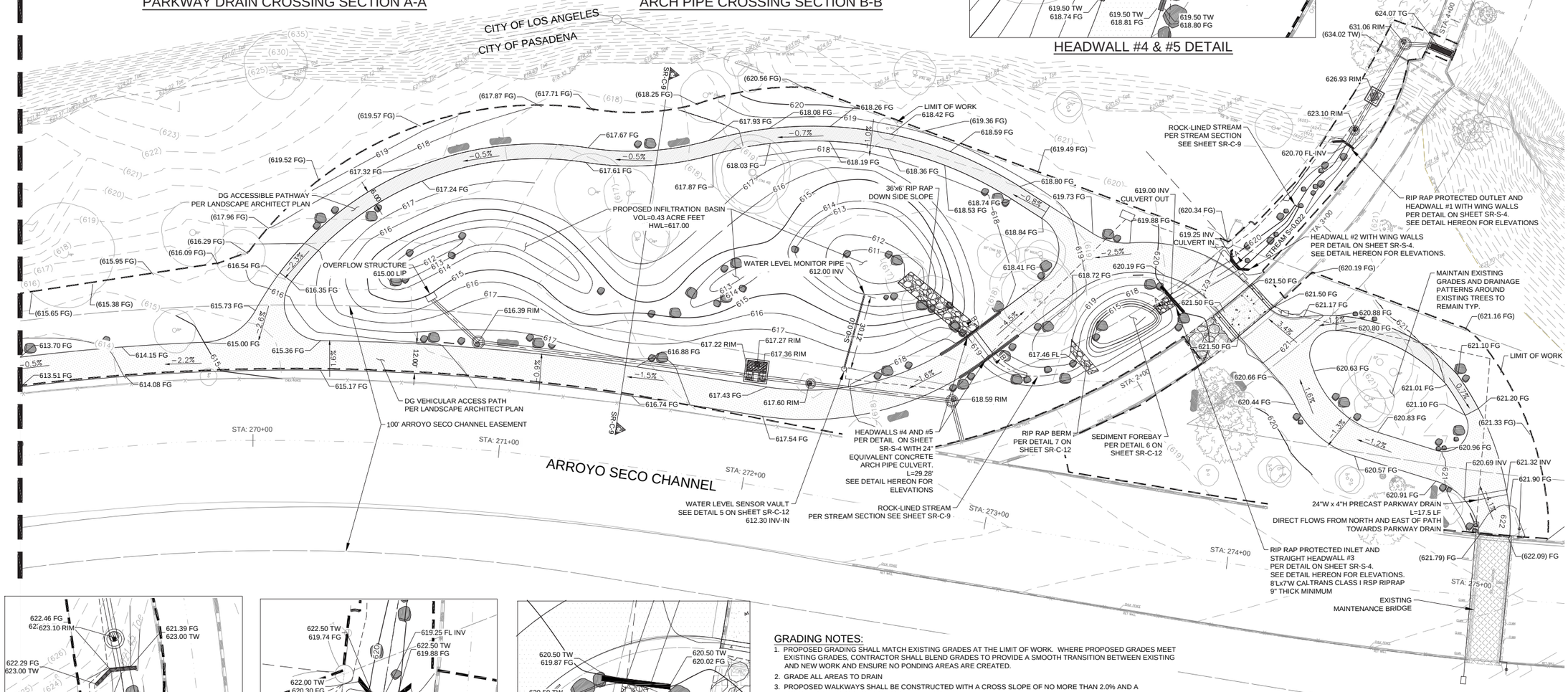
PARKWAY DRAIN CROSSING SECTION A-A



ARCH PIPE CROSSING SECTION B-B



HEADWALL #4 & #5 DETAIL



HEADWALL #1 DETAIL

HEADWALL #2 DETAIL

HEADWALL #3 DETAIL

GRADING NOTES:

1. PROPOSED GRADING SHALL MATCH EXISTING GRADES AT THE LIMIT OF WORK. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK AND ENSURE NO PONDING AREAS ARE CREATED.
2. GRADE ALL AREAS TO DRAIN
3. PROPOSED WALKWAYS SHALL BE CONSTRUCTED WITH A CROSS SLOPE OF NO MORE THAN 2.0% AND A LONGITUDINAL SLOPE OF NO MORE THAN 5.0%.
4. CONTRACTORS SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES.
5. CONTRACTOR SHALL ADJUST UTILITY ELEMENTS MEANT TO BE FLUSH WITH GRADE (I.E. UTILITY MANHOLES, CATCH BASINS, ETC.) THAT ARE AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON THE PLANS OR NOT.

Source: Craftwater Engineering, Inc 2024

San Rafael Grading Plan

Exhibit 2-10a

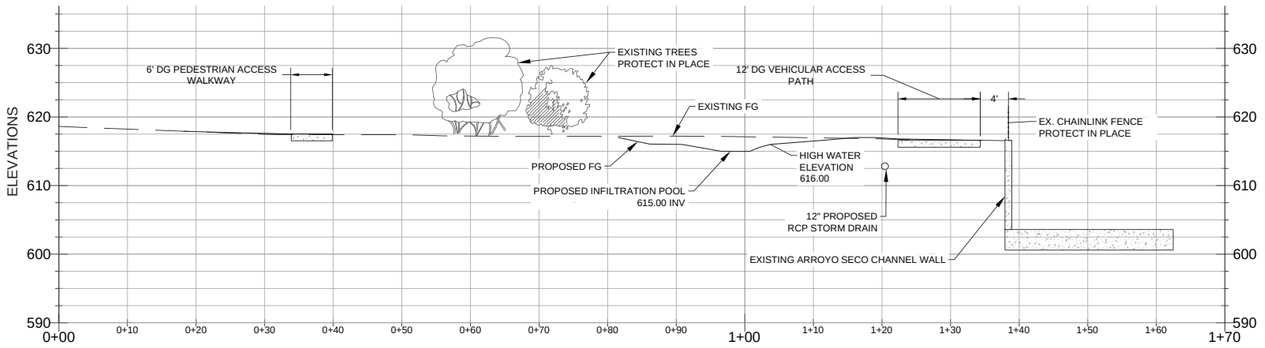
Arroyo Seco Water Reuse Project

Map not to scale

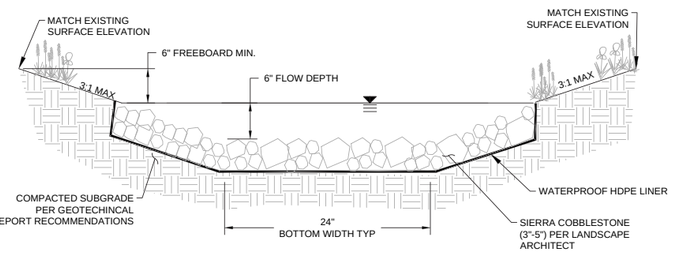
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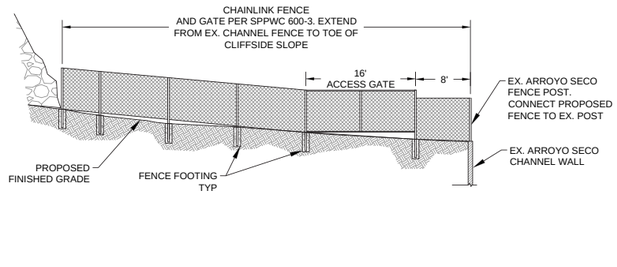
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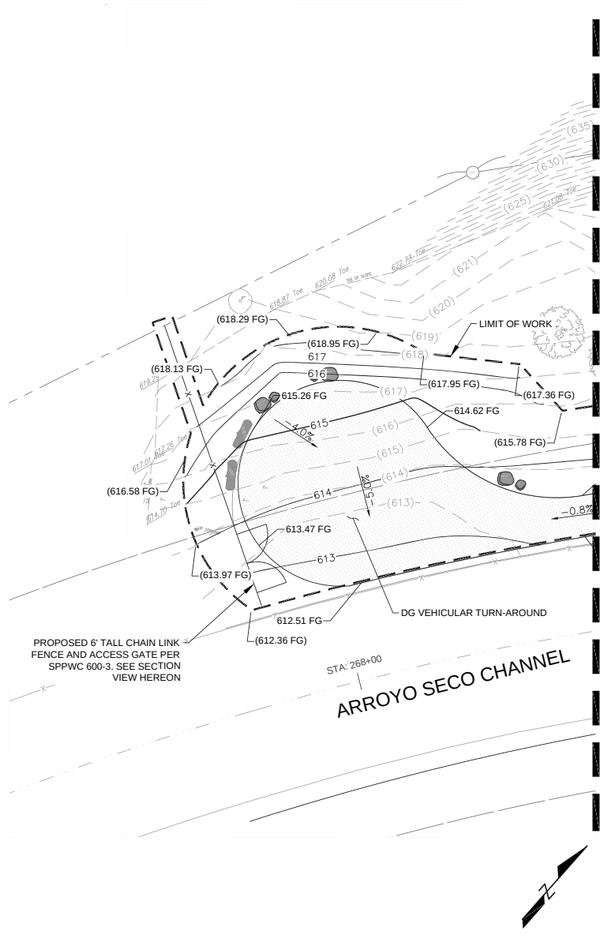
SECTION C-C



TYPICAL STREAM SECTION



CHAINLINK FENCE SECTION VIEW



GRADING NOTES:

1. PROPOSED GRADING SHALL MATCH EXISTING GRADES AT THE LIMIT OF WORK. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK AND ENSURE NO PONDING AREAS ARE CREATED.
2. GRADE ALL AREAS TO DRAIN
3. PROPOSED WALKWAYS SHALL BE CONSTRUCTED WITH A CROSS SLOPE OF NO MORE THAN 2.0% AND A LONGITUDINAL SLOPE OF NO MORE THAN 5.0%.
4. CONTRACTORS SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES.
5. CONTRACTOR SHALL ADJUST UTILITY ELEMENTS MEANT TO BE FLUSH WITH GRADE (I.E. UTILITY MANHOLES, CATCH BASINS, ETC.) THAT ARE AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON THE PLANS OR NOT.

EARTHWORK QUANTITIES		
CUT (CY)	FILL (CY)	NET (CY)
1941	374	1567

NOTE: CUT/FILL REPORT CONTAINS RAW CALCULATED NUMBERS THAT DO NOT ACCOUNT FOR SHRINKAGE/SWELLING OF SOILS

Source: Craftwater Engineering, Inc 2024

San Rafael Grading Plan

Exhibit 2-10b

Arroyo Seco Water Reuse Project

Map not to scale

PSOMAS

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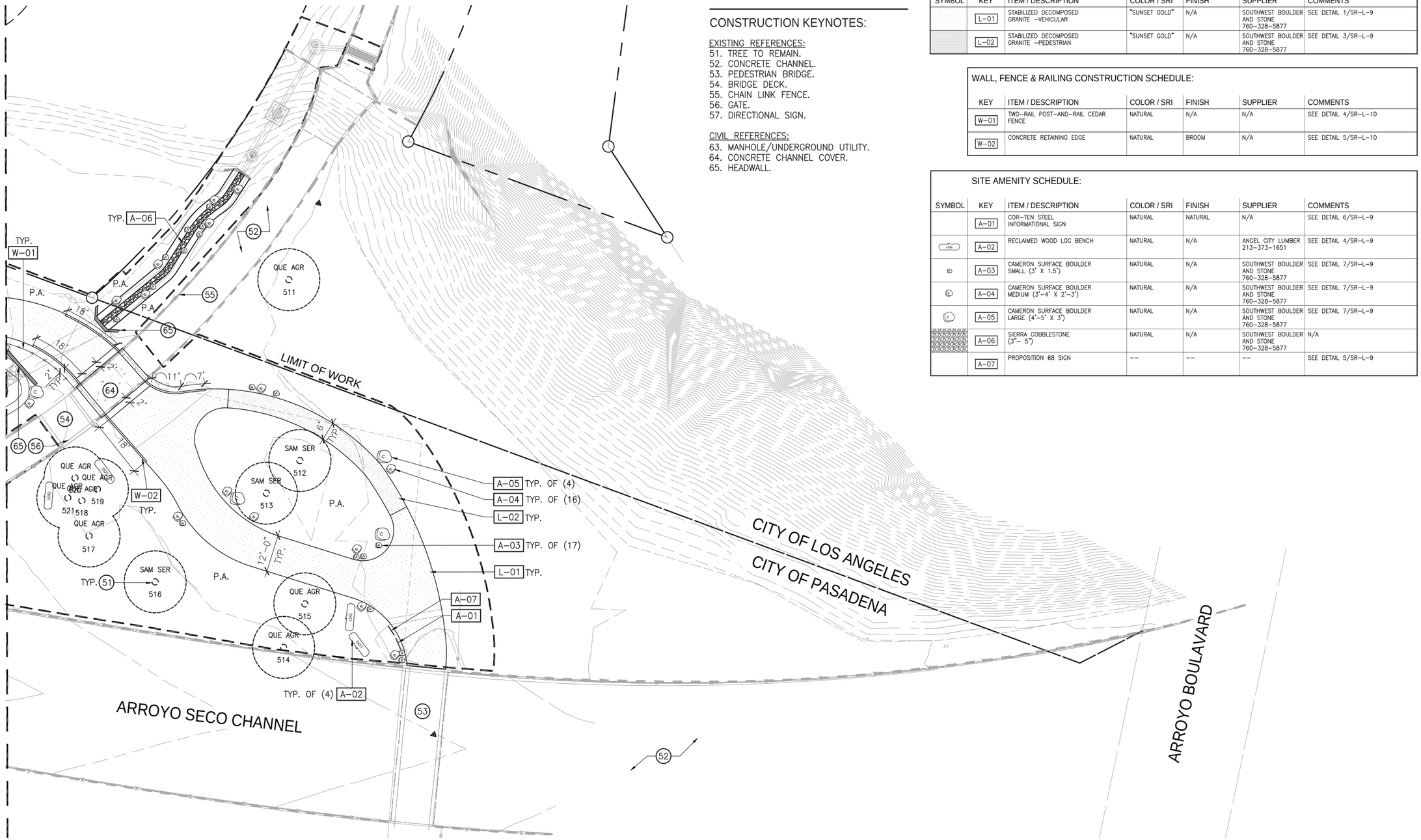
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through c, San Rafael Landscape Construction Plan, provides the landscape design and construction details; and Exhibit 2-12a through d, San Rafael Planting Plan, provides details on the number and species of plants to be installed. Refer to Section 3.3, Biological Resources, for further details regarding tree impacts and mitigation.

During wet weather events, modeled hourly flow rates for the San Rafael drainage area range from less than 200 cfs to nearly 1,200 cfs. A diversion structure is proposed as a drop inlet at the Creek bottom with a 6.3 cfs gravity diversion. As shown on Exhibit 2-8 diverted water would flow along a proposed rock-lined stream that would parallel San Rafael Creek, pass beneath the pathway in a 60-inch-diameter drain, daylight on the south side of the pathway into a proposed sediment forebay, and then pass a proposed riprap berm into a proposed rock-lined stream. The flows would pass through a proposed culvert into the proposed treatment wetland. The basin would occupy a total footprint of 0.25 acre and have a total volume of 0.437-acre-foot (af) with 0.068 af reserved for infiltration only. The San Rafael BMP would include dual infiltration and filtration treatment in the basin. In a combined treatment configuration, diverted flows would first enter the basin to be treated through infiltration only. When the water level is above the filter outlet, the water would be filtered prior to being discharged. If the diverted flow volume is larger than the filtered flow, the excess flow would still contribute to filling the basin until the basin is full. The proposed San Rafael BMP configuration is expected to provide full capture of the 85th percentile 24-hour design storm peak flow and runoff volume. Other BMP infrastructure that would be installed to operate, maintain, and monitor the San Rafael BMP include reinforced concrete pipe (RCP), sampling manholes, flow meters, water level sensor, jellyfish filter, and actuated valves. While these components are shown on the engineering plans, they would be hidden from view as much as feasible by location (e.g., underground) or screening.

The Arroyo Seco Trail runs along both sides of the Arroyo Seco Channel immediately upstream of the San Rafael confluence; and an existing traffic-rated bridge crosses the Channel approximately 225 feet downstream of the San Rafael Avenue overpass. This bridge would provide access to the San Rafael BMP. There is also an existing pedestrian/equestrian bridge over the San Rafael Creek. The Project would maintain this bridge and construct a new, 16-foot-wide traffic-rated concrete bridge over the Creek to facilitate pedestrian, equestrian, and maintenance vehicle (only) access to the site. The new bridge would be the primary circulation route proposed for all visitors, including the public and maintenance staff.

The existing trail network in and around the San Rafael site is the sole existing recreational feature. The Project would improve the section of Arroyo Seco Trail along the length of the San Rafael site and provide new pathways to and around the treatment wetlands as stabilized decomposed granite (DG) trails, as shown on Exhibits 2-7, 2-8, and 2-11a-c. A portion of the new or improved trails would be designed to allow maintenance vehicle access, as well as equestrian and pedestrian use; and a portion of the new trails would be designed to be pedestrian-only paths. This would expand public access for passive recreation opportunities throughout the San Rafael site, enhance the existing trail network connecting Pasadena and South Pasadena, and contribute to regional trail connectivity through the length of the Arroyo Seco.



CONSTRUCTION KEYNOTES:

EXISTING REFERENCES:
51. TREE TO REMAIN.
52. CONCRETE CHANNEL.
53. PEDESTRIAN BRIDGE.
54. BRIDGE DECK.
55. CHAIN LINK FENCE.
56. GATE.
57. DIRECTIONAL SIGN.

CIVIL REFERENCES:
63. MANHOLE/UNDERGROUND UTILITY.
64. CONCRETE CHANNEL COVER.
65. HEADWALL.

LANDSCAPE CONSTRUCTION SCHEDULE:

SYMBOL	KEY	ITEM / DESCRIPTION	COLOR / SRI	FINISH	SUPPLIER	COMMENTS
	L-01	STABILIZED DECOMPOSED GRANITE –VEHICULAR	"SUNSET GOLD"	N/A	SOUTHWEST BOULDER AND STONE 760-328-5877	SEE DETAIL 1/SR-L-9
	L-02	STABILIZED DECOMPOSED GRANITE –PEDESTRIAN	"SUNSET GOLD"	N/A	SOUTHWEST BOULDER AND STONE 760-328-5877	SEE DETAIL 3/SR-L-9

WALL, FENCE & RAILING CONSTRUCTION SCHEDULE:

KEY	ITEM / DESCRIPTION	COLOR / SRI	FINISH	SUPPLIER	COMMENTS
W-01	TWO-RAIL POST-AND-RAIL CEDAR FENCE	NATURAL	N/A	N/A	SEE DETAIL 4/SR-L-10
W-02	CONCRETE RETAINING EDGE	NATURAL	BROOM	N/A	SEE DETAIL 5/SR-L-10

SITE AMENITY SCHEDULE:

SYMBOL	KEY	ITEM / DESCRIPTION	COLOR / SRI	FINISH	SUPPLIER	COMMENTS
	A-01	COR-TEN STEEL INFORMATIONAL SIGN	NATURAL	NATURAL	N/A	SEE DETAIL 6/SR-L-9
LOG	A-02	RECLAIMED WOOD LOG BENCH	NATURAL	N/A	ANGEL CITY LUMBER 213-373-1651	SEE DETAIL 4/SR-L-9
B	A-03	CAMERON SURFACE BOULDER SMALL (3' X 1.5')	NATURAL	N/A	SOUTHWEST BOULDER AND STONE 760-328-5877	SEE DETAIL 7/SR-L-9
B	A-04	CAMERON SURFACE BOULDER MEDIUM (3'-4' X 2'-3')	NATURAL	N/A	SOUTHWEST BOULDER AND STONE 760-328-5877	SEE DETAIL 7/SR-L-9
C	A-05	CAMERON SURFACE BOULDER LARGE (4'-5' X 3')	NATURAL	N/A	SOUTHWEST BOULDER AND STONE 760-328-5877	SEE DETAIL 7/SR-L-9
	A-06	SIERRA COBBLESTONE (3"- 5")	NATURAL	N/A	SOUTHWEST BOULDER AND STONE 760-328-5877	N/A
	A-07	PROPOSITION 68 SIGN	--	--	--	SEE DETAIL 5/SR-L-9

Source: Craftwater Engineering, Inc 2024

San Rafael Landscape Construction Plan

Exhibit 2-11a

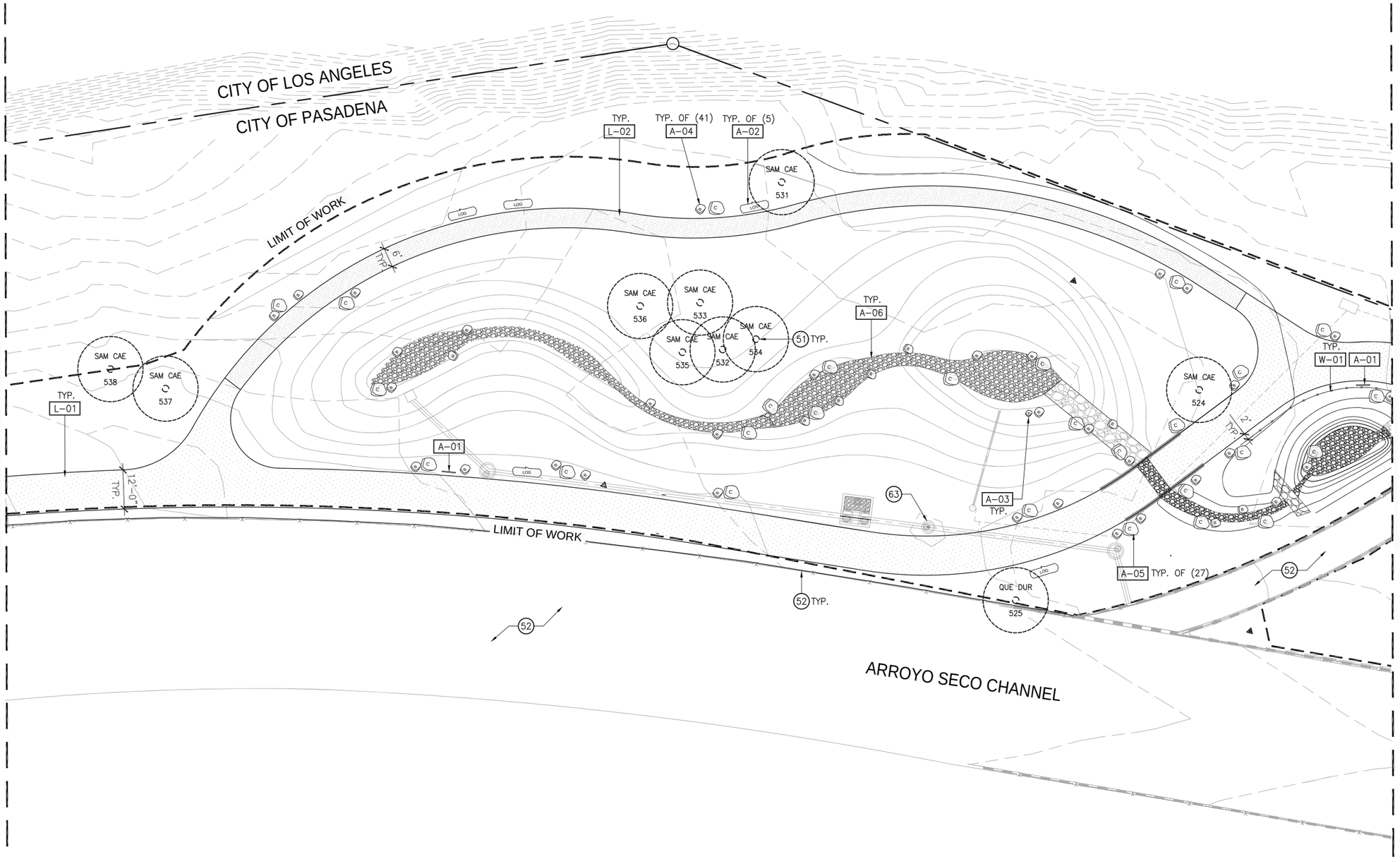
Arroyo Seco Water Reuse Project

Map not to scale

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CONSTRUCTION KEYNOTES:

EXISTING REFERENCES:
51. TREE TO REMAIN.
52. CONCRETE CHANNEL.
53. PEDESTRIAN BRIDGE.
54. BRIDGE DECK.
55. CHAIN LINK FENCE.
56. GATE.
57. DIRECTIONAL SIGN.

CIVIL REFERENCES:
63. MANHOLE/UNDERGROUND UTILITY.
64. CONCRETE CHANNEL COVER.
65. HEADWALL.

Source: Craftwater Engineering, Inc 2024

San Rafael Landscape Construction Plan

Exhibit 2-11b

Arroyo Seco Water Reuse Project

Map not to scale

PSOMAS

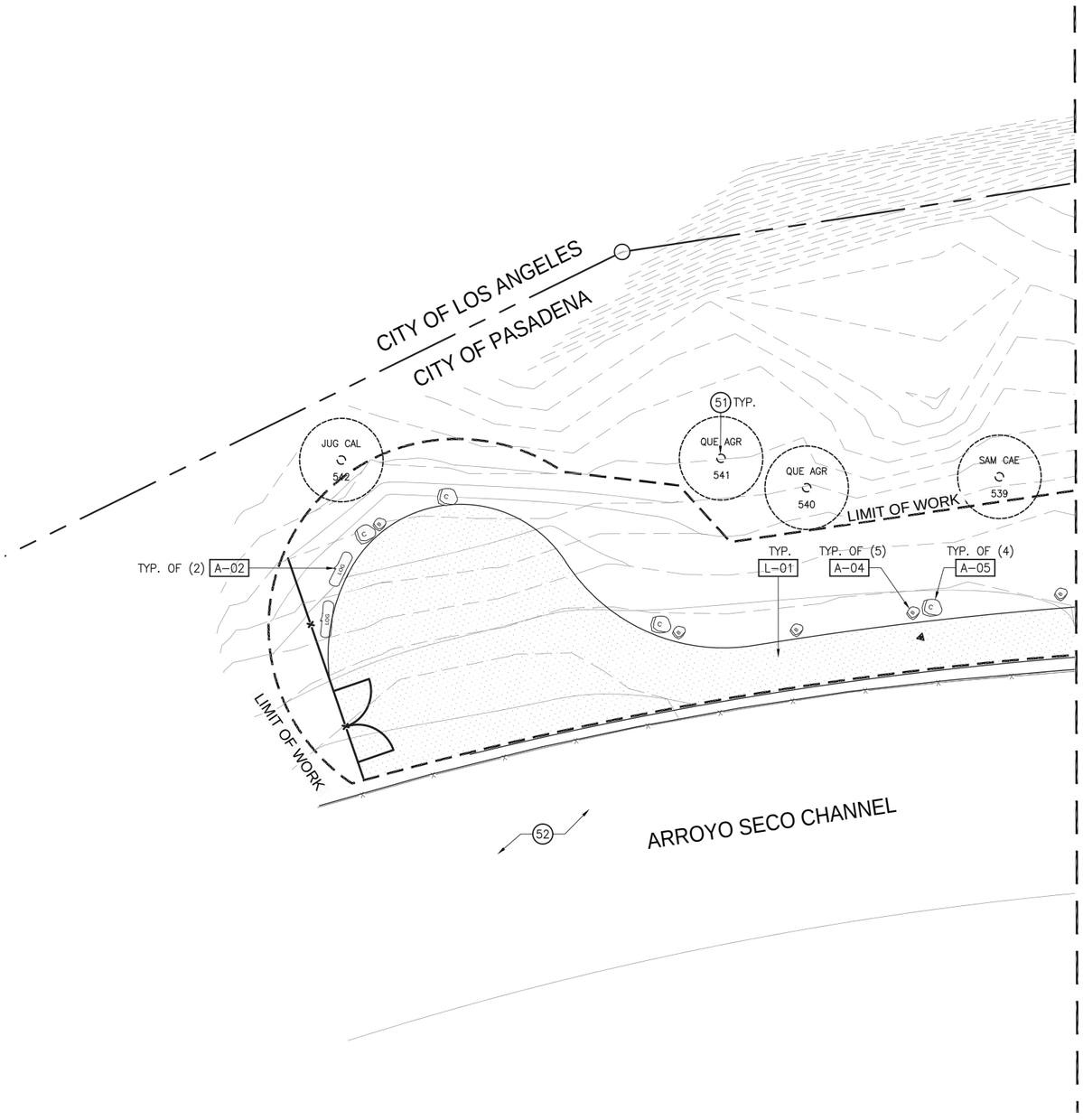
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CONSTRUCTION KEYNOTES:

EXISTING REFERENCES:
51. TREE TO REMAIN.
52. CONCRETE CHANNEL.
53. PEDESTRIAN BRIDGE.
54. BRIDGE DECK.
55. CHAIN LINK FENCE.
56. GATE.
57. DIRECTIONAL SIGN.

CIVIL REFERENCES:
63. MANHOLE/UNDERGROUND UTILITY.
64. CONCRETE CHANNEL COVER.
65. HEADWALL.



Source: Craftwater Engineering, Inc 2024

San Rafael Landscape Construction Plan

Exhibit 2-11c

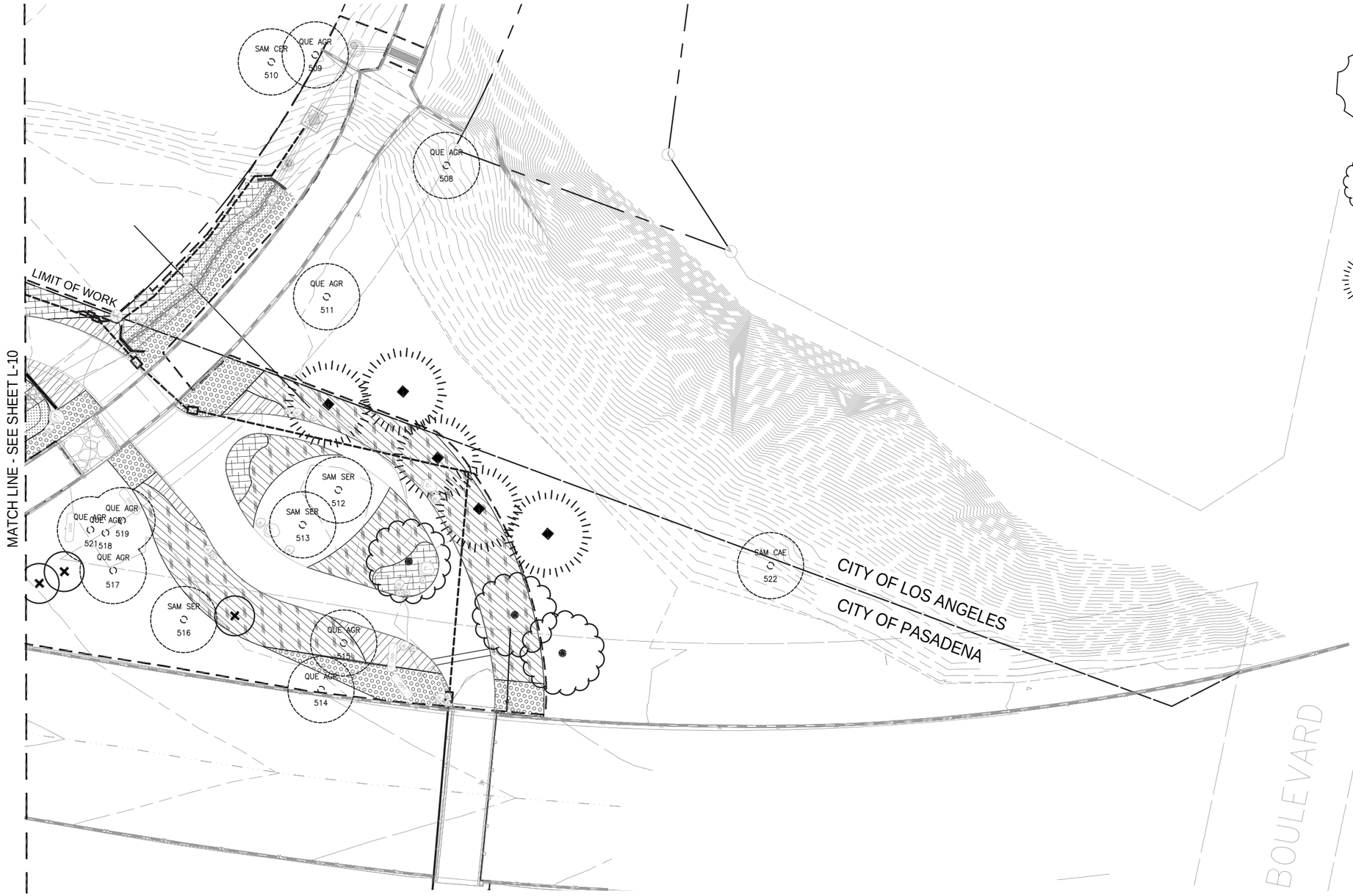
Arroyo Seco Water Reuse Project

Map not to scale

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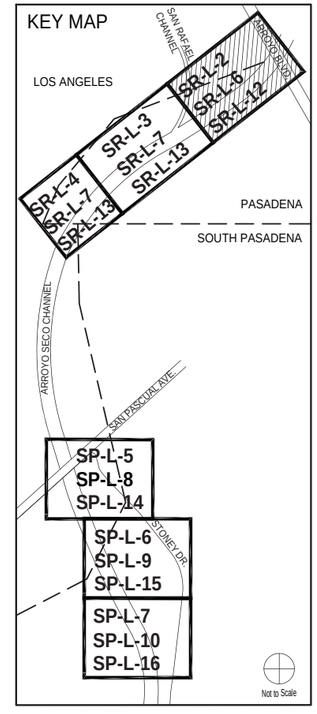
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TREE LEGEND:

SYMBOL	BOTANICAL NAME "COMMON NAME"	SIZE (HTxSPR)	WUCOLS	QTY.	DETAIL
+	SALIX LASIOLEPSIS "ARROYO WILLOW"	15 GAL 3'X4'	HIGH (0.7)	17	5 /SR-L-14
•	PLATANUS RACEMOSA "WESTERN SYCAMORE"	36" BOX 5'X2.5'	MODERATE (0.5)	3	5 /SR-L-14
+	PLATANUS RACEMOSA "WESTERN SYCAMORE"	24" BOX 5'X2.5'	MODERATE (0.5)	4	5 /SR-L-14
•	QUERCUS AGRIFOLIA "COAST LIVE OAK"	36" BOX 4'X3'	LOW (0.3)	8	5 /SR-L-14
+	QUERCUS AGRIFOLIA "COAST LIVE OAK"	24" BOX 4'X3'	LOW (0.3)	3	5 /SR-L-14
■	SAMBUCUS NIGRA SSP. CAERULEA "BLUE ELDERBERRY"	24"BOX 4'X3'	LOW (0.3)	26	5 /SR-L-14

TOTAL NEW TREES PLANTED: 61



Source: MIG 2022

San Rafael Planting Plan

Exhibit 2-12a

Arroyo Seco Water Reuse Project

Map not to scale

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CITY OF LOS ANGELES

CITY OF PASADENA

LIMIT OF WORK

LIMIT OF WORK

MATCH LINE - SEE SHEET L-10

MATCH LINE - SEE SHEET L-10

SAM CAE
538

SAM CAE
537

SAM CAE
536

SAM CAE
533

SAM CAE
535

SAM CAE
532

SAM CAE
534

SAM CAE
531

SAM CAE
524

QUE BER
525

KEY MAP

LOS ANGELES

SAN RAFAEL CHANNEL

ARROYO BLVD

SR-L-4
SR-L-7
SR-L-13

SR-L-3
SR-L-7
SR-L-13

SR-L-2
SR-L-6
SR-L-12

PASADENA

SOUTH PASADENA

ARROYO SECO CHANNEL

SAN PASCUAL AVE

STONEY DR

SP-L-5
SP-L-8
SP-L-14

SP-L-6
SP-L-9
SP-L-15

SP-L-7
SP-L-10
SP-L-16

Not to Scale

Source: MIG 2022

San Rafael Planting Plan

Exhibit 2-12b

Arroyo Seco Water Reuse Project

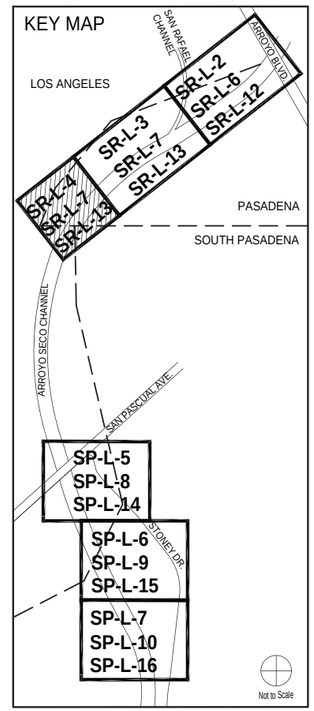
Map not to scale

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Source: MIG 2022

San Rafael Planting Plan

Exhibit 2-12c

Arroyo Seco Water Reuse Project

Map not to scale

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2.4.5 SAN PASCUAL SITE

The San Rafael and San Pascual sites would each have a diversion structure with maximum diversion rates of 10 cfs and 15 cfs, respectively, for a total Project diversion rate of 25 cfs.

The San Pascual Site BMP would consist of the following components, which are discussed further below:

- Pretreatment device with hydrodynamic separator;
- Pump station;
- Two (0.73-acre total) sequential treatment wetlands;
- Headwalls and wingwalls, pipeline(s), meter(s), valve(s), filter(s), and manhole(s); and
- Landscape and hardscape elements, including new trees and other vegetation, trail expansions, and informational signage.

The San Pascual site is situated at the intersection of San Pascual Avenue and Stoney Drive and is occupied by a densely vegetated parcel with an existing treatment wetland that has not been properly maintained and is no longer functioning to its full capacity. The San Pascual BMP would divert only dry weather flows from the Arroyo Seco Channel (LACFCD's Concrete Conduit Section 2) at an existing diversion structure that already directs flows into the San Pascual site. The flow from the diversion would go through both infiltration basins, and the connection to the existing outlet pipe to the Golf Course is an overflow inlet in the second basin. Exhibit 2-13, Bird's Eye View of San Pascual Concept Plan; and Exhibit 2-14, San Pascual Site Plan; provide different views and levels of detail of the proposed BMP at the San Pascual site. Exhibit 2-15, San Pascual Demolition Plan, shows details of existing demolition and grubbing within the site as well as existing features to be protected in place; Exhibit 2-16a and b, San Pascual Grading Plan, shows the limit of grading and the existing and proposed elevations with the Project.

As discussed above, the Project was designed to maximize avoidance of trees. As discussed further in "Construction Scenario" below, additional staging and laydown areas are defined beyond the Project footprint; however, these areas were limited to areas without trees. As shown in Table 2-3, a total of 157 trees were surveyed within the disturbance footprint of the San Pascual site. Implementation of the San Pascual BMP would involve removal of 130 trees, which includes 23 protected trees and 14 significant trees. Most of the existing trees being removed at San Pascual that are not protected under a tree ordinance are Mexican fan palms (82 trees), which represent the primary species mapped in the non-native ornamental woodland present in the central portion of this site. All trees being removed and not covered under a tree ordinance are both non-native and invasive plant species.

Of the 23 protected and 14 significant trees to be removed, 31 (17 protected and 14 significant) are within South Pasadena's jurisdiction and 6 (protected) are within Los Angeles' jurisdiction and all are native species. The remaining 27 existing trees, both native and non-native, would be protected in place and have been integrated into the site design.





Source: MIG, Inc 2023

Bird's Eye View of San Pascual Site Concept Plan

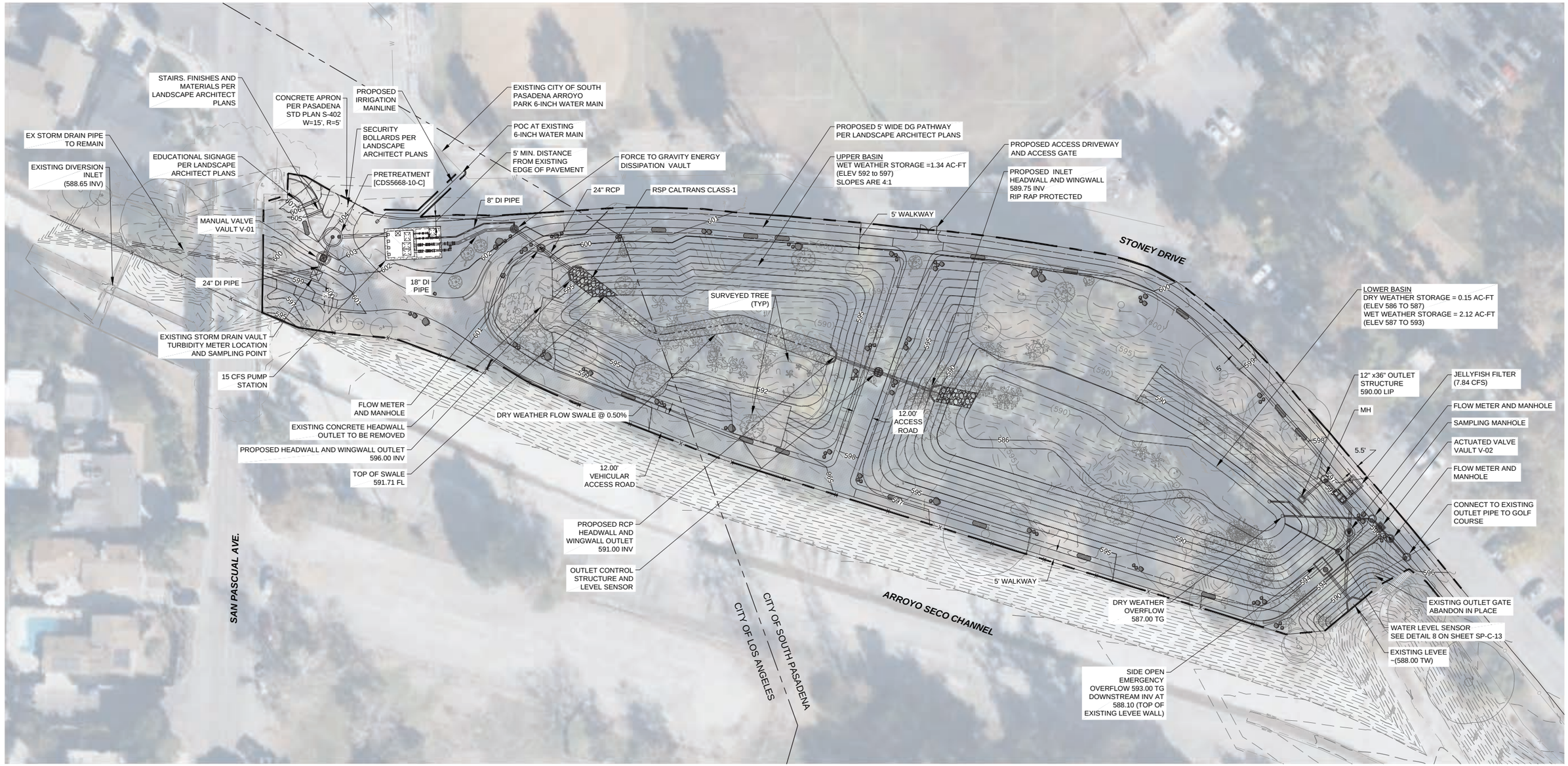
Exhibit 2-13

Arroyo Seco Water Reuse Project

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Source: Craftwater Engineering, Inc 2024

San Pascual Site Plan

Exhibit 2-14

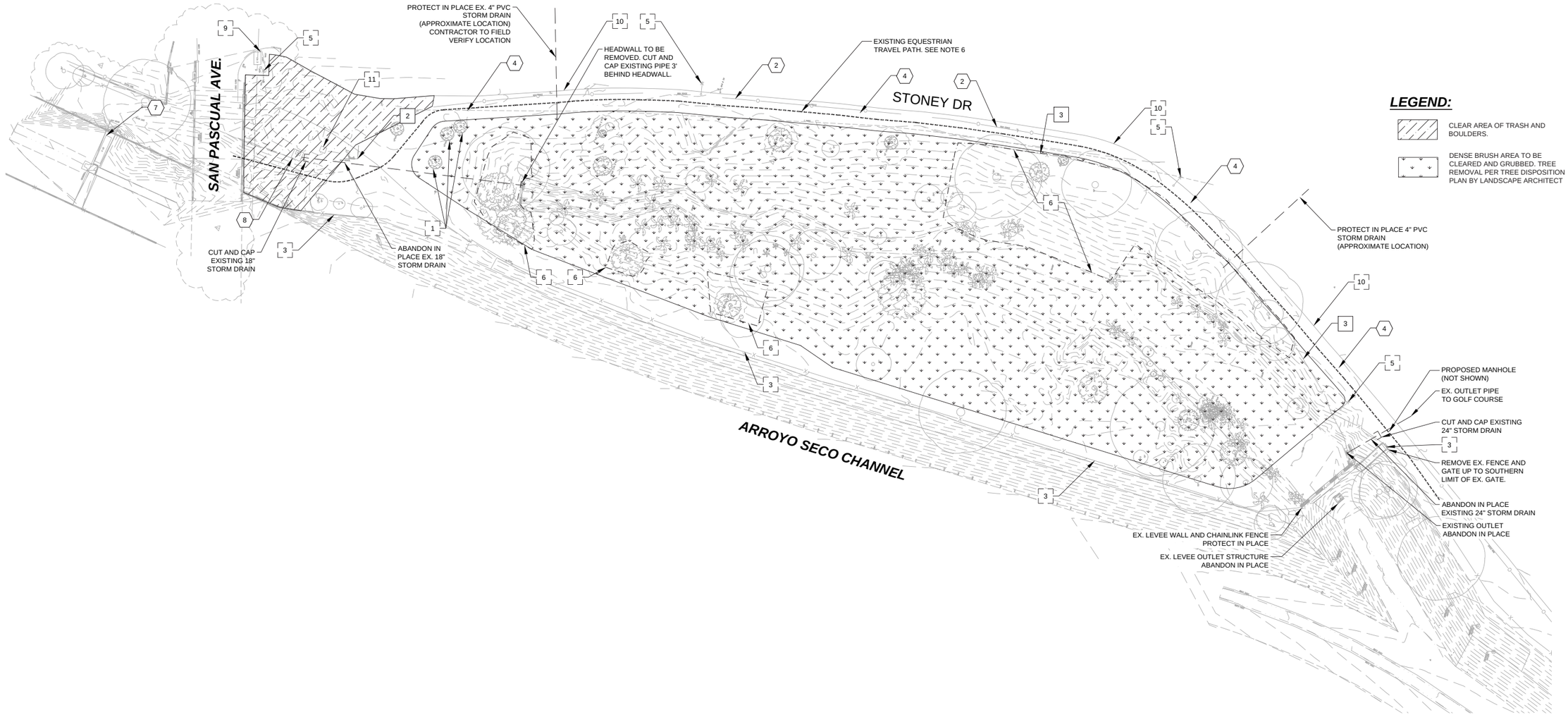
Arroyo Seco Water Reuse Project

Map not to scale

PSOMAS

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LEGEND:

- CLEAR AREA OF TRASH AND BOULDERS.
- DENSE BRUSH AREA TO BE CLEARED AND GRUBBED. TREE REMOVAL PER TREE DISPOSITION PLAN BY LANDSCAPE ARCHITECT

CONSTRUCTION NOTES:

- REMOVE
- REMOVE AND REPLACE PER PLANS
- EXISTING - PROTECT IN PLACE
- EXISTING - MODIFY PER PLAN

1. TREE (SEE NOTE 3,4)
2. WOODEN FENCING
3. METAL FENCING
4. DIRT PATH
5. STREET LIGHT
6. SITE PROTECTION AREA
7. STORM DRAIN DIVERSION
8. STORM DRAIN VAULT
9. ELECTRICAL UTILITIES
10. ASPHALT PAVEMENT EDGE
11. STONE PILLAR

Source: Craftwater Engineering, Inc 2024

San Pascual Demolition Plan

Exhibit 2-15

Arroyo Seco Water Reuse Project

Map not to scale

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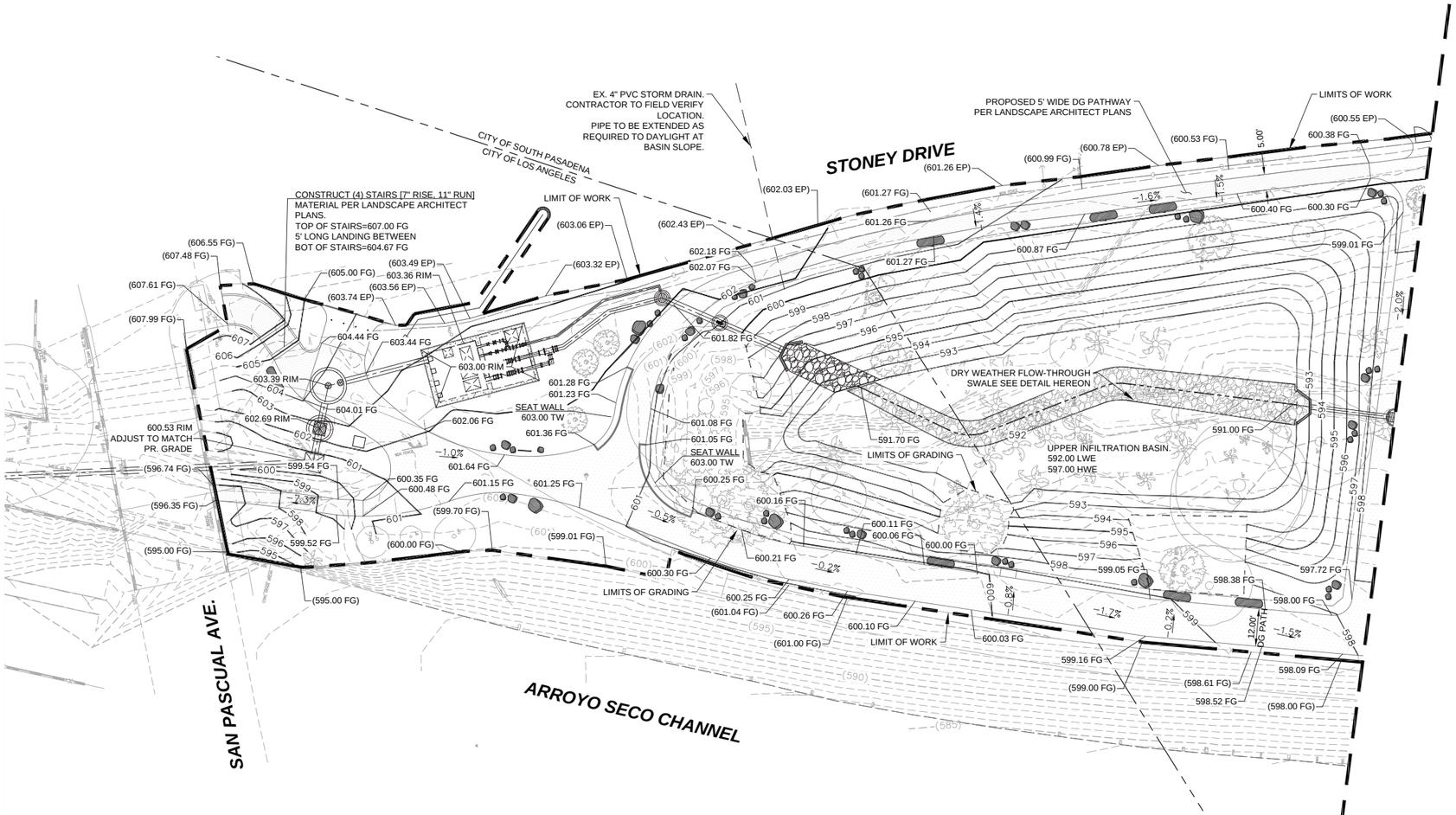
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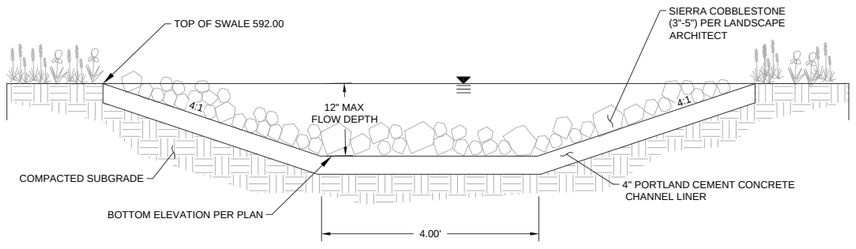
GRADING NOTES

1. PROPOSED GRADING SHALL MATCH EXISTING GRADES AT THE LIMIT OF WORK. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK AND ENSURE NO PONDING AREAS ARE CREATED.
2. GRADE ALL AREAS TO DRAIN
3. PROPOSED WALKWAYS SHALL BE CONSTRUCTED WITH A CROSS SLOPE OF NO MORE THAN 2.0% AND A LONGITUDINAL SLOPE OF NO MORE THAN 5.0%.
4. CONTRACTORS SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES.
5. CONTRACTOR SHALL ADJUST UTILITY ELEMENTS MEANT TO BE FLUSH WITH GRADE (I.E. UTILITY MANHOLES, CATCH BASINS, ETC.) THAT ARE AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON THE PLANS OR NOT.

LEGEND & ABBREVIATIONS

FG	FINISHED GRADE
FS	FINISHED SURFACE
INV	INVERT
XX.XX	PROPOSED ELEVATION
(XX.XX)	EXISTING ELEVATION
S=X.XXXX	PROPOSED SLOPE OF PIPE
(S=X.XXXX)	EXISTING SLOPE OF PIPE
X:X	RATIO SLOPE
MH	MAINTENANCE HOLE
TG	TOP OF GRADE
RIM	MAINTENANCE RIM ELEVATION
X.XX%	GRADE SLOPE
(X.XX%)	EXISTING GRADE SLOPE
(XX)	EXISTING CONTOUR
XX	PROPOSED CONTOUR





TYPICAL DRY WEATHER SWALE SECTION

Source: Craftwater Engineering, Inc 2024

San Pascual Grading Plan

Exhibit 2-16a

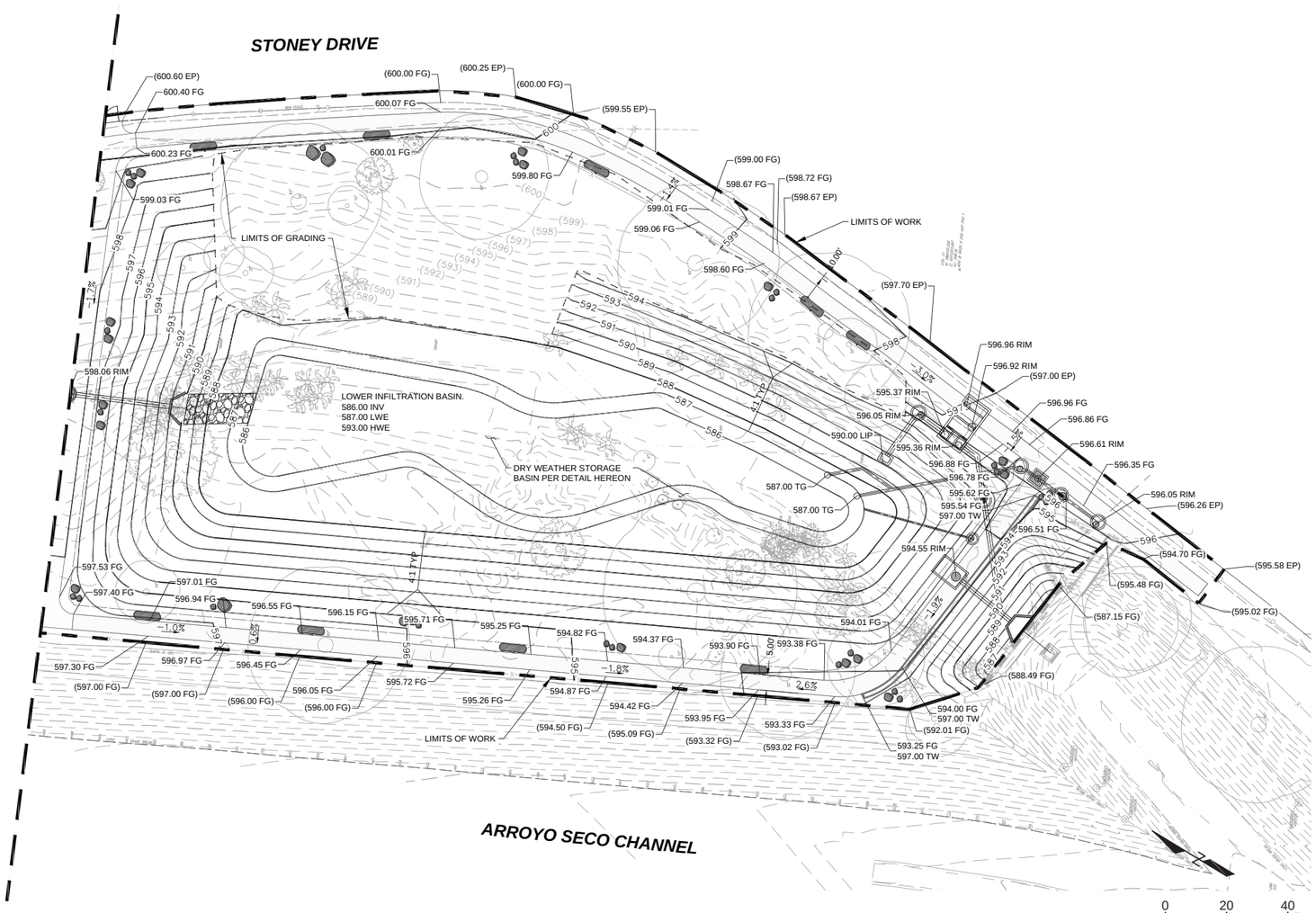
Arroyo Seco Water Reuse Project

Map not to scale

PSOMAS

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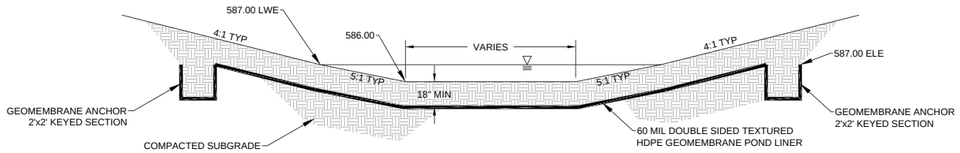
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GRADING NOTES

1. PROPOSED GRADING SHALL MATCH EXISTING GRADES AT THE LIMIT OF WORK. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK AND ENSURE NO PONDING AREAS ARE CREATED.
2. GRADE ALL AREAS TO DRAIN
3. PROPOSED WALKWAYS SHALL BE CONSTRUCTED WITH A CROSS SLOPE OF NO MORE THAN 2.0% AND A LONGITUDINAL SLOPE OF NO MORE THAN 5.0%.
4. CONTRACTORS SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES.
5. CONTRACTOR SHALL ADJUST UTILITY ELEMENTS MEANT TO BE FLUSH WITH GRADE (I.E. UTILITY MANHOLES, CATCH BASINS, ETC.) THAT ARE AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON THE PLANS OR NOT.

LEGEND & ABBREVIATIONS

FG	FINISHED GRADE
FS	FINISHED SURFACE
INV	INVERT
XX.XX	PROPOSED ELEVATION
(XX.XX)	EXISTING ELEVATION
S=X.XXXX	PROPOSED SLOPE OF PIPE
(S=X.XXXX)	EXISTING SLOPE OF PIPE
X:X	RATIO SLOPE
MH	MAINTENANCE HOLE
TG	TOP OF GRADE
RIM	MAINTENANCE RIM ELEVATION
X.XX%	GRADE SLOPE
(X.XX%)	EXISTING GRADE SLOPE
(XX)	EXISTING CONTOUR
XX	PROPOSED CONTOUR



TYPICAL DRY WEATHER STORAGE BASIN SECTION

EARTHWORK QUANTITIES		
CUT (CY)	FILL (CY)	NET (CY)
3736	2331	1406

NOTE: CUT/FILL REPORT CONTAINS RAW CALCULATED NUMBERS THAT DO NOT ACCOUNT FOR SHRINKAGE/SWELLING OF SOILS

Source: Craftwater Engineering, Inc 2024

San Pascual Grading Plan

Exhibit 2-16b

Arroyo Seco Water Reuse Project

Map not to scale

PSOMAS

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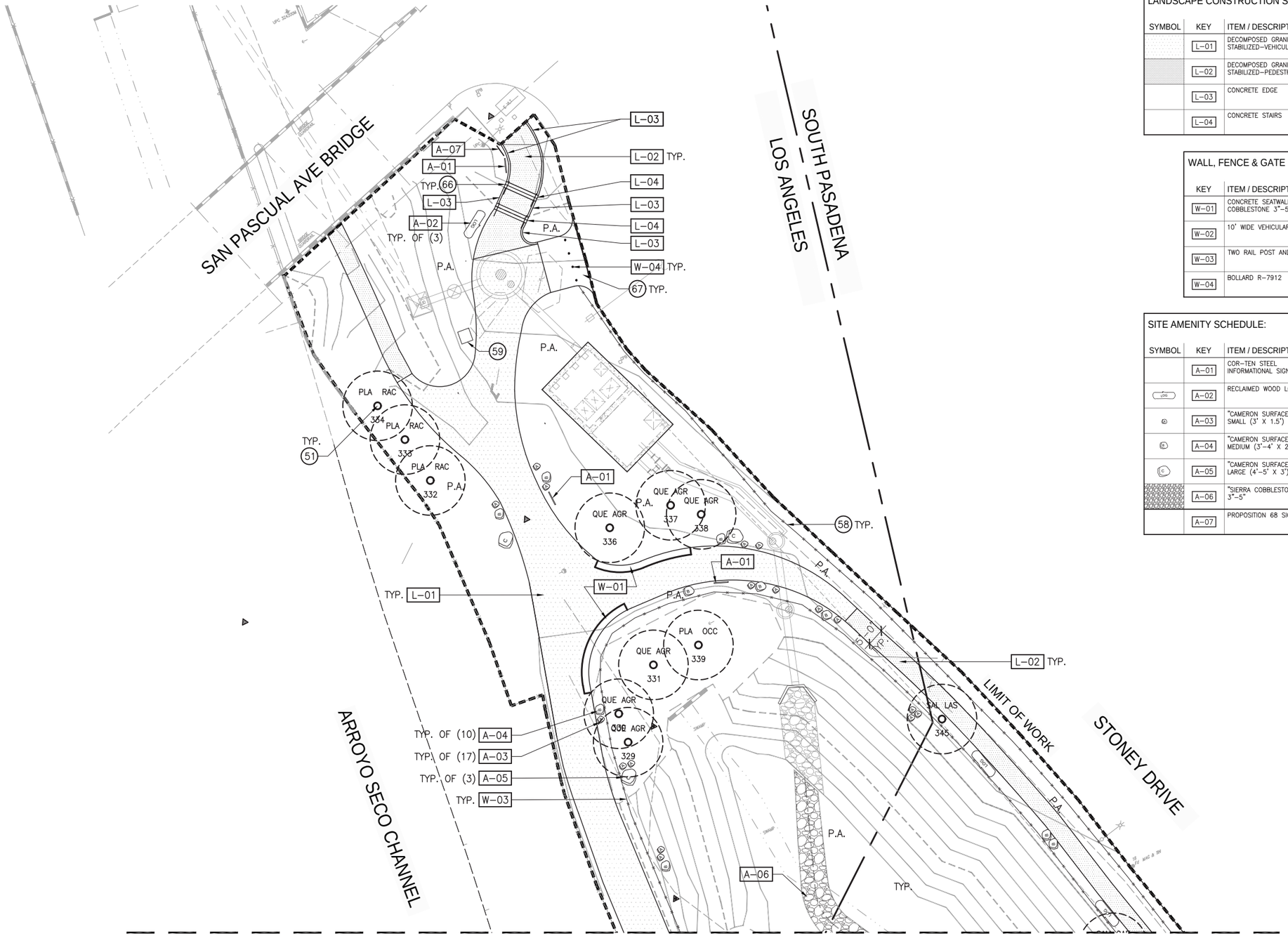
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The Project's landscape concept proposes planting 155 additional native trees as well as native shrubs and groundcovers. Exhibit 2-17a through d, San Pascual Landscape Construction Plan, provides the landscape design and construction details; and Exhibit 2-18a through d, San Pascual Planting Plan, provides details on the number and species of plants to be installed. Refer to Section 3.3, Biological Resources, for further details regarding tree impacts and mitigation.

As shown on Exhibit 2-6, the San Pascual site drains a large tributary area (over 5,000 acres). The area includes 863 acres of impervious area and generates an average annual runoff of 1,305 af. As noted above, the diversion structure would be an existing inlet with a 15.0 cfs pumped diversion into a pretreatment device. A pumped, rather than gravity, diversion was selected to minimize excavation and costs. The dry weather runoff transports sediment, metals, nutrients, trash, and debris that can compromise the performance of the stormwater facility and pollute downstream receiving waters. Pretreatment would be an integral component of the treatment train strategy to extend the life of the system. A hydrodynamic separator is proposed to be installed at the San Pascual diversion point. One hundred percent of floatables and neutrally buoyant debris larger than the screen aperture (2.4 millimeters) would be collected and settle in the isolated sump of the system. At least 80 percent of particles that are 130 microns or larger in size would be removed from the proposed diversion flow. With the chambered system, hydrocarbons float to the top of the water surface and would be prevented from being transported downstream.

As shown on Exhibit 2-14, diverted, pre-treated water would pass through a proposed pump station and then be directed into two sequential proposed treatment wetlands–herein referred to as the top basin and bottom basin. The top basin would have 1.34 af of dry weather storage capacity and the bottom basin would have 2.12 af of dry weather storage capacity, with a combined footprint of 0.73 acre providing 3.46 af of dry weather storage. A cascading water feature with protective aggregate rip rap along the northern end of each basin wall would lead to a dry weather flow swale present along the basin bottom. An outlet control structure is proposed to connect the two basins, with an outlet at the south end of the top basin and an inlet at the north end of the bottom basin. The bottom basin would have dry weather overflow and emergency overflow outlets. The San Pascual BMP would direct and store only dry weather flows for irrigation reuse. The basins have been designed such that incoming flows are distributed evenly between the two basins. If the top basin cannot accept any more flow, runoff would continue to accumulate in the bottom basin. All possible diversion rates were analyzed for an optimized filtration and infiltration configuration that balances water supply and water quality benefits from the San Pascual BMP. The San Pascual BMP would also provide dual infiltration and a 7.84 cfs filtration capacity.

Based on the infiltration rate of 3.3 inches per hour, capture of the 85th percentile design volume was determined not to be feasible at the San Pascual BMP given the previously developed footprint. Therefore, this site would be designated as a dry-weather BMP under the Safe, Clean Water Program scoring criteria. With a 15 cfs diversion rate, the San Pascual BMP was estimated to treat 534 af of average annual runoff. This site would experience 230 af of average annual dry weather flows. Table 2-4, Average Annual Performance of the San Pascual BMP (AF), summarizes the long-term performance based on modeling of this BMP design.



LANDSCAPE CONSTRUCTION SCHEDULE:

SYMBOL	KEY	ITEM / DESCRIPTION	COLOR / SRI	FINISH	SUPPLIER	COMMENTS
	L-01	DECOMPOSED GRANITE STABILIZED-VEHICULAR	"SUNSET GOLD"	N/A	SOUTHWEST BOULDER AND STONE 760-328-5877	SEE DETAIL 1/SP-L-12
	L-02	DECOMPOSED GRANITE STABILIZED-PEDESTRIAN	"SUNSET GOLD"	N/A	SOUTHWEST BOULDER AND STONE 760-328-5877	SEE DETAIL 2/SP-L-12
	L-03	CONCRETE EDGE	NATURAL	N/A	--	SEE DETAIL 7/SP-L-12
	L-04	CONCRETE STAIRS	NATURAL	TOP CAST #15	--	SEE DETAIL 5/SP-L-13

WALL, FENCE & GATE CONSTRUCTION SCHEDULE:

KEY	ITEM / DESCRIPTION	COLOR / SRI	FINISH	SUPPLIER	COMMENTS
W-01	CONCRETE SEATWALL WITH SIERRA COBBLESTONE 3"-5" VENEER	NATRUAL	N/A	SOUTHWEST BOULDER AND STONE 760-328-5877	SEE DETAIL 3/SP-L-12
W-02	10' WIDE VEHICULAR GATE	TBD.	"STEEL"	--	SEE DETAIL 4/SP-L-13
W-03	TWO RAIL POST AND RAIL CEDAR FENCE	NATURAL	N/A	N/A	SEE DETAIL 5/SP-L-12
W-04	BOLLARD R-7912	"BLACK"	N/A	RELIANCE FOUNDRY 877-789-3245	SEE DETAIL 1/SP-L-13

SITE AMENITY SCHEDULE:

SYMBOL	KEY	ITEM / DESCRIPTION	COLOR / SRI	FINISH	SUPPLIER	COMMENTS
	A-01	COR-TEN STEEL INFORMATIONAL SIGN	NATURAL	--	--	SEE DETAIL 8/SP-L-12
LOG	A-02	RECLAIMED WOOD LOG BENCH	NATURAL	--	ANGEL CITY LUMBER (213) 373-1651	SEE DETAIL 6/SP-L-12
a	A-03	"CAMERON SURFACE BOULDER" SMALL (3' X 1.5')	NATURAL	N/A	SOUTHWEST BOULDER AND STONE (760) 328-5877	SEE DETAIL 5/SP-L-12
b	A-04	"CAMERON SURFACE BOULDER" MEDIUM (3'-4" X 2'-3')	NATURAL	N/A	SOUTHWEST BOULDER AND STONE (760) 328-5877	SEE DETAIL 5/SP-L-12
c	A-05	"CAMERON SURFACE BOULDER" LARGE (4'-5' X 3')	NATURAL	N/A	SOUTHWEST BOULDER AND STONE (760) 328-5877	SEE DETAIL 5/SP-L-12
	A-06	"SIERRA COBBLESTONE" 3"-5"	NATURAL	N/A	SOUTHWEST BOULDER AND STONE (760) 328-5877	N/A
	A-07	PROPOSITION 68 SIGN	--	--	--	SEE DETAIL 3/SP-L-13

CONSTRUCTION KEYNOTES:

EXISTING REFERENCES:
51. TREE TO REMAIN.
52. CONCRETE CHANNEL.
53. PEDESTRIAN BRIDGE.
54. BRIDGE DECK.
55. CHAIN LINK FENCE.
56. GATE.
57. DIRECTIONAL SIGN.
58. WOOD FENCE.
59. HITCHING POST TO REMAIN.

CIVIL REFERENCES:
62. CONCRETE CURB.
63. MANHOLE/UNDERGROUND UTILITY.
64. CONCRETE CHANNEL COVER.
65. CONCRETE RETAINING WALL.
66. CONCRETE STAIRS.
67. VEHICULAR CONCRETE ENTRANCE.

Source: Craftwater Engineering, Inc 2024

San Pascual Landscape Construction Plan

Exhibit 2-17a

Arroyo Seco Water Reuse Project

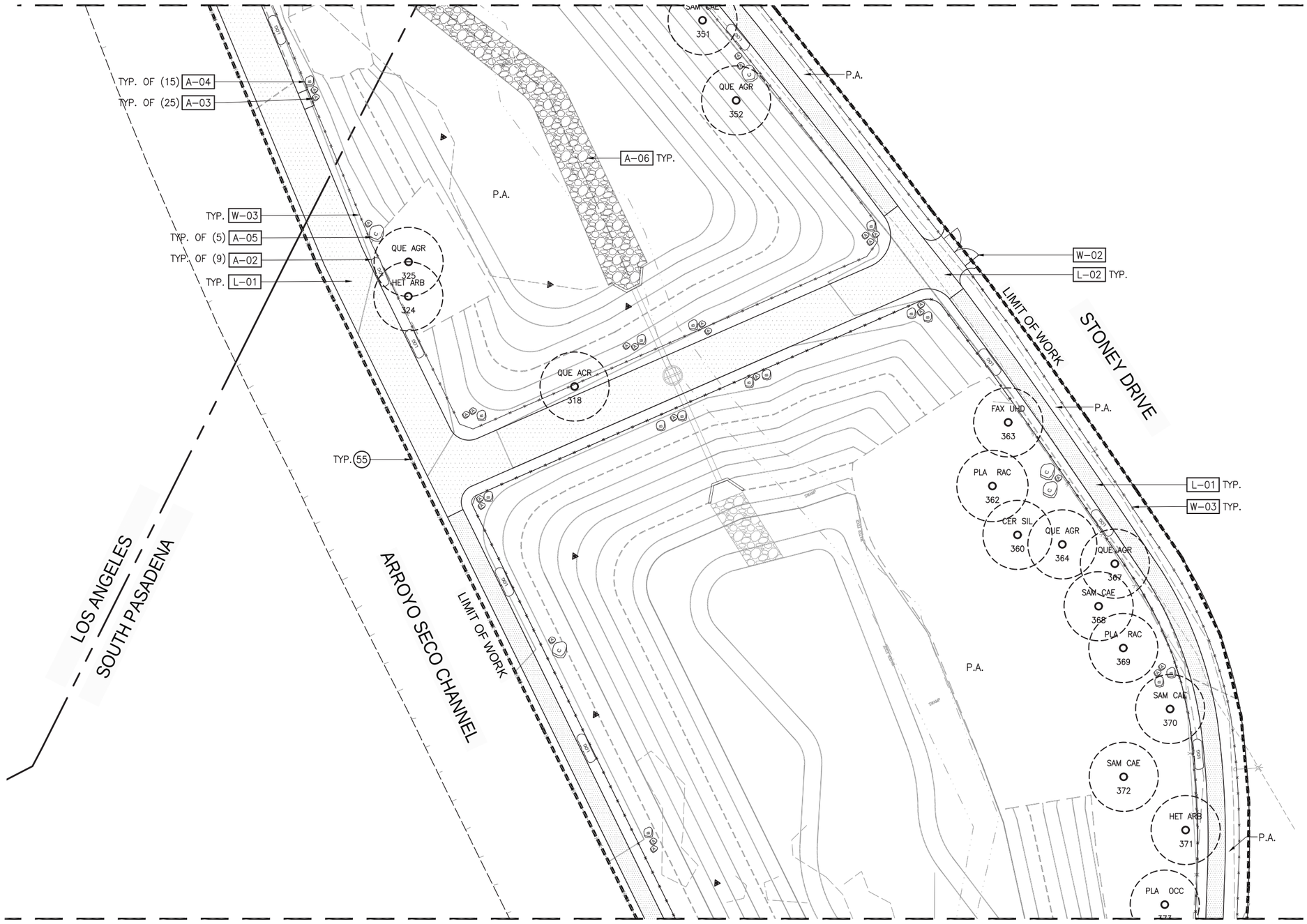
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Map not to scale

PSOMAS

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CONSTRUCTION KEYNOTES:

EXISTING REFERENCES:
51. TREE TO REMAIN.
52. CONCRETE CHANNEL.
53. PEDESTRIAN BRIDGE.
54. BRIDGE DECK.
55. CHAIN LINK FENCE.
56. GATE.
57. DIRECTIONAL SIGN.
58. WOOD FENCE.
59. HITCHING POST TO REMAIN.

CIVIL REFERENCES:
62. CONCRETE CURB.
63. MANHOLE/UNDERGROUND UTILITY.
64. CONCRETE CHANNEL COVER.
65. CONCRETE RETAINING WALL.
66. CONCRETE STAIRS.
67. VEHICULAR CONCRETE ENTRANCE.

Source: Craftwater Engineering, Inc 2024

San Pascual Landscape Construction Plan

Exhibit 2-17b

Arroyo Seco Water Reuse Project

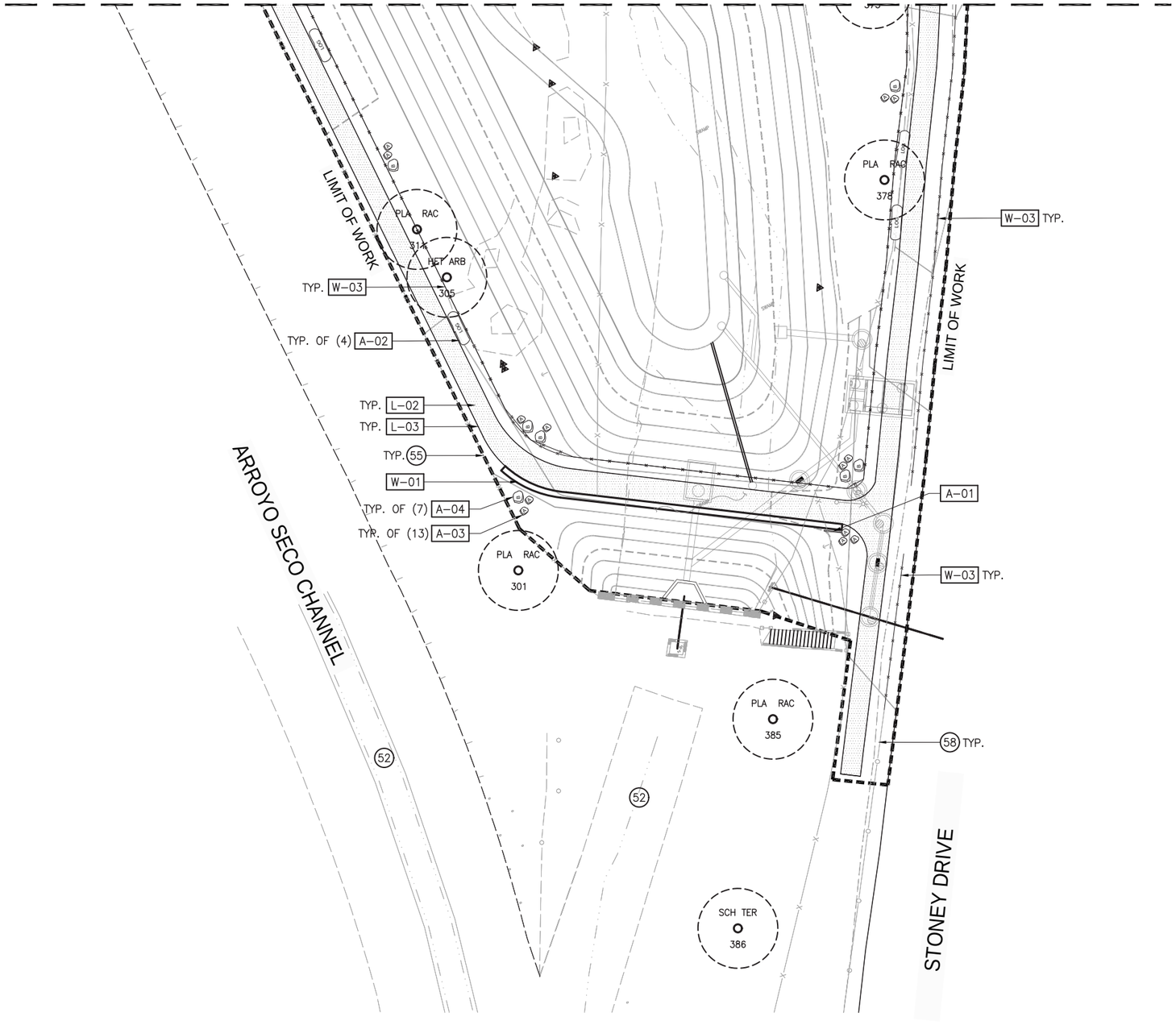
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CONSTRUCTION KEYNOTES:

EXISTING REFERENCES:
51. TREE TO REMAIN.
52. CONCRETE CHANNEL.
53. PEDESTRIAN BRIDGE.
54. BRIDGE DECK.
55. CHAIN LINK FENCE.
56. GATE.
57. DIRECTIONAL SIGN.
58. WOOD FENCE.
59. HITCHING POST TO REMAIN.

CIVIL REFERENCES:
62. CONCRETE CURB.
63. MANHOLE/UNDERGROUND UTILITY.
64. CONCRETE CHANNEL COVER.
65. CONCRETE RETAINING WALL.
66. CONCRETE STAIRS.
67. VEHICULAR CONCRETE ENTRANCE.

Source: Craftwater Engineering, Inc 2024

San Pascual Landscape Construction Plan

Exhibit 2-17c

Arroyo Seco Water Reuse Project

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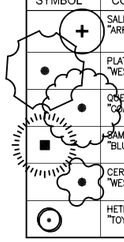
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TREE AND SHRUB LEGEND:



SYMBOL	BOTANICAL NAME "COMMON NAME"	SIZE (HTxSPR)	WUCOLS	QTY.	DETAIL
+	SALIX LASIOLEPSIS "ARROYO WILLOW"	15 GAL 3'X4'	HIGH (0.7)	72	5 /SR-L-14
●	PLATANUS RACEMOSA "WESTERN SYCAMORE"	15 GAL 5'X2.5'	MODERATE (0.5)	17	5 /SR-L-14
●	QUERCUS AGRIFOLIA "COAST LIVE OAK"	15 GAL 4'X3'	LOW (0.3)	24	5 /SR-L-14
■	SAMBUCUS NIGRA SSP. CAERULEA "BLUE ELDERBERRY"	15 GAL 4'X3'	LOW (0.3)	26	5 /SR-L-14
●	CERCIS OCCIDENTALIS "WESTERN REDBUD"	15 GAL 4'X3'	LOW (0.3)	4	5 /SR-L-14
⊙	HETEROMELES ARBUTIFOLIA "TOYON"	15 GAL 4'X3'	LOW (0.3)	12	1, 2 /SP-L2-16

TOTAL NEW TREES PLANTED: 155

SHRUB & GROUNDCOVER LEGEND: NATIVE MIX

SYMBOL	BOTANICAL NAME "COMMON NAME"	SIZE (HTxSPR)	WUCOLS	COMMENTS	DETAIL
	ASCLEPIAS FASCICULARIS "CALIFORNIA NARROWLEAF MILKWEED"	1 GAL	VERY LOW (0.1)	PLANTS ARE CITY SUPPLIED AND PERCENTAGE OF EACH PLANT WILL VARY DEPENDING ON PLANT AVAILABILITY 195 PLANTS	1, 2 /SP-L2-16
	CIRSIUM OCCIDENTALE "COBWEBBY THISTLE"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	ENCELIA CALIFORNICA "CALIFORNIA BRITTLEBUSH"	1 GAL	VERY LOW (0.1)		1, 2 /SP-L2-16
	ERIOGONUM ELONGATUM "LONG-STEM WILD BUCKWHEAT"	1 GAL	VERY LOW (0.1)		1, 2 /SP-L2-16
	ERIOPHYLLUM CONFERTIFLORUM "GOLDEN-YARROW"	1 GAL	VERY LOW (0.1)		1, 2 /SP-L2-16
	LUPINUS LONGIFOLILUS "LONG-LEAVED LUPINE"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	PENSTEMON CENTRANTHIFOLIUS "SCARLET BUGLER"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	PENSTEMON SPECTABILIS "SPECTACULAR BEARDTONGUE"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	SCROPHULARIA CALIFORNICA "CALIFORNIA FIGWORT"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	SALVIA APIANA "WHITE SAGE"	1 GAL	VERY LOW (0.1)		1, 2 /SP-L2-16
	STIPA LEPIDA "FOOTHILL NEEDLE GRASS"	1 GAL	VERY LOW (0.1)		1, 2 /SP-L2-16
	VERBENA LASIOSTACHYS "WOOLLY-FLOWERED VERVAIN"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16

SHRUB & GROUNDCOVER LEGEND: LOW NATIVE MIX

SYMBOL	BOTANICAL NAME "COMMON NAME"	SIZE (HTxSPR)	WUCOLS	COMMENTS	DETAIL
	ASCIEPIAS FASCICULARIS "NARROW-LEAF MILKWEED"	1 GAL		PLANTS ARE CITY SUPPLIED AND PERCENTAGE OF EACH PLANT WILL VARY DEPENDING ON PLANT AVAILABILITY 250 PLANTS	1, 2 /SP-L2-16
	CIESIUM OCCIDENTALE "COBWEBBY THISTLE"	1 GAL			1, 2 /SP-L2-16
	EPILOBIUM CANUM "CALIFORNIA FUCHSIA"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	ERIGONUM ELONGATUM "LONG-STEM WILD BUCKWHEAT"	1 GAL			1, 2 /SP-L2-16
	ERIOPHYLLUM CONFERTIFLORUM "GOLDEN YARROW"	1 GAL			1, 2 /SP-L2-16
	MELICA IMPERFECTA "LITTLE CALIFORNIA MELIC"	1 GAL			1, 2 /SP-L2-16
	DIPLACUS AURANTIACUS "ORANGE BUSH MONKEYFLOWER"	1 GAL			1, 2 /SP-L2-16
	MIRABILIS LAEVIS "SMOOTH FOUR O'CLOCK"	1 GAL			1, 2 /SP-L2-16
	PENSTEMON CENTRANTHIFOLIUS "SCARLET BUGLER"	1 GAL			1, 2 /SP-L2-16
	PENSTEMON SPECTABILIS "SPECTACULAR BEARDTONGUE"	1 GAL			1, 2 /SP-L2-16
	STIPA LEPIDA "FOOTHILL NEEDLE GRASS"	1 GAL			1, 2 /SP-L2-16
	VERBENA LASIOSTACHYS "WOOLLY-FLOWERED VERVAIN"	1 GAL			1, 2 /SP-L2-16

SHRUB & GROUNDCOVER LEGEND: CHAPARRAL

SYMBOL	BOTANICAL NAME "COMMON NAME"	SIZE (HTxSPR)	WUCOLS	COMMENTS	DETAIL
	ACOURTIA MICROCEPHALA "SMALL-HEADED ACOURTIA"	1 GAL	–	PLANTS ARE CITY SUPPLIED AND PERCENTAGE OF EACH PLANT WILL VARY DEPENDING ON PLANT AVAILABILITY 50 PLANTS	1, 2 /SP-L2-16
	CEANOTHUS LEUCODERMIS "CHAPARRAL WHITETHORN"	1 GAL	VERY LOW (0.1)		1, 2 /SP-L2-16
	DENDROMECON RIGIDA "BUSH POPPY"	1 GAL	VERY LOW (0.1)		1, 2 /SP-L2-16
	ELYMUS CONDENSATUS "GIANT WILD-RYE"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	ERIODICTYON CRASSIFOLIUM "THICK-LEAVED YERBA SANTA"	1 GAL	VERY LOW (0.1)		1, 2 /SP-L2-16
	HETEROMELES ARBUTIFOLIA "TOYON"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	KECKIELLA CORDIFOLIA "CLIMBING PENSTEMON"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	MELICA IMPERFECTA "LITTLE CALIFORNIA MELIC"	1 GAL	MODERATE (0.5)		1, 2 /SP-L2-16
	PENSTEMON CENTRANTHIFOLIUS "SCARLET BUGLER"	1 GAL	–		1, 2 /SP-L2-16
	RHAMNUS CROCEA "SPINY REDBERRY"	1 GAL	–		1, 2 /SP-L2-16
	RHUS AROMATICA "SKUNK BUSH"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	RIBES SPECIOSUM "FUCHSIA-FLOWERED GOOSEBERRY"	1 GAL	MODERATE (0.5)		1, 2 /SP-L2-16

SHRUB & GROUNDCOVER: MULEFAT SCRUB

SYMBOL	BOTANICAL NAME "COMMON NAME"	SIZE (HTxSPR)	WUCOLS	COMMENTS	DETAIL
	ACMISPON DOUGLASSIANA "MUGWORT"	1 GAL	–	PLANTS ARE CITY SUPPLIED AND PERCENTAGE OF EACH PLANT WILL VARY DEPENDING ON PLANT AVAILABILITY 275 PLANTS	1, 2 /SP-L2-16
	BACCHARIS SALICIFOLIA "MULEFAT"	LOCALLY HARVESTED CUTTING	MODERATE (0.5)		1, 2 /SP-L2-16
	CLEMATIS LIGUSTICIFOLIA "WESTERN VIRGIN'S BOWER"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	JUNCUS TECTILLIS "BASKET RUSH	1 GAL	HIGH (0.7)		1, 2 /SP-L2-16
	MUHLENBERGIA RIGENS "DEER GRASS"	1 GAL	MODERATE (0.5)		1, 2 /SP-L2-16
	RIBES AUREUM "GOLDEN CURRANT"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	ROSA CALIFONICA "CALIFORNIA BLACKBERRY"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16
	RUBUS URSINUS "CALIFORNIA BLACKBERRY"	1 GAL	MODERATE (0.5)		1, 2 /SP-L2-16
	PSEUDOGNAPHALIUM STRAMNEUM "STRAW-COLORED CUDWEED"	1 GAL	–		1, 2 /SP-L2-16
	SOLANUM DOUGLASII "DOUGLAS' NIGHTSHADE"	1 GAL	–		1, 2 /SP-L2-16
	SOLANUM VELUTINA "VELVETY GOLDENROD"	1 GAL	–		1, 2 /SP-L2-16
	VERBENA LASIOSTACHYS "WOOLLY-FLOWERED VERVAIN"	1 GAL	LOW (0.3)		1, 2 /SP-L2-16

SHRUB & GROUNDCOVER LEGEND: RIPARIAN HERBACEOUS LAYER

SYMBOL	BOTANICAL NAME "COMMON NAME"	SIZE (HTxSPR)	WUCOLS	COMMENTS	DETAIL
	ANEMOPSIS CALIFORNICA "YERBA MANSA"	1 GAL	MODERATE (0.5)	PLANTS ARE CITY SUPPLIED AND PERCENTAGE OF EACH PLANT WILL VARY DEPENDING ON PLANT AVAILABILITY 650 PLANTS	1, 2 /SR-L-14
	CAREX SPISSA "SAN DIEGO SEDGE"	1 GAL	LOW (0.3)		1, 2 /SR-L-14
	CYPERUS ERAGROSTIS "LOVERGRASS FLATSEDGE"	1 GAL	HIGH (0.7)		1, 2 /SR-L-14
	ELEOCHARIS MACROSTACHYA "LOVERGRASS FLATSEDGE"	1 GAL	HIGH (0.7)		1, 2 /SR-L-14
	ERYTHRANTHE CARDINALIS "SCARLET MONKEYFLOWER"	1 GAL	–		1, 2 /SR-L-14
	JUNCUS RUGULOSUS "WRINKLED RUSH"	1 GAL	–		1, 2 /SR-L-14
	LEPTOCHLOA FUSCA "SPRANGLETOP"	1 GAL	–		1, 2 /SR-L-14
	PLUCHEA ODORATA "SALTMARSH-FLEABANE"	1 GAL	–		1, 2 /SR-L-14
	RUMEX SALICIFOLIUS "WILLOE DOCK"	1 GAL	–		1, 2 /SR-L-14
	SETARIA PARVIFLORA "KNOTROOT BRISTLE GRASS"	1 GAL	MODERATE (0.5)		1, 2 /SR-L-14
	SOLIDAGO VELUTINA "VELVETY GOLDENROD"	1 GAL	MODERATE (0.5)		1, 2 /SR-L-14
	URTICA DIOICA "HOARY NETTLE"	1 GAL	–		1, 2 /SR-L-14

SHRUB & GROUNDCOVER LEGEND: COASTAL SAGE SCRUB

SYMBOL	BOTANICAL NAME "COMMON NAME"	SIZE (HTxSPR)	WUCOLS	COMMENTS	DETAIL
	ARTEMISIA CALIFORNICA "CALIFORNIA SAGEBRUSH"	1 GAL	VERY LOW (0.1)	PLANTS ARE CITY SUPPLIED AND PERCENTAGE OF EACH PLANT WILL VARY DEPENDING ON PLANT AVAILABILITY 400 PLANTS	1, 2 /SR-L-14
	ASCLEPIAS FASCICULARIS "NARROW-LEAF MILKWEED"	1 GAL	LOW (0.3)		1, 2 /SR-L-14
	BRICKELLIA CALIFORNICA "CALIFORNIA BRICKELLBUSH"	1 GAL	LOW (0.3)		1, 2 /SR-L-14
	DIPLACUS AURANTIACUS "ORANGE BUSH MONKEYFLOWER"	1 GAL	VERY LOW (0.1)		1, 2 /SR-L-14
	ERIOGONUM FASCICULATUM "CALIFORNIA BUCKWHEAT"	1 GAL	VERY LOW (0.1)		1, 2 /SR-L-14
	ENCELIA CALIFORNICA "CALIFORNIA ENCELIA"	1 GAL	LOW (0.3)		1, 2 /SR-L-14
	LUPINUS LONGIFOLILUS "LONG LEAF BUSH LUPINE"	1 GAL	–		1, 2 /SR-L-14
	PENSTEMON SPECTABILIS "SPECTACULAR BEARDTONUGE"	1 GAL	–		1, 2 /SR-L-14
	SALVIA APIANA "WHITE SAGE"	1 GAL	LOW (0.3)		1, 2 /SR-L-14
	SALVIA MELLIFERA "BLACK SAGE"	1 GAL	LOW (0.3)		1, 2 /SR-L-14
	STIPA LEPIDA "FOOTHILL NEEDLE GRASS"	1 GAL	VERY LOW (0.1)		1, 2 /SR-L-14

SHRUB & GROUNDCOVER LEGEND: EMERGENT WETLAND

SYMBOL	BOTANICAL NAME "COMMON NAME"	SIZE (HTxSPR)	WUCOLS	COMMENTS	DETAIL
	ANEMOPSIS CALIFORNICA "YERBA MANSA"	1 GAL	MODERATE (0.5)	PLANTS ARE CITY SUPPLIED AND PERCENTAGE OF EACH PLANT WILL VARY DEPENDING ON PLANT AVAILABILITY 325 PLANTS	1, 2 /SP-L2-16
	CAREX SPISSA "SAN DIEGO SEDGE"	1 GAL			1, 2 /SP-L2-16
	CYPERUS ERAGROSTIS "TALL FLATSEDGE"	1 GAL	HIGH (0.7)		1, 2 /SP-L2-16
	ELEOCHARIS MACROSTACHYA "LARGE-SPIKED SPIKERUSH"	1 GAL			1, 2 /SP-L2-16
	ERYTHRANTHE GUTTATA "SCARLET MONKEYFLOWER"	1 GAL			1, 2 /SP-L2-16
	JUNCUS RUGULOSUS "WRINKLED RUSH"	1 GAL			1, 2 /SP-L2-16
	JUNCUS XIPHIOIDES "IRIS-LEAVED RUSH"	1 GAL			1, 2 /SP-L2-16
	PLUCHEA ODORATA "SALT MARSH FLEABANE"	1 GAL	MODERATE (0.5)		1, 2 /SP-L2-16
	RUMEX SALICIFOLIUS "WILLOW DOCK"	1 GAL			1, 2 /SP-L2-16
	SOLIDAGO VELUTINA "VELVETY GOLDENROD"	1 GAL			1, 2 /SP-L2-16
	STACHYS ALBENS "WHITE HEDGE-NETTLE"	1 GAL			1, 2 /SP-L2-16
	URTICA DIOICA "HOARY NETTLE"	1 GAL			1, 2 /SP-L2-16

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Source: MIG 2022

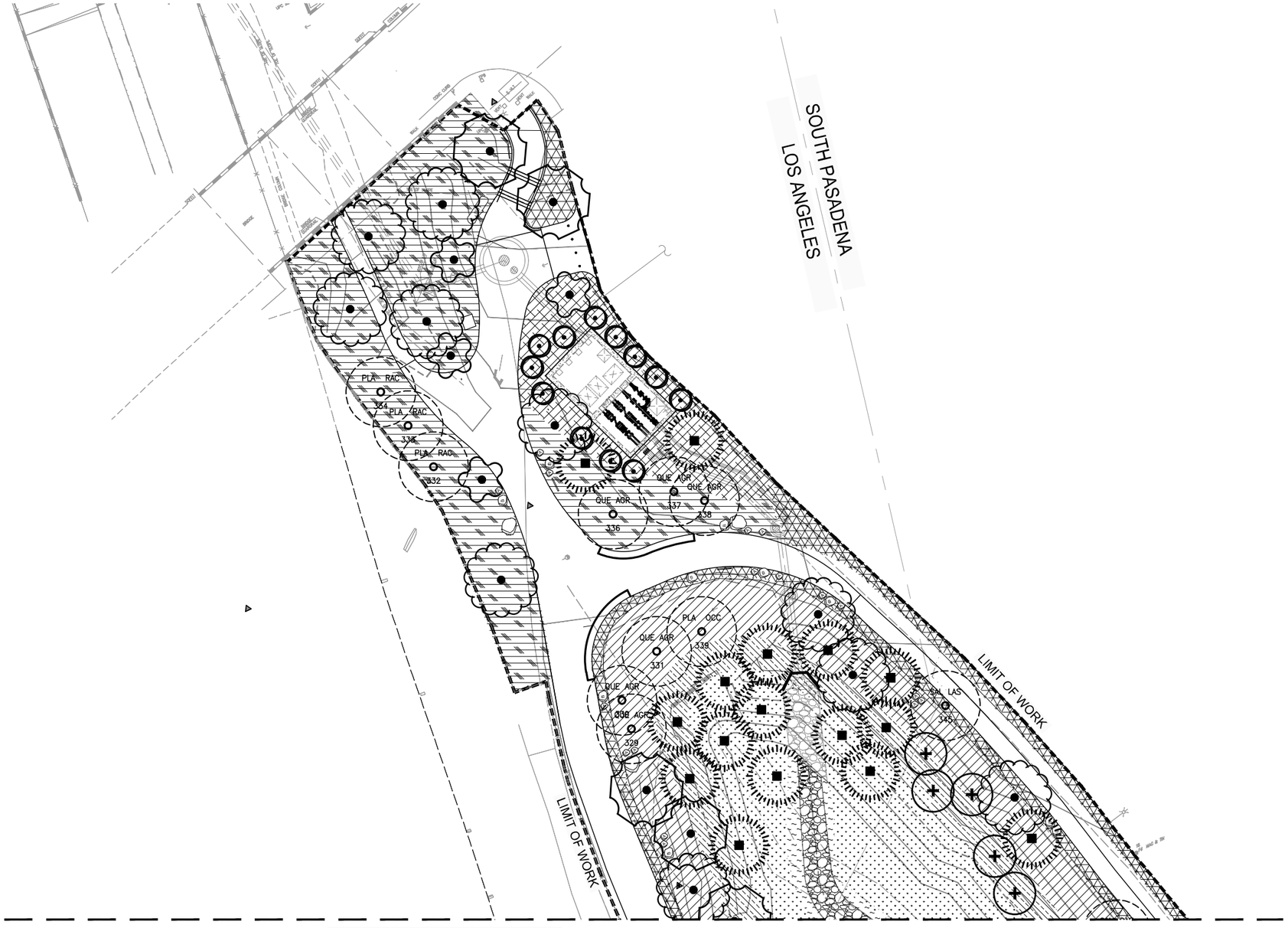
San Pascual Planting Plan

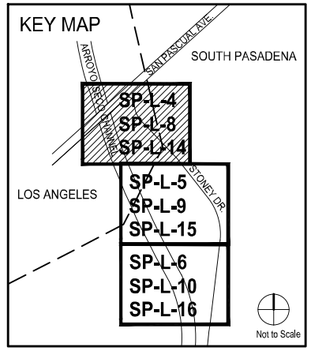
Arroyo Seco Water Reuse Project

Exhibit 2-18a

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Source: MIG 2022

San Pasqual Planting Plan

Exhibit 2-18b

Arroyo Seco Water Reuse Project

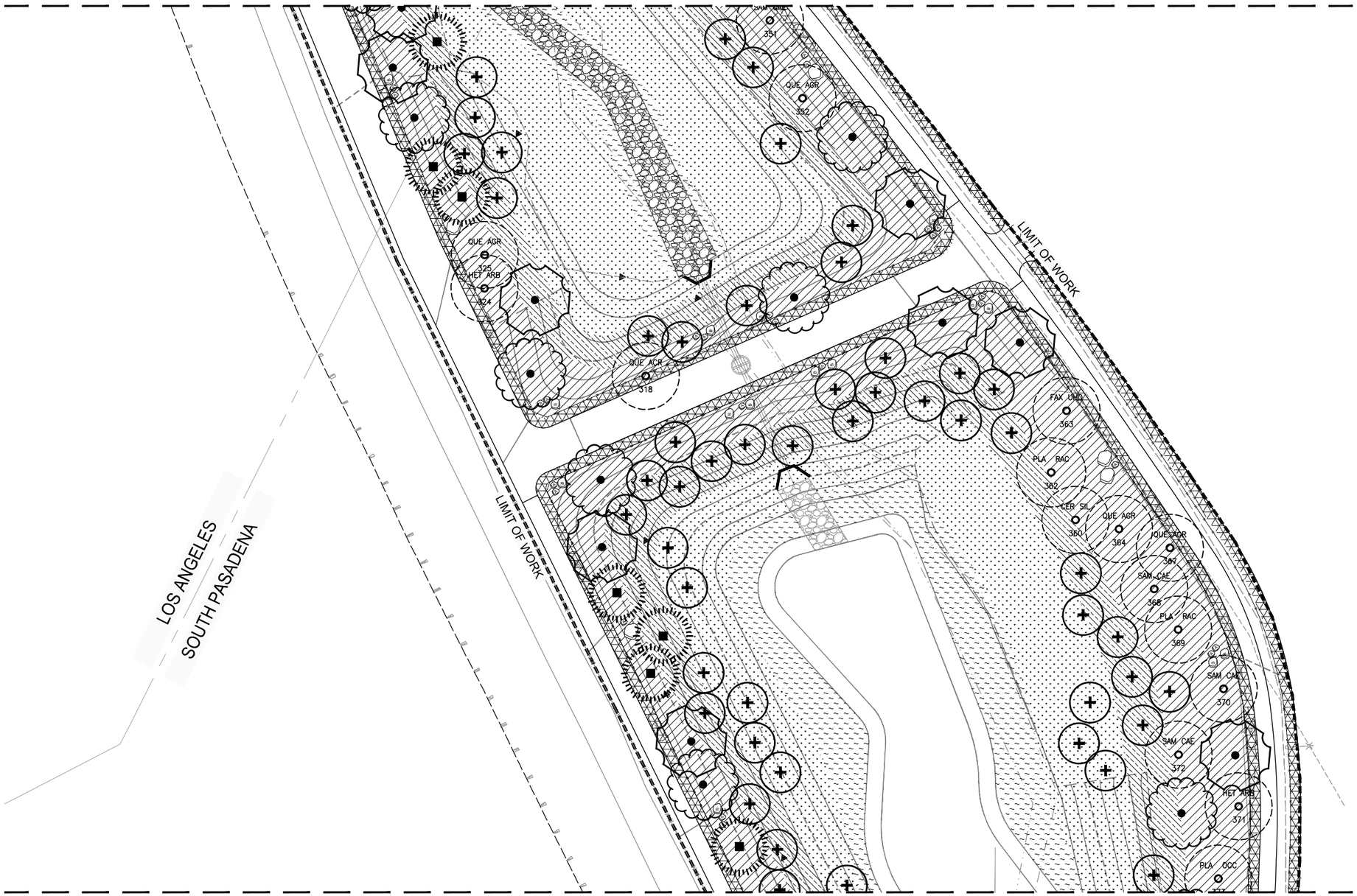
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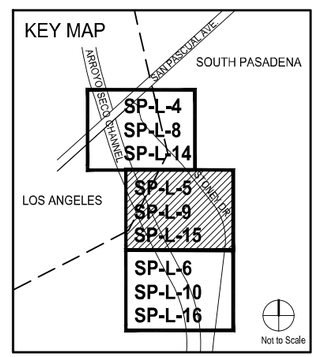
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MATCH LINE - SEE SHEET SP-L-22



MATCH LINE - SEE SHEET SP-L-24



Source: MIG 2022

San Pascual Planting Plan

Exhibit 2-18c

Arroyo Seco Water Reuse Project

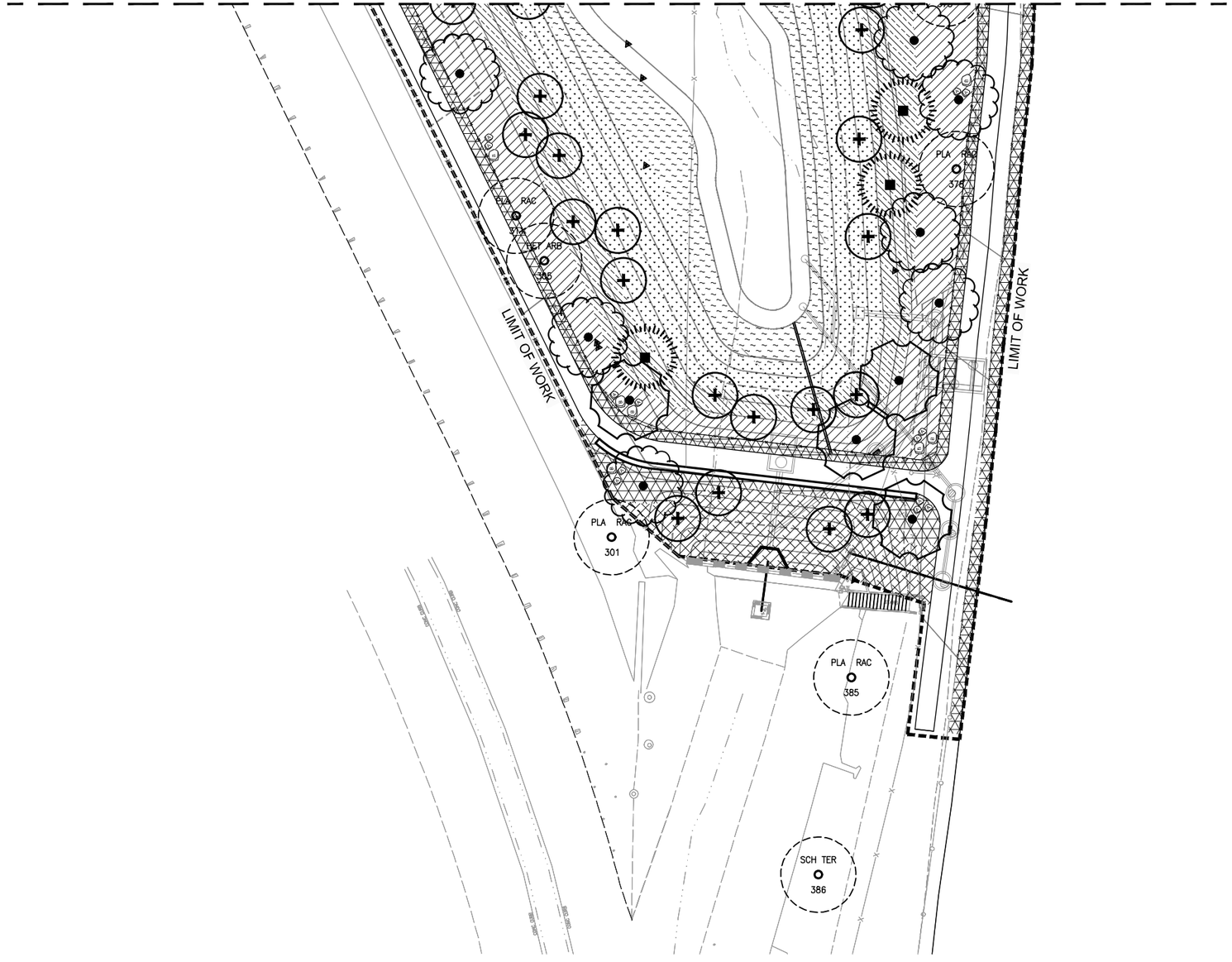
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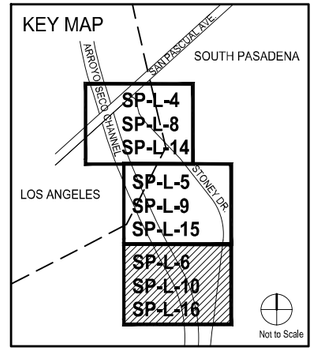
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MATCH LINE - SEE SHEET SP-L-23





Source: MIG 2022

San Pascual Planting Plan

Exhibit 2-18d

Arroyo Seco Water Reuse Project

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TABLE 2-4
AVERAGE ANNUAL PERFORMANCE OF THE SAN PASCUAL BMP (AF)

Stormwater Filtration	Irrigation Reuse	Groundwater Recharge	Water Supply Benefit	Total Runoff Treated
214	30	258	320	534

af: acre-feet
Source: Craftwater Engineering, Inc. 2022 (September). *San Pascual Stormwater Capture Facility; Stormwater Capture Study Technical Memorandum*. Los Angeles, CA: Craftwater Engineering, Inc.

The proposed San Pascual BMP can treat 100 percent of dry-weather flows, as required under the Safe, Clean Water Program, while also removing over 70 percent of divertible pollutants in wet-weather runoff. The annual irrigation water demand has been estimated at 30 af/year for the Arroyo Seco Golf Course. The San Pascual BMP has been designed to provide the total estimated annual irrigation water to the Golf Course, thereby reducing demand on potable water supplies. The water diverted for reuse at the Golf Course would be 100 percent dry weather flows.

Other BMP infrastructure that would be installed to operate, maintain, and monitor the San Pascual BMP include reinforced concrete pipe or RCP, manholes, inlet and outlet headwalls and wingwalls, jellyfish filter, turbidity meter, sampling point, and actuated valve vault. While these components are shown on the engineering plans, they would be hidden from view as much as feasible by location (e.g., underground) or screening. As indicated on Exhibit 2-14, some existing engineering features would be abandoned in place. Also, electrical connection for the Project site will be off an existing pole, and no new utility pole is proposed. Additionally, a two-inch-diameter water line would be installed across Stoney Drive between the San Pascual site and Arroyo Park. The water line would have a meter and backflow preventer onsite and would connect to an existing six-inch-diameter water line on the east side of Stoney Drive. The off-site water line would be installed via trenching; due to the small size of the proposed pipeline the width and depth of the trench would likely be less than one foot. The surface would be returned to its existing condition after installation of the water line is completed. The purpose of this water line would initially be to provide irrigation water to the newly planted landscaping; after the landscaping is established the on-site irrigation infrastructure would be removed but the water line would remain as a quick connection point in the event of extended drought conditions, "hot spots" in the landscape that require temporary supplemental water, and/or for maintenance needs.

The Project would improve the existing pedestrian/equestrian trail along the eastern side of the site, which is the sole existing recreation feature at the San Pascual site. The Project would also provide new pathways to and around both basins as stabilized DG trails (refer to Exhibits 2-12 through 2-14). A portion of the new trail would be designed to allow maintenance vehicle access, as well as equestrian and pedestrian use; and a portion of the new trails would be designed to be pedestrian-only paths. A vehicular gate would be installed on the east side of the site where the two basins are divided, for maintenance access only. The Project would expand public access for passive recreation opportunities throughout the

San Pascual site, enhance the existing trail network connecting Pasadena and South Pasadena, and contribute to regional trail connectivity.

2.4.6 OFF-SITE GOLF COURSE WATER HARVESTER

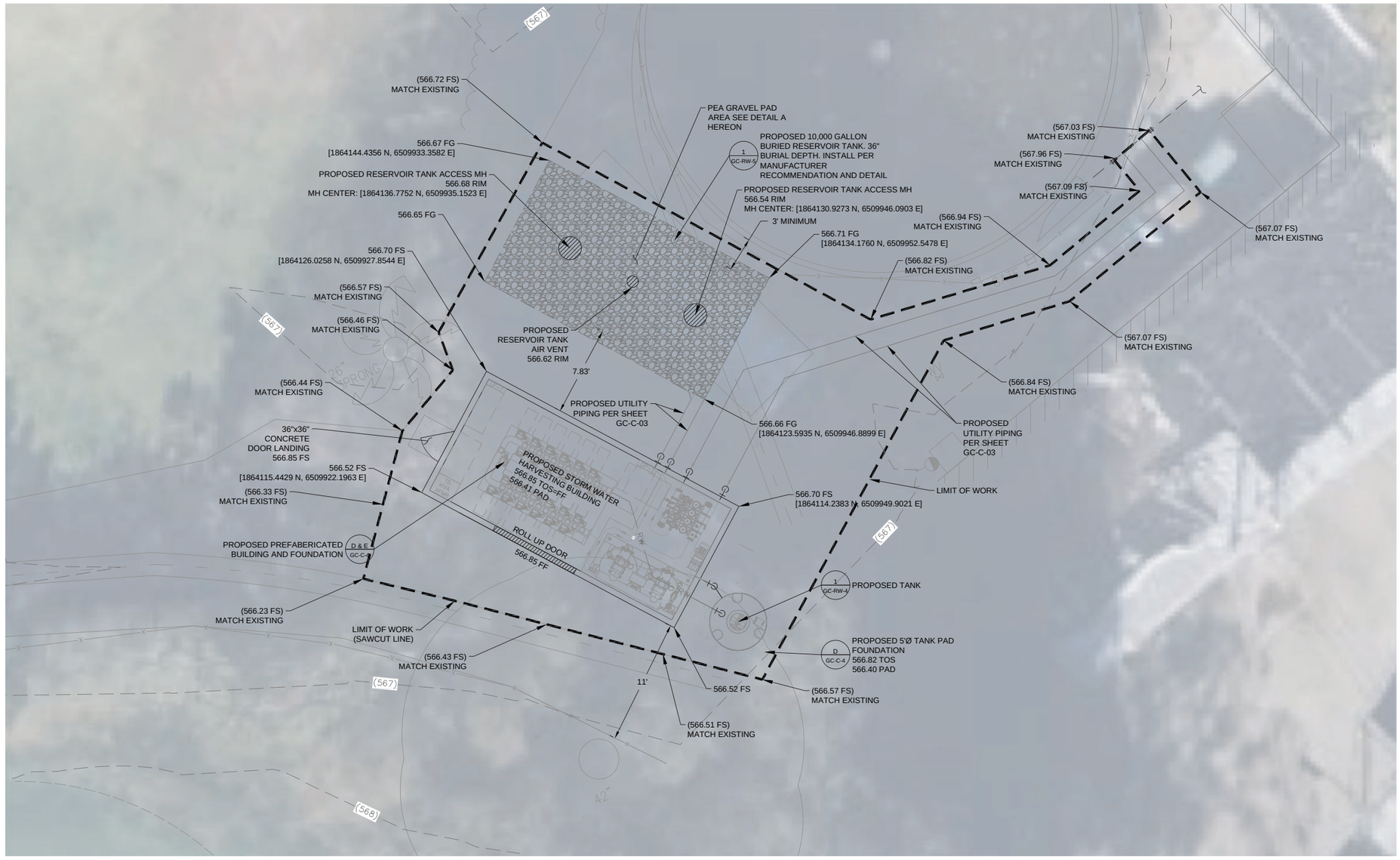
The proposed water harvester would be housed within an approximately 12-foot by 24-foot (288 square foot [sf]) prefabricated building with a small (approximately 1,000 gallon) aboveground storage tank (AST) situated adjacent to the building. These pieces of infrastructure would be installed on a concrete pad and located immediately south of the existing water reservoir within the maintenance yard. The water harvester and related infrastructure would be accessible via the existing paved road branching off Lohman Lane, which parallels the west side of the Golf Course. Exhibit 2-19, Off-Site Water Harvester Site Plan and Grading Plan, shows the configuration and scale of proposed components as well as proposed grading.

2.4.7 PROJECT CONSTRUCTION

Project construction would begin in Fall 2026 and occur over a total period of approximately 17 months in a single phase, with semi-consecutive construction of the San Rafael and San Pascual BMPs. The San Rafael construction period would be approximately 9 months total and the San Pascual construction period would be approximately 13 months total. Construction at the San Pascual site would be initiated after demolition, site preparation, and grading activity at San Rafael are complete, which is expected to require about 4 months. Therefore, there would be construction activity at San Rafael only for 4 months, construction at both sites simultaneously for 5 months, and construction at San Pascual only for 8 months. Construction of both sites is expected to be completed in June 2028.

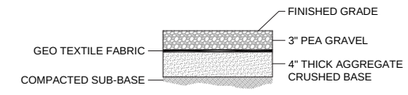
Project construction is anticipated to occur from Monday through Friday, between the hours of 7:00 AM and 5:00 PM, without activity on weekends or federal holidays. The Project is anticipated to be fully operational in Summer 2028. Construction equipment would vary by phase and include, but not be limited to: an excavator(s), bulldozer(s), tree trimmer, skid steer/bobcat loader(s), mobile crane, and compact roller. Asphalt paver and cement trucks would visit the sites as needed to implement the Project. Equipment staging and parking for construction workers would be on public property, either on-site or on the surrounding areas.

Exhibit 2-20, San Rafael Construction Footprint; and Exhibit 2-21, San Pascual Grading Footprint, illustrate the Project disturbance footprints and the potential staging and laydown areas in the vicinity of the Project for each BMP site. Table 2-5, Summary of Disturbance and Staging Areas (AC), provides the acreage of the disturbance, or grading, footprint and the staging and laydown area(s) for each BMP site.



LEGEND/ABBREVIATIONS

	PROPOSED PEA GRAVEL PAD
	LIMITS OF WORK
XXX.XX	PROPOSED ELEVATION
(XXX.XX)	EXISTING ELEVATION
—XXX—	PROPOSED CONTOUR
– –(XXX)– –	EXISTING CONTOUR
FG	FINISHED GRADE
FS	FINISHED SURFACE
RIM	RIM ELEVATION
FL	FLOW LINE
FL-HP	FLOW LINE HIGH POINT
FL-LP	FLOW LINE LOW POINT
EP	EDGE OF PAVEMENT
TOS	TOP OF SLAB
PAD	PAD ELEVATION



A PEA GRAVEL SECTION
SCALE: NTS

Source: Craftwater Engineering, Inc 2024

Off-Site Water Harvester Site Plan and Grading Plan

Exhibit 2-19

Arroyo Seco Water Reuse Project

N W E S

Map not to scale

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San Rafael Site Construction Footprint

Exhibit 2-20

Arroyo Seco Water Reuse Project

N
W E
S

0 60 120
Feet

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San Pascual Site Construction Footprint

Exhibit 2-21

Arroyo Seco Water Reuse Project

N
W
E
S

0 60 120 Feet

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TABLE 2-5
SUMMARY OF DISTURBANCE AREAS (AC)

BMP Site	Disturbance (Grading) Footprint	Staging and Laydown Area
San Rafael	1.4	0.30
San Pascual	2.2	0.25
Totals	**3.6**	**0.54**

ac: acres
Notes: Some totals may not add due to rounding. The San Pascual staging area is paved/disturbed.

Construction would not require staging along adjacent public roadways or other areas that would disrupt existing traffic patterns. There may be occasions where large construction equipment or construction materials are transported across Stoney Drive (i.e., between the staging/laydown area and the site), requiring temporary traffic control. Also, as discussed above, a two-inch-diameter water line would be installed across Stoney Drive via trenching. This would involve temporary closure of one lane of the road at a time. However, no street or other lane closures, or street improvements, would be required to implement the Project.

As shown in Exhibit 2-20, for the San Rafael site, four separate, irregularly-shaped, areas at the Project footprint boundary have been identified for staging. Because of the steep slopes adjacent to the north and west and the Arroyo Seco Channel to the east, available space for construction activity at the San Rafael site is limited. The staging areas at the San Rafael site encompass 0.30 acre. The primary access point for construction traffic at the San Rafael site would be via San Pascual Avenue, then north through the paved parking lot at San Pascual Stables and continuing west along the unpaved road immediately north of the stables towards the Channel. A temporary bridge would span the Arroyo Seco Channel at this point to provide access to the west side of the Channel. The bridge is necessary to have access to the San Rafael site that would accommodate the potential weight of all anticipated construction vehicles. The abutments on either side of the temporary bridge would not touch the limits of the Channel itself and would be removed at the end of construction. A safe path for equestrian and pedestrian traffic at the northern (upstream) end of the San Rafael site during construction would be made available to the maximum extent feasible. There would be brief periods where the existing trail alignment on the west side of the Channel at the bridge crossing would be restricted to public access for safety and/or to allow the proposed improvements in this portion of the site to be completed. The City of Pasadena has been in communication with the San Pascual Stables and would continue to communicate regarding equestrian access at both sites throughout the construction period.

As shown in Exhibit 2-21, for the San Pascual site, the paved parking lot with approximately 18 spaces that serves the adjacent ballfields in the southeast corner of San Pascual Avenue and Stoney Drive, in South Pasadena, has been identified as a staging and laydown area. This would result in closure of this parking lot to public and other municipal use during the construction period. However, restrooms in the parking lot will remain open to the public. The staging area at the San Pascual site encompass 0.25 acre. There is additional parking for

the ballfields and Arroyo Park along Stoney Drive and in the Arroyo Park paved parking lot, as well as street parking available on San Pascual Avenue. At least a single lane for vehicular traffic along Stoney Drive at the San Pascual site as well as a safe detour for equestrian and pedestrian traffic would be available at all times through the construction period. The main point of ingress and egress for construction traffic, including private worker vehicles, at the San Pascual site would be via San Pascual Avenue and Stoney Drive.

For the water harvester, installation would involve constructing a concrete pad slightly larger than the 288-sf prefabricated building and an approximate 5-foot by 5-foot (25 sf) concrete pad for the AST. Excavation for the concrete pads is estimated to be in the order of 1 foot deep. The existing concrete paving would be removed and a foundation appropriate for the water harvester building and AST would be constructed. Power for the water harvester would be via a connection to the existing Southern California Edison (SCE) facilities present within the maintenance yard. Trenching to lay the electric connection to the south or southeast exterior of the main building in the yard, a distance of 10 to 15 feet, would have a depth of approximately 3 feet. It is possible the pumps in the existing reservoir would need to be replaced. If this is necessary, the existing pumps are on rails and would be pulled out and replaced in kind. No dewatering of the reservoir would be required. Ingress and egress for construction traffic associated with installation of the water harvester and related infrastructure would be via Lohman Lane.

Construction and demolition debris would be disposed at Scholl Canyon Landfill, located approximately 2.5 miles northwest of the site, at 3001 Scholl Canyon Road in Glendale. Also, consistent with the City of Pasadena's *Construction and Demolition Waste Management Ordinance* (Section 8.62 et. seq. of the PMC), a minimum of 75 percent of the construction and demolition debris generated during construction would be diverted through recycling or reuse. Prior to diversion, an estimated 600 cubic yards (cy) of demolition debris, 3,000 cy of greenwaste, and 6,000 cy of excavated soil would be generated from construction of both sites. Grading and excavation at both sites would range from 2 to 15 feet in depth. Assuming use of 14-cy haul trucks, construction of the San Rafael site would generate an estimated 300 one-way truck trips over the course of 4 months, or an average of 3 to 4 one-way truck trips per day. Construction of the San Pascual site would generate an estimated 600 one-way truck trips over the course of 5 months, or an average of 6 one-way truck trips a day.

Construction requires working on portions of the San Rafael Creek under LACFCD jurisdiction. The LACFCD requires that the hydraulics of the existing infrastructure not be negatively affected, and that access is maintained. The cities would be required to enter into a Use and Maintenance Agreement with the LACFCD for continued access to the constructed diversion structures.

2.4.8 PROJECT OPERATION AND MAINTENANCE

Public Use and Access

The recreation features proposed as part of the Project would be available for public use from sunrise to sunset, which is consistent with the Arroyo Seco as a whole. The proposed Project would provide expanded and improved physical facilities and open space resources

to existing users of the Lower Arroyo Seco. However, the Project is not anticipated to directly increase use of the Lower Arroyo Seco area as a destination. It is expected that existing users of the Arroyo Seco area would use the proposed Project features, as they are similar to passive and active recreation features existing in the area.

Maintenance

Long-term maintenance of the proposed systems is vital to its continued operation. The responsible party for the operation and maintenance (O&M) of Project would be both Pasadena and South Pasadena for the San Rafael and San Pascual sites, respectively. The two cities would coordinate to ensure efficient maintenance and operation of the proposed BMPs. Anticipated long-term O&M tasks at one or both sites would include, but not be limited to:

- Diversion Structure – Inspection and Cleaning
- Wet Well – Wet and Dry Season Inspection and Cleaning
- Storage – Wet and Dry Season Inspection and Cleaning
- Pump Station – Inspection and Cleaning
- Stormwater Harvesting Device – Inspection & Cleaning
- Pretreatment Device – Vacuum
- Post-Treatment Filter Device – Vacuum
- Valve Maintenance
- Control Panel Maintenance
- Water Harvester Maintenance

Long-term maintenance is expected to involve, on average, a single visit to both sites and the water harvester per month by a two- to four- person crew during a one-day (e.g., up to eight-hour) visit. The maintenance performed during each visit would vary depending on the equipment status and the season (wet or dry). It is expected that maintenance personnel would travel to and from the sites in one to two vehicles – such as a pickup truck, or pickup truck and a vacuum truck, for instance. Occasional visits for more intensive maintenance activity or to respond to equipment issues may occur. This is an estimate of the O&M program for purposes of this EIR, as the final maintenance plan would be completed at the end of construction when actual brands and part information are available. The maintenance plan would include details on equipment needed during O&M activities and standard practices and procedures.

The Project would also have a vector (i.e., mosquito) minimization plan based on guidelines outlined in the California Department of Public Health's Checklist for Minimizing Vector Protection in Stormwater Management Sources. As part of design process, Pasadena has coordinated with the Greater Los Angeles County Vector Control District to review the design documents and ensure the system meets all requirements and minimizes the potential for vector increases.

Monitoring

Pasadena is required to demonstrate Project performance to the LARWQCB for acceptance towards the water quality objectives. A full monitoring plan would be developed as a part of the 100 percent design documentation and implemented as part of routine O&M activity. The preliminary constituents of concern identified for monitoring are metals (copper, lead, and zinc), bacteria, nitrogen compounds, and trash; and flow, pH, and temperature would also be monitored.

2.5 APPROACH TO CUMULATIVE IMPACTS

Section 15355 of the State CEQA Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts". Section 15355 also specifies:

a) The individual effects may be changes resulting from a single project or a number of separate projects.

b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Section 15130(b)(1) of the State CEQA Guidelines describes two allowable methods to determine the scope of projects considered in the cumulative impact analysis, as follows:

1) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or

2) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

The cumulative impact analysis contained in this EIR uses method 1, the list method. Because the Project would not result in other demographic changes (e.g., additional population, housing, jobs), the list method is the more appropriate.

Because the significant impacts are limited to the construction period and because these effects would have a limited geographic effect (i.e., on-site or nearby), a search was conducted for reasonably foreseeable related projects within about one-quarter mile of both sites that could potentially be under construction at the same time as the Project. The City of Pasadena consulted with the planning and public works departments of the cities of Pasadena, South Pasadena, and Los Angeles. Based on this consultation, it was determined there would be no qualifying related projects in Pasadena or Los Angeles. South Pasadena determined there are two residential additions in the single-family neighborhood to the east-

southeast of the San Pascual site that would be related projects for the purposes of the cumulative impacts analysis.

These two related projects are approximately 1,650 feet and 2,175 feet southeast of the San Rafael site, and approximately 550 feet and 950 feet east-southeast of the San Pascual site. As these are occurring at private, occupied residences, the street addresses of these locations are not provided to ensure the residents' privacy. Both projects are in the area northeast of the Arroyo Drive and Sterling Place intersection.

There are no projects in the vicinity of the Project sites that would be considered major construction activity. The limited scope of related projects is unsurprising as the areas surrounding the Project sites are primarily public open space and established residential land uses.

Pursuant to Section 15130(b) of the State CEQA Guidelines:

> The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

2.6 PROJECT OBJECTIVES

Section 15124 of the State CEQA Guidelines requires an EIR to include a statement of the proposed project's objectives. This disclosure will assist in developing the range of project alternatives to be investigated in the EIR, as well as to provide a rationale for the adoption of a Statement of Overriding Considerations if one is needed. Arroyo Seco Water Reuse Project seeks to achieve the following key objectives:

1. Improve water quality in the Arroyo Seco Channel and support the goals described in the Enhanced Watershed Management Program and the Load Reduction Strategy plan.
2. Rehabilitate San Rafael Creek by providing a natural creek bed for low flow events. The proposed project will remove trash, metals, and nutrients that would otherwise flow to the Arroyo Seco Channel. Project will capture dry weather flows to treat the bacteria as required in the bacteria Total Maximum Daily Load (TMDL) issued by the Regional Water Quality Control Board to meet compliance requirements. Also eliminate diversion to the sewer system, in complying with the TMDL.
3. Enhance the existing sites by installing nature based, natural treatment wetlands and infiltration basins to recharge groundwater.
4. Provide for treated dry-weather flow to offset the potable water demand required to irrigate the golf course at the San Pascual site.

5. Provide for native habitat, educational opportunities, and diverse vegetation to the existing spaces encouraging habitat for wildlife. Different plant life emphasizing native vegetation can be planted in the drier infiltration basin sections than the treatment wetlands. These will protect, enhance, and restore habitat, green space, and usable space.
6. At San Rafael site, create passive recreation space that is currently inaccessible and unusable.
7. At San Pascual site, remove invasive Mexican Fan Palms, which are a fire hazard and unauthorized recreational uses (i.e., BMX bike trail, undefined trails). Reestablish inoperable wetlands and address ponding issue at south end of site where trash accumulates, algae grows and creates an unhealthy vector issue.
8. Educate the public on integrated systems and sustainable resources practices.
9. Improve public access and use.
10. Rehabilitate the existing trail along the Arroyo Seco.
11. Plant additional native plants and trees for both sites to increase existing tree count to reduce heat island effect. Native trees that are part of the post-construction landscape plan will contribute to increased tree count and shade for the area.
12. Contribute towards flood retention capabilities of the whole storm drain system by enhancing the detention capabilities of the system. The volume detention contributes to flood management, and because this project site is in the upland areas of the greater watershed, it offers distributed volume control that is needed across the watershed to mitigate flooding from the largest rain events.

2.7 INTENDED USES OF THE EIR

2.7.1 CITY OF PASADENA

The City of Pasadena is expected to use the information contained in this EIR for consideration of approvals related to and involved in Project implementation. Actions to be considered by the City, after implementation of the CEQA process, include, but not be limited to:

- Certification of the Final EIR for Arroyo Seco Water Reuse Project;
- Approval of Arroyo Seco Water Reuse Project;
- Urban Forestry Advisory Committee Review[2],
- Award of contract for construction of the Arroyo Seco Water Reuse Project, and

[2] UFAC (Urban Forestry Advisory Committee) review is not a discretionary action, but this body's review is used as part of Pasadena's discretionary decision-making regarding removal of trees on public lands.

- Other discretionary and ministerial permits and approvals that may be deemed necessary, including but not limited to, grading permit, foundation permit, and building permit.

City of South Pasadena

Pursuant to the MOU between Pasadena and South Pasadena executed in 2020, South Pasadena would rely on Pasadena's actions as Lead Agency under CEQA, including approval of the Project and adoption of the EIR, and to award and oversee the contract for construction of the Project. However, South Pasadena would be required a to issue of a tree removal permit for Project implementation.

City of Los Angeles

Similar to the MOU with South Pasadena, the City of Los Angeles will enter into an agreement with Pasadena and would rely on Pasadena's actions to implement the Project. This agreement establishes that Pasadena can have access to construct that portion of the San Pascual site within Los Angeles without additional discretionary actions by Los Angeles. The agreement also establishes that South Pasadena and Pasadena would have access to operate and maintain the portion of the San Pascual site within Los Angeles in perpetuity.

2.7.2 RESPONSIBLE AND TRUSTEE AGENCIES

State law requires that all EIRs be reviewed by trustee and responsible agencies. A "Trustee Agency" is defined in Section 15386 of the State CEQA Guidelines as "a State agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California". Per Section 15381 of the State CEQA Guidelines, "the term 'Responsible Agency' includes all public agencies other than the Lead Agency which have discretionary approval power".

This EIR is intended to serve as the primary environmental document pursuant to CEQA for actions associated with the Project, including all discretionary approvals required to implement the Project, including those made by responsible trustee, and other public agencies that may be required to grant approvals and permits or coordinate with the City as part of Project implementation. These agencies include, but are not limited to, those listed in Table 2-6, Other Agency Approvals and Requirements.

TABLE 2-6
OTHER AGENCY APPROVALS AND REQUIREMENTS

Agency	Approval Required
California Department of Fish and Wildlife	Clean Water Act / Streambed Alteration Agreement
California Department of Parks and Recreation	Prop 68 Urban Counties Per Capita Program
Greater Los Angeles County Vector Control District	Mosquito Abatement
Los Angeles County	Measure W / Safe Clean Water Program
Los Angeles County Flood Control District	Major Modification Permit, Discharge Permit, Use and Maintenance Agreement
Los Angeles County Department of Public Health	Cross Connection and Water Pollution Control Program
Los Angeles Regional Water Quality Control Board	Clean Water Act / Section 401 Water Quality Certification
State Water Resources Control Board	Construction General Permit
U.S. Army Corps of Engineers	Clean Water Act / Section 404 Permit

2.8 REFERENCES

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3.0 ENVIRONMENTAL ANALYSIS

In accordance with Sections 15125 and 15126(a) to (c) of the California Environmental Quality Act (CEQA) Guidelines, this section of the EIR analyzes those environmental topics where the Project could result in "potentially significant impacts", as identified in the Notice of Preparation (NOP) included in Appendix A-1. The City of Pasadena identified the following topics as requiring detailed EIR analysis:

- Aesthetics (Section 3.1),
- Air Quality (Section 3.2),
- Biological Resources (Section 3.3),
- Cultural and Paleontological Resources (Section 3.4),
- Greenhouse Gas Emissions (Section 3.5),
- Hydrology and Water Quality (Section 3.6),
- Land Use and Planning (Section 3.7),
- Noise (Section 3.8),
- Public Services and Recreation (Section 3.9),
- Tribal Cultural Resources (Section 3.10), and
- Wildfire (Section 3.11).

Each topical section includes the information presented in the format described further below under the heading "Environmental Analysis Format".

As discussed in Section 1.0, Introduction, the City determined there would be no impacts or less than significant impacts to the following environmental topics:

- Agriculture and Forestry Resources,
- Energy,
- Geology and Soils,
- Hazards and Hazardous Materials,
- Mineral Resources,
- Population and Housing,
- Transportation, and
- Utilities and Service Systems.

Therefore, these topics do not require, and the EIR does not set forth any further analysis of these topics. Section 1.0 provides a brief analysis of each of these topics to support the Lead Agency's determination.

Where a potentially significant environmental effect has been identified, Project-specific mitigation measures have been included. Any regulatory requirement or mitigation measure, and timing thereof, is subject to the approval of the City. The two components of the Regulatory Requirements and Mitigation Measures presented in this EIR are described below:

- **Regulatory Requirements (RRs).** These requirements are based on local, State, or federal regulations or laws that are required independently of the CEQA process but also serve to offset or prevent certain environmental impacts. Examples include compliance with the provisions of the California Building Code, South Coast Air Quality Management District Rules, and local agency ordinances. Additional requirements may be imposed on the Project by government agencies during the approval process, as appropriate.
- **Mitigation Measures (MMs).** Where a potentially significant environmental effect has been identified and is not reduced to a level considered less than significant with the application of RRs, feasible, appropriate, Project-specific mitigation measures have been identified consistent with Section 15126.4 of the State CEQA Guidelines.

Section 15126.4(a) of the State CEQA Guidelines requires lead agencies to consider feasible mitigation measures to avoid or substantially reduce a project's significant environmental impacts.

Environmental Analysis Format

To facilitate the analysis of each topic presented in Section 3.0, a standard format was developed. This format is presented below, with a brief discussion of the information included within each heading.

Methodology

This section describes the methods that were used in the process of analyzing impacts related to the implementation of the proposed Project in relation to the environmental topic.

Existing Conditions

This section describes the existing environmental conditions related to each topic analyzed. In accordance with Section 15125 of the State CEQA Guidelines, the existing local and regional setting is discussed as if they existed when the NOP was circulated in May 2025, unless otherwise noted. This section provides the baseline conditions with which environmental changes associated with the Project would be compared and analyzed.

Relevant Programs and Regulations

This section includes a summary of the existing federal, State, regional, County, and local laws, regulations, and ordinances that directly relate to the environmental topic being analyzed. These are summarized to provide background information and to establish the regulatory setting under which Project construction and operation would occur.

Thresholds of Significance

Section 15126.2 of the State CEQA Guidelines requires an EIR to "identify and focus on the significant environmental effects of the proposed project". "Effects" and "impacts" mean the same under CEQA and are used interchangeably in this EIR. A "significant effect" or "significant impact" on the environment is "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (Section 15382 of the State CEQA Guidelines).

In determining whether an impact is "significant", Section 15064.7 of the State CEQA Guidelines encourages each public agency to develop and publish thresholds of significance to use in determining the significance of an environmental impact. These thresholds may consist of identifiable quantitative, qualitative, or performance-level criteria used to determine noncompliance or compliance. Non-compliance would mean the effect would be significant, and compliance with the thresholds would mean the effect normally would be less than significant.

Like most municipalities, the City of Pasadena has not adopted a comprehensive set of thresholds of significance. Thus, the significance criteria used in the analysis in Section 3.0 of this EIR are derived from Appendix G of the State CEQA Guidelines. In addition, City policies and standards, as well as thresholds adopted by other public agencies with jurisdiction over select issues, are used as thresholds of significance where applicable. For example, the South Coast Air Quality Management District publishes numerical thresholds for criteria pollutant emissions. Also, accepted technical and scientific data are used in some instances to determine if an impact would be considered significant. These thresholds are identified under each environmental topic and have been used in analyzing the potential impacts of the Project.

Regulatory Requirements

This section lists the regulations pertinent to any of the thresholds being addressed for that topic that can avoid or reduce what would otherwise be a significant impact. The RRs are listed with a code–e.g., RR AQ-1 for the first regulatory requirement listed in the air quality section—that are referred to in the following environmental analysis to make it clear what potential impacts would be reduced through compliance with existing regulations.

Environmental Impacts

The analysis of environmental impacts presented in this EIR identifies direct and indirect, as well as short-term and long-term, environmental impacts of the Project. The thresholds of significance (discussed above) provide the basis for distinguishing between impacts that are determined to be significant (i.e., impact exceeds the threshold of significance) and those that are considered less than significant. The analysis is structured to address each threshold, while considering any residual impact after compliance with RRs.

Where the impact analysis demonstrates that a potential environmental effect is too speculative or subjective for evaluation, or that the effect is beneficial, that conclusion is

noted. Where the impact analysis demonstrates that a potential environmental effect could have a substantial or potentially substantial and adverse impact on existing physical conditions within the City, that conclusion is noted and followed by a discussion of how the proposed mitigation would address the potential impact.

Cumulative Impacts

While the extent of environmental changes that would occur with individual projects that are proposed, planned, or under construction in the City or region may not be significant, the sum of the cumulative impacts of these related projects and the proposed Project may be cumulatively significant, as defined in Section 15130 of the State CEQA Guidelines. Section 2.5, Approach to Cumulative Impact Analysis, of this EIR contains a discussion of the overall methodology to determine the scope of projects and/or regional growth considered in the cumulative impact analysis. The anticipated environmental changes resulting from the related projects and the proposed Project on a cumulative level are addressed in each topical analysis presented in Section 3.0 of this EIR. This discussion also contains a more detailed discussion of the cumulative impact analysis methodology for each environmental topic.

Mitigation Measures

This section identifies the mitigation measures (MMs) under each topic that have been proposed, when necessary, to reduce or avoid significant adverse environmental impacts.

Level of Significance After Mitigation

This section identifies the level of significance of the identified impacts after the implementation of the required mitigation measures, where applicable. Unavoidable significant adverse impacts are those effects that either cannot be mitigated or that remain significant even after mitigation.

References

Documents and other sources that have been used in the preparation of each topical analysis are identified in this section.

3.1 AESTHETICS

3.1.1 METHODOLOGY

This section describes the existing aesthetic (visual) condition of the Arroyo Seco Water Reuse Project (Project) and analyzes potential Project impacts related to aesthetics, views, designated scenic resources, and light and glare.

Aesthetics generally refer to the identification of visual resources, the quality of one's view, and/or the overall visual perception of the environment. The issue of light and glare is related to both the creation of daytime glare due to the reflection of the sun (such as on glass surfaces) and/or an increase in nighttime lighting levels (such as from building lights, street lights, and vehicle headlights).

3.1.2 EXISTING CONDITIONS

Existing On-Site Uses

San Rafael Site

The San Rafael Project site totals 1.4 acres and consists of undeveloped open space located southwest of the San Rafael Avenue overpass of the Arroyo Seco Channel and along the northwest side of the Arroyo Seco Channel. This site is adjacent to Pasadena's southern boundary. The San Rafael site includes a linear feature that is within the limits of the San Rafael Creek easement under LACFCD jurisdiction. This site is occupied by public open space, which is open daily from sunrise to sunset. The San Rafael site is fully accessible to the public via public and private transportation routes, and/or by various trails for pedestrians, bicyclists, and equestrians.

San Pascual Site

The San Pascual Project site encompasses 2.2 acres and consists of undeveloped open space bound on the north by San Pascual Avenue and on the east by Stoney Drive. The San Pascual site is located southeast of the San Pascual Avenue overpass of the Arroyo Seco Channel and on the east side of the Arroyo Seco Channel. In addition, the San Pascual site is situated in between Arroyo Park, located along the east side of Stoney Drive, and San Pascual Park, partially located in the City of Los Angeles and partially located in the City of South Pasadena, west of the Arroyo Seco Channel. This site is occupied by open space, which is open daily from sunrise to sunset. The San Pascual site is fully accessible to the public via public and private transportation routes, and/or by various trails for pedestrians, bicyclists, and equestrians.

Surrounding Uses

San Rafael Site

Uses surrounding the San Rafael site include the soft-bottom portion of San Rafael Creek and an undeveloped slope with a single-family residential on the hilltop at an elevation of approximately 40 feet above the site; the Arroyo Seco Channel, Arroyo Seco open space, and San Pascual Avenue to the east; San Pascual Stables located at 221 San Pascual Avenue, South Pasadena, to the south and southeast across the Arroyo Seco Channel; and undeveloped slopes and a housing development on the hilltop to the west at elevations 160 to 200 feet above the San Rafael site.

San Pascual Site

Land uses surrounding the San Pascual site include San Pascual Avenue and single-family residential on San Ramon Drive to the north; the Burke, Clarich, Nelson Fields (649 Stoney Drive, South Pasadena) and Arroyo Park (614 Stoney Drive, South Pasadena) beyond Stoney Drive to the east; Stoney Drive and the Arroyo Seco Channel to the south; and San Pascual Park (930 San Pascual Avenue, Los Angeles) across the Arroyo Seco Channel to the west; and single-family residential on North Avenue 67 to the northwest.

Public Views of Scenic Resources

Public views within and around the Project site areas include a combination of natural features, recreational open space and trails, and distant views of the San Gabriel Mountains that are intermittently available from portions of the public trail network, surrounding rights-of-way, and adjacent parklands. The availability and clarity of these views from the San Rafael and San Pascual sites vary due to topography, density of vegetation, and the presence of built recreational and flood-control infrastructure that characterizes the area. The Arroyo Seco Flood Control Channel is located adjacent to both the San Rafael and San Pascual sites, with the Arroyo Seco Trail running along both sides of the Arroyo Seco Channel. The San Rafael Bridge is located approximately 70 feet north (upstream) of the San Rafael site at the nearest point. The San Rafael site falls within the Arroyo Seco Park District.

Scenic Vistas

A scenic vista is generally defined as a viewpoint that provides panoramic or focused views of a highly valued landscape or scenic resource for the benefit of the general public. The EIR for the Pasadena General Plan provides the following description of the existing scenic features and visual resources in the City of Pasadena: "The City of Pasadena affords a variety of views of scenic landscapes and built environments. The San Gabriel Mountains, near the north City boundary, dominate the skyline from most of the City. The San Rafael Hills are along the western City boundary, and the Verdugo Mountains are further to the west. In addition, the Arroyo Seco corridor and Eaton Canyon traverse the western and eastern portions of the City, respectively. The City also offers scenic views of distinct architecture in the built environment, such as the Old Pasadena Historic District, Pasadena City Hall, Castle

Green, St. Andrew Catholic Church bell tower, and Bungalow Heaven" (City of Pasadena 2015). South Pasadena's current General Plan defines that the "hillsides and ridgelines . . . provide a scenic backdrop for the entire community" (City of South Pasadena General Plan 2023).

The largely undeveloped condition of the Lower Arroyo Seco, with built features being both low profile and widely spaced, is a prominent feature that contributes to the visual setting that many find valuable. However, the San Rafael site is situated at the southern tip of the Lower Arroyo Seco and is proximate to more developed or active recreation features such as San Pascual Stables and South Pasadena city parklands.

Scenic Highways and Byways

There are portions of two designated State scenic highways in or adjacent to Pasadena and South Pasadena: (1) the Angeles Crest Highway (State Route [SR] 2) is located north of Arroyo Seco Canyon and transects the extreme northernmost portion of Pasadena and (2) a segment of SR-110 from approximately East California Boulevard in Pasadena, to Pasadena's southern city boundary, and through South Pasadena is identified as a Historic Parkway (the Arroyo Seco Historic Parkway) (Caltrans 2025). Additionally, SR-110 from Colorado Boulevard in Pasadena, south through South Pasadena, to U.S. Highway 101 in downtown Los Angeles is also identified as a National Scenic Byway by the Federal Highway Administration (USDOT 2025).

Light and Glare

Artificial lighting is widely utilized in most urban and suburban areas to provide visibility for both traffic and security. Pasadena, South Pasadena, and Los Angeles have nighttime illumination typical of any urban/suburban area, which is attributable to land use developments (e.g., commercial, recreational, residential), street and highway lighting, and parking lot lighting. Transient lighting from vehicular headlights also contributes to nighttime illumination in urban areas. Generally, the most prominent sources of existing nighttime light and glare are vehicular traffic and commercial land uses along the primary thoroughfares (e.g., Fair Oaks Avenue, Mission Street, Fremont Avenue, Huntington Drive), traffic along SR-110, and parks with nighttime lighting and/or sports fields (i.e., Orange Grove Park). Daytime glare can also be caused by light reflections from pavement, vehicles, and building materials such as reflective glass and polished surfaces.

3.1.3 RELEVANT PROGRAMS AND REGULATIONS

Federal

National Scenic Byways Program

The U.S. Department of Transportation, Federal Highway Administration's National Scenic Byways Program (as contained in Title 23, Section 162 of the United States Code), initially established in 1991, is a grassroots collaborative effort to help recognize, preserve, and enhance selected roads throughout the U.S. The National Scenic Byways Program has subsequently been expanded, reauthorized, and/or given appropriations for certain related actions several times. National Scenic Byways or All-American Roads (collectively, Byways) are designated by the U.S. Secretary of Transportation based on their archaeological, cultural, historic, natural, recreational, and/or scenic qualities. Currently, there are 184 Byways in 48 states.

State

Scenic Highways Program

The California Department of Transportation's (Caltrans) Scenic Highways Program (as contained in Sections 260 to 263 of the *California Streets and Highways Code,*) recognizes the visual resources and natural scenic beauty of California highways and adjacent corridors. These highways are designated based on the natural landscape seen by travelers, the scenic quality of the landscape, and the extent to which development is kept away from the corridor to preclude intrusion on the traveler's enjoyment of the view.

The program includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The status of a scenic highway changes from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval and adopts a Corridor Protection Program that (1) regulates land use and density of development along the highway; (2) controls outdoor advertising; (3) provides guidelines for site planning; (4) controls earth-moving and landscaping activities; and (5) provides design guidelines for the appearance of structures and equipment. Caltrans approval leads to official designation and inclusion in the list of the State's Scenic Highways.

Local

City of Pasadena

City of Pasadena General Plan Land Use Element

The Land Use Element of the City of Pasadena General Plan serves as a guide for future development proposed in the City. The Land Use Element is guided by certain principles, such as maintaining a focus on community needs, enhancing quality of life, and directing higher density development away from residential neighborhoods; preserving Pasadena's

historic resources and ensuring new development harmonizes with the City's character; fostering a diverse economic base with job opportunities and support for existing businesses and promotion of a socially, economically, and environmentally sustainable community with accessible residential and commercial areas. The Land Use Element provides multiple goals related to aesthetics, including elements contributing to urban form,[1] character and scale, architectural design and quality, and historic preservation.

Arroyo Seco Design Guidelines

The Arroyo Seco Design Guidelines provide a unifying set of criteria for the site development improvements set forth in the Arroyo Seco Master Plan for on-going, long-range improvements for the Arroyo Seco. These guidelines are intended to lead to a unified park design that reflects the heritage of the Arroyo Seco and its relationship to the tradition of the City of Pasadena. The Arroyo Seco Design Guidelines provide specific site design solutions that are consistent with the existing Arroyo Seco Ordinance and a vehicle by which practical inputs for ongoing improvements can take place (Pasadena 2003).

City of Pasadena Municipal Code

The City of Pasadena Municipal Code (PMC) identifies land use categories, development standards, and other general provisions that ensure consistency between the General Plan and proposed development projects. The provisions from the Municipal Code described below are relevant to the visual quality of new development projects. Chapters beginning with "17" are part of the City's Zoning Code.

Design Commission (Chapter 2.80)

This section of the Municipal Code establishes the City's Design Commission. The Design Commission is tasked with fulfilling the Pasadena City Council's declaration that the "achievement of quality in the architecture and urban design of the City is required in the interest of the prosperity, social and cultural enrichment, and general welfare of the people." The Commission is given the authority to develop City policies and standards related to community design, review development and redevelopment projects regarding aesthetic concerns, and make recommendations regarding environmental review documents. A subsection of Chapter 2.80 establishes the City's Urban Forestry Advisory Committee. The code gives authority to the Design Commission to delegate review of matters pertaining to trees to the Urban Forestry Advisory Committee.

City Trees and Tree Protection Ordinance (Chapter 8.52)

This section of the Municipal Code acknowledges that, in addition to generating environmental and economic benefits, the City's thousands of mature trees greatly impact

[1] Urban Form means the general pattern of building height and developments intensity and structural elements that that define the City physically, such as natural features, transportation corridors, open space, public facilities, as well as activity centers and focal elements. Urban form focuses on how buildings are located on parcels, how buildings relate to one another, and how buildings relate to the street, including sidewalks and open spaces.

the aesthetic environment of the community, offering "dimensions in the form of color, shape, texture, scale, and variety" (Pasadena 2014). Chapter 8.52 establishes the City's tree protection ordinance, which is intended to protect landmark, native, and specimen trees (as defined by the code), which includes trees on both private and public property. The ordinance contains guidelines for the designation of protected trees and regulations regarding the pruning or removal of protected trees. Penalties for noncompliance are explicitly described.

General Property Development and Use Standards (Chapter 17.40)

These citywide standards include a variety of provisions aimed at managing Pasadena's aesthetic character, including outdoor lighting standards and a public art program. The standards also address the height, mass, intensity, and setbacks of proposed developments.

Landscaping (Chapter 17.44)

This portion of the Zoning Code regulates the design, engineering, and maintenance of landscaping on most land uses designations in the City. It also includes special protections for existing large specimen plants, including trees.

Signs (Chapter 17.48)

Among other goals, this chapter aims to "encourage creative, well-designed signs that contribute in a positive way to the City's visual environment, and help maintain an image of quality for the City" (Pasadena 2014). The chapter regulates the location, size, type, content, illumination, and number of signs in Pasadena. It includes detailed standards for each zoning district, but also establishes procedures for a "creative sign permit," which allows unique and creatively designed signs that are also sensitive to their surrounding aesthetic context.

Permit Approval or Disapproval (Chapter 17.61)

Subsection 17.61.030 of this chapter outlines Pasadena's Design Review procedures. The procedures are meant to ensure, among other objectives, that development projects comply with citywide urban design principles and enhance the surrounding aesthetic environment. The subsection establishes thresholds of review, identifies the appropriate review authority for different types of projects (i.e., the Design Commission or Director of Planning and Development) and outlines procedures for hearings and findings related to planning applications.

Historic Preservation (Chapter 17.62)

This section of the Zoning Code regulates the designation of individual historic resources and landmark districts, and the protection of these once designated. The section addresses a broad variety of resources with historic value, including monuments, buildings, signs, and trees. Provisions include review procedures for projects affecting historic resources and incentives for preserving such resources. The chapter makes clear that the aesthetic integrity of historic resources is an essential component of their value; special attention is given to architecturally important building facades that are visible from the public realm.

City of South Pasadena

City of South Pasadena General Plan Our Well-Planned Community Element

This Element serves as South Pasadena's Land Use Element. The goal of this Element is to preserve and enhance the distinctive residential neighborhoods; provide housing opportunities for all; reinvest in downtown corridors and neighborhood centers; and ensure that new development contributes its fair share towards the provision of affordable housing, adequate parks, schools, and other public facilities. The Land Use Element provides multiple goals related to aesthetics, including discussion related to urban form, such as districts, corridors, and neighborhood center planning.

City of South Pasadena Municipal Code

Property Development (Chapter 36.300)

Section 36.300 et. seq. of the SPMC describes general property development and use standards, includes several sections that affect the visual quality of a property. These include standards for height (Section 36.300.040), screening (Section 36.300.070), either between land uses or of unsightly features on a property; placement of mechanical equipment (Section 36.300.080); outdoor lighting requirements (Section 36.300.090); and detailed performance standards to promote land use compatibility (Section 36.300.110).

Signs (Chapter 36.320)

Section 36.320, Signs, regulates the placement, type, size, and number of signs allowed within the City, and requires the proper maintenance of signs. Section 36.330 provides landscape standards for proposed development to improve the livability and attractiveness of South Pasadena, and to protect public health, safety, and welfare. Section 36.340, Hillside Protection provides development standards intended to preserve the City's scenic resources by encouraging retention of natural topographic features and vegetation.

Tree Protection (Chapter 34)

The Public Works Department is responsible for streets, public buildings, water, sewer systems, street lighting and park maintenance. The City Council amended the SPMC to further regulate removal of trees of 12 inches in diameter or larger on any property within the City. In addition, regulations have been added to protect mature heritage, native, and oak (*Quercus sp*.) trees (4 inches in diameter at breast height or larger) on any property, public or private, within the City. Chapter 34, Trees and Shrubs, of the SPMC defines the regulations for the protection (during development activity), trimming, and/or replacement of protected trees in the City.

City of Los Angeles

City of Los Angeles General Plan

Northeast Los Angeles Community Plan

The General Plan's Land Use Element is divided into 35 separate Community Plans. The northern portion of the San Pascual site (i.e., the portion that is within the City of Los Angeles) is located within the *Northeast Los Angeles Community Plan* (Community Plan) area. The Northeast Los Angeles Community Plan area encompasses the hills and valleys lying east of the Los Angeles River and north of the Boyle Heights Community Plan area within Los Angeles; and includes the neighborhoods of Atwater Village, Cypress Park, Eagle Rock, El Serreno, Garvanza, Glassell Park, Highland Park, Hermon, Lincoln Heights, Montecito Heights, Monterey Hills, and Mount Washington, among others. This Community Plan area serves as a transition between the downtown center of Los Angeles and the neighboring cities of Glendale, Pasadena, South Pasadena and Alhambra to the north and east, as well as the City of Monterey Park and the unincorporated community of City Terrace on the south.

Urban Form and Neighborhood Design (Chapter 5)

Chapter 5 of the Framework Element, Urban Form and Neighborhood Design established a goal of creating a livable city for existing and future residents within interconnected diverse neighborhoods. Urban form refers to the general pattern of building heights and development intensity and the structural elements that define the City physically, such as natural features, transportation corridors, activity centers, and focal elements.

City of Los Angeles Municipal Code

The Los Angeles Municipal Code (LAMC) regulates all aspects of building development in the City, including aesthetic aspects such as lighting and tree protection.

Lighting

Lighting is regulated by various chapters within the LAMC, including Chapter I and IX, which limits its outdoor and exterior lighting so that fixtures do not spill excessive light, or glare, onto neighboring residential properties, and lighting that exceeds this intensity or is insufficiently shielded is prohibited unless exemptions apply (e.g. certain low-lumen lights, or fixtures not visible from neighboring residences). No person shall construct, establish or create any stationary lighting that may cause specific locations, such as exterior windows, habitable porches/balconies, or recreation/lawn areas, to be illuminated more than two-foot candles of lighting intensity or receive direct glare from the light source.

Tree Protection (Chapter IV, Article 6)

The City of Los Angeles Bureau of Street Services Urban Forestry Division is responsible for managing and protecting the City's public trees, including those in streets, parkways, and public landscapes. The LAMC includes regulations that restrict the removal of certain native tree species, such as coast live oak, California bay, Southern California black walnut, and

western sycamore, when they measure four inches or more in cumulative trunk diameter at 4.5 feet above grade. These rules apply to both public and private property within the City. Article 6, "Preservation of Protected Trees," of Chapter IV of the LAMC establishes the standards for the protection of these trees during development activity and outlines the permitting, trimming, relocation, and replacement requirements associated with any proposed disturbance to protected trees.

3.1.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. A project would result in a significant adverse aesthetic impact if it would:

Threshold 3.1a: Have a substantial adverse effect on a scenic vista;

Threshold 3.1b: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;

Threshold 3.1c: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality and/or

Threshold 3.1d: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.1.5 REGULATORY REQUIREMENTS

There are no regulatory requirements appliable to the analysis of Aesthetics.

3.1.6 ENVIRONMENTAL IMPACTS

Threshold 3.1a: Would the Project have a substantial adverse effect on a scenic vista?

As stated above, a scenic vista is generally defined as a viewpoint that provides panoramic or focused views of a highly valued landscape or scenic resource for the benefit of the general public. In the context of the Lower Arroyo Seco, scenic vistas include locations where visitors can observe sweeping natural landscapes such as public trails or accessible open space, and prominent geographic features such as the San Gabriel Mountains or San Rafael Hills. These elements contribute to the scenic quality within the area. For purposes of this analysis, views by visitors on trails and other accessible open space areas within and of the Lower Arroyo Seco are considered views of a valued landscape and thus a scenic vista for analysis of the San Rafael site. Scenic vistas in this context are defined as those points along trails and accessible open space areas where the views encompass these notable features and

landscapes. Ordinary views within the open space that do not provide such valued or distinctive visual experiences, such as views limited to the interior of dense vegetation without a broader landscape context, may not be considered scenic vistas.

The largely undeveloped, naturalized condition of the Lower Arroyo Seco, with built features being both low profile and widely spaced, is a prominent feature that contributes to the visual setting that many find valuable. However, the San Rafael site is situated at the southern tip of the Lower Arroyo Seco and is proximate to more developed or active recreation features such as San Pascual Stables and South Pasadena city parklands. The assessment of Project impacts will focus on those locations and viewpoints that offer recognized scenic vistas, specifically where visitors can appreciate the unique natural and built environment characterizing the Lower Arroyo Seco.

Visual Renderings

Visual renderings have been prepared for the San Rafael and San Pascual Sites, as shown in Exhibit 2-7, Bird's Eye View of San Rafael Concept Plan and Exhibit 2-13, Bird's Eye View of San Pascual Concept Plan, in Section 2.0, Project Description. The bird's eye views provide a comparison of the existing view and a simulation of the proposed view.

San Rafael Site

As depicted on Exhibit 2-7, Bird's Eye View of San Rafael Concept Plan, the existing views show the undeveloped public area along the northwest side of the Arroyo Seco Channel. The proposed view presents a naturalized visual and ecological condition including a wetland component, bridge located over San Rafael Creek, additional trails, and a rock lined stream weaving through the site.

San Pascual Site

As depicted on Exhibit 2-13, Bird's Eye View of San Pascual Concept Plan, the existing views show the undeveloped densely vegetated public space situated in between Arroyo Park, located along the east side of Stoney Drive, and San Pascual Park. The proposed view presents a naturalized visual and ecological condition populated by landscaping and hardscaping elements including new trees and other vegetation, and additional trails.

Project Components

The Project's water capture and treatment concept, including use of materials, was designed to present a naturalized visual and ecological condition at the surface while meeting State-mandated water quality targets. Although the Project would not introduce large or otherwise view-obscuring structures into the landscape, it would construct new nature-based water treatment infrastructure at both the San Pascual and San Rafael sites.

San Rafael Site

The San Rafael site BMP would consist of a new 16-foot-wide bridge/cap over San Rafael Creek, diversion structure at San Rafael Creek, a rock-lined stream, man-made treatment

wetland, infrastructure elements including pipelines, valves, meters, and manholes, and landscape and hardscape elements, including new trees and other vegetation, trail expansions, and informational signage. While the infrastructure components are shown on the engineering plans, they would be hidden as much as feasible by location (e.g., underground) or screening.

A total of 44 trees were surveyed within the disturbance footprint of the San Rafael site, within Pasadena's jurisdiction. Implementation of the San Rafael BMP would involve removal of 6 protected trees–all blue elderberry (*Sambucus nigra* ssp. *caerulea*), a native species–and the remaining 38 trees would be protected in place during construction and have been integrated into the site design. The Project's landscape concept proposes planting 61 native trees as well as native shrubs and groundcovers at the San Rafael site. Refer to Section 3.3, Biological Resources, for further details regarding tree impacts and mitigation.

San Pascual Site

The San Pascual site BMP would consist of a pretreatment device with a hydrodynamic separator, pump station, two treatment wetlands, infrastructure elements including pipelines, valves, meters, and manholes, and landscape and hardscape elements, including new trees and other vegetation, trail expansions, and informational signage. Similar to the San Rafael site, while the infrastructure components are shown on the engineering plans, they would be hidden as much as feasible by location (e.g., underground) or screening.

A total of 157 trees were surveyed within the disturbance footprint of the San Pascual site (22 within Los Angeles' jurisdiction and 135 within South Pasadena's jurisdiction). Of the 23 protected and 14 significant trees to be removed, 31 are within South Pasadena's jurisdiction and 6 are within Los Angeles' jurisdiction and all are native species. The remaining 27 existing trees, both native and non-native, would be protected in place and have been integrated into the site design. The Project's landscape concept proposes planting 155 additional native trees as well as native shrubs and groundcovers. Refer to Section 3.3, Biological Resources, for further details regarding tree impacts and mitigation.

Off-Site Golf Course

The water harvester would be enclosed in a 288-sf building and have a small (1,000 gallon) above-ground storage tank (AST) located adjacent to the building; and would be within the existing, gated maintenance yard. The interior of the maintenance yard is minimally visible from most directions due to panels in the chain link fence and the presence of several mature trees immediately outside the yard fencing. The yard interior is visible from the portion of the Golf Course and Lohman Lane immediately southwest of the yard, where the access gate and drive are located.

Overall Visual Analysis

The Project was designed to maximize avoidance of mature trees, particularly native tree and shrub species (per the South Pasadena Tree Ordinance), and shrubs of a size and/or shape to be counted. The native and/or protected and significant tree removals within the

Project's footprint at each site must occur to accommodate the new water treatment infrastructure. At the San Pascual site, there is very dense existing vegetation related to the historic treatment wetland installed at this site that has not been properly maintained. Due to the limited space along the Arroyo Seco to implement the proposed BMPs and existing dense vegetation on the San Pascual site, some native and/or protected and significant tree removals would be unavoidable.

Tree removals could create visual breaks in the tree canopy while new native trees grow to an average size, which can require between approximately 10 to 20 years, depending on the tree species installed (e.g., willows grow much faster than oaks) and site-specific weather conditions in the future. In the interim, views in and of portions of the San Rafael and San Pascual sites would be altered by intermittent canopy openings, immature trees and/or shrubs/understory vegetation, and changes to existing built features. The alterations to the existing condition in the near term would be more apparent at the San Pascual site. Whereas at the San Rafael site the area would likely appear more densely vegetated at the completion of construction because there is sparse existing vegetation.

However, when considered together, the above-described on-site Project components and related change in views of the San Rafael and San Pascual sites would be consistent with the existing setting in both areas, and would not significantly alter public views from the nearby trails and open space areas. Specifically, views through the San Rafael site would be naturalized with no tall or otherwise view-obstructing features except for a net increase in trees, whose canopies, with time, would partially obscure views of the slopes adjacent to the site. However, views of these slopes are not contributing elements, by themselves, of the scenic vista assumed to be present throughout the Lower Arroyo Seco. As explained above, scenic vistas in this context are defined as those points along accessible/public open space areas where the views encompass notable features and landscapes. Ordinary views within the area that do not provide such valued or distinctive visual experiences, such as these slopes, may not be considered as significant components of the Lower Arroyo Seco visual context. As such, the partially obscured views of these slopes in the future condition would not create a significant impact on the scenic vistas present within the Lower Arroyo Seco. Further, the proposed features at the San Rafael site, including the improved section of the existing Arroyo Seco Trail, would expand public access and new pathways to the west side of the Arroyo Seco Channel and thereby provide views towards the east into the Lower Arroyo Seco, for a greater number of visitors.

The San Pascual site is a non-functioning wetland, and its footprint and infrastructure would be similar to the existing and past use of this site. Views of and through the San Pascual site would be naturalized with no tall or otherwise view-obstructing features. Views of the slopes immediately to the northwest along the Arroyo Seco Channel and of the San Gabriel Mountains further in the distance would not be reduced with Project implementation. Additionally, the Project would be required to comply with all applicable regulations, including the Arroyo Seco Design Guidelines, which provides a unifying set of criteria for the site development improvements set forth in the area, as well as the City of Pasadena, South Pasadena, and Los Angeles' municipal code and tree ordinances.

Related to the off-site water harvester within the existing maintenance yard at the Arroyo Seco Golf Course, the proposed harvester building would be partially visible from the portion of the Golf Course and Lohman Lane immediately southwest of the yard, where the access gate and drive are located. However, the condition of the yard interior would not be considered scenic, and the proposed building would replace an existing shipping container adjacent to the reservoir, which would not significantly alter existing aesthetics conditions on-site.

Although construction activities would introduce short-term visual changes during the approximately 17-month construction period, and some of these temporary conditions may be considered unattractive, they would be short-term and temporary. They would neither substantially degrade the existing visual character or quality of the site or its surroundings nor would they adversely affect a scenic vista. The short-term changes are not permanent and are reversible once construction work is completed and construction equipment are removed from the site and staging area is returned to pre-construction condition.

The long-term visual change associated with the Project would improve the views and is considered a beneficial impact of the Project. It should be noted that, currently San Rafael is overgrown and inaccessible and half of the site is fenced off. The Project proposes new green passive recreation space with a significant number of new natives trees (at least twice as many as the number currently exists), over 1,100 new native plant and shrubs, and a new water feature. San Pascual site is also overgrown mostly with non-native Mexican Fan Palms. The interior of the wetlands is polluted with trash, encampments, undesignated trails, ponded water at the south end with algae growing, and an illegal bike trail for BMX. As discussed previously, the Project proposes plant new trees, and the net tree count to be planted on this site will be higher, and approximately 2,100 native plants and shrubs will be planted as well.

Therefore, in light of the above, implementation of the proposed Project would not result in a substantial adverse effect on a scenic vista and would, in fact, improve the overall visual quality. There would be a less than significant impact, and no mitigation is required.

Threshold 3.1b: Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

As stated above, there are portions of two designated State scenic highways in or adjacent to Pasadena and South Pasadena: (1) the Angeles Crest Highway (State Route [SR] 2) is located north of Arroyo Seco Canyon and transects the extreme northernmost portion of Pasadena and (2) a segment of SR-110 from approximately East California Boulevard in Pasadena, to Pasadena's southern City boundary, and through South Pasadena is identified as a Historic Parkway (the Arroyo Seco Historic Parkway). Additionally, SR-110 from Colorado Boulevard in Pasadena, through South Pasadena, to U.S. Highway 101 in downtown Los Angeles is also identified as a National Scenic Byway by the Federal Highway Administration.

Although a segment of SR-110 passes as near as approximately 500 feet to the south of the San Pascual site, this site is not visible due to the dense evergreen vegetation present on

either side of the highway. The southern portion of the Arroyo Seco Soccer Field, its tall sports field lighting, and a portion of the Arroyo Seco Channel can briefly be seen from SR-110 when traveling south. However, the San Pascual site is not clearly visible and only intermittent views of the site would be available from SR-110. Only the tops of trees on the site may contribute to the general view to the north from this segment of the highway. The Mexican Fan Palms, which are considered invasive, are the predominant species currently visible due to their height. It should be noted that replacement trees, including Western Sycamore and Arroyo Willows, are already being grown for both the San Pascual and San Rafael sites. In light of improvements proposed for San Pascual, views of the site from SR-110—although intermittent—would consist of an enhanced landscape with new trees and vegetation. In light of this, no impacts to scenic vistas (San Pascual) from SR-110 would result, and no mitigation is required. The San Rafael site is located approximately two miles north of the SR-110, which would not be visible due to distance and intervening topography

Neither of the two site is visible from the Angeles Crest Highway (SR-2). Although portions of this highway provide views of the upper Arroyo Seco Canyon, the San Pascual and San Rafael sites are located several miles downstream and are not visible from the highway due to intervening topography and development. Thus, the sites are not within the viewshed of Angeles Crest Highway, and as such no impact to scenic vistas from SR-2 would occur, and no mitigation is required.

Threshold 3.1c: In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?

Visual character is descriptive and not evaluative, which means that the development traits described for a given area are neither good nor bad in and of themselves. The determination of whether the changes in the visual quality of a site would degrade an area or its surroundings, and thus be significant and adverse, is somewhat dependent upon the perspective of the viewer. It is acknowledged that the change in visual character on the Project sites is considered adverse to some members of the community. However, under CEQA, dislike of a visual change is not automatically considered a significant environmental impact.

The Project sites are located in an urbanized area, as discussed in Section 2.0, Environmental Setting and Project Description. The Project site is within the Upper Los Angeles River (ULAR) Watershed, which encompasses approximately 485 square miles of largely built-out urban land area. The San Pascual and San Rafael sites are within established boundaries of Pasadena, South Pasadena, and Los Angeles, which are developed municipalities within the Los Angeles metropolitan region. As discussed under Threshold 3.1(a) above, there would be short-term changes in visual quality that some may find unattractive and construction activity would be visible for approximately 17 months. However, the intent of the proposed Project is to improve the long-term visual quality of both sites while incorporating the required water quality infrastructure. The proposed Project components and proposed

condition would also be largely consistent with the existing setting in both areas, and would provide natural wetland and stream features, improved trails over existing conditions, and additional signage for wayfinding and educational purposes. Moreover, the proposed Project would not conflict with applicable zoning and other regulations governing scenic quality established in the jurisdictions of Pasadena, South Pasadena, or Los Angeles. Per discussion in Section 3.7, Land Use and Planning in this EIR, the Arroyo Seco Master Plan is a park/facility planning document that consists of four separate elements: (1) Hahamongna Watershed Park Master Plan, (2) Central Arroyo Seco Master Plan, (3) Lower Arroyo Seco Master Plan, and (4) Design Guidelines for the Arroyo Seco. The purpose of these four plans is to provide facilities for passive and active recreation that support Policy 9.2 of the City of Pasadena's Comprehensive General Plan in order to provide recreation facilities and programs to meet the diverse needs of City of Pasadena residents and visitors. The Lower Arroyo Seco Master Plan and the Arroyo Seco Design Guidelines are applicable documents that address the portion of the Project located in Pasadena (i.e., San Rafael site).

The Arroyo Seco Design Guidelines provide a unifying set of criteria for the site development improvements set forth in the Arroyo Seco Master Plan for on-going, long-range improvements for the Arroyo Seco. These guidelines will lead to a unified park design that reflects the heritage of the Arroyo Seco and its relationship to the tradition of the City of Pasadena. The Arroyo Seco Design Guidelines provide specific site design solutions that are consistent with the existing Arroyo Seco Ordinance and a vehicle by which practical inputs for ongoing improvements can take place (Pasadena 2003). As Discussed in Section 3.7, Land Use and Planning of this EIR, the Project's hardscape and landscape elements at both the San Rafael and San Pascual sites have been designed to conform with the Arroyo Seco Design Guidelines.

Additionally, as discussed in detail in the Land Use and Planning Section, the Project is consistent with the Pasadena, South Pasadena, and Los Angeles General Plans and would not conflict with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The land use planning documents that govern the Project sites are the General Plans, Community Plan(s), zoning codes, and/or other codes and plans of the cities of Pasadena, South Pasadena, and Los Angeles. All three cities have a General Plan land use designation and zoning designation of OS/Open Space for each respective city's portions of the two sites.

As such, implementation of the proposed Project would not substantially degrade the existing visual character or quality of public views of the Lower Arroyo Seco. There would be a less than significant impact, and no mitigation is required.

Threshold 3.1d: Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

There would be no new sources of light or glare with Project implementation. No new light fixtures would be installed, and all proposed landscape materials would be comprised of non-reflective materials. The recreation features proposed as part of the water conservation project would be available for public use from sunrise to sunset, which would be consistent with the Arroyo Seco as a whole. Additionally, the Project is not anticipated to directly

increase use of the Lower Arroyo Seco area as a destination. Therefore, it would not change the number or timing of vehicles coming into and out of the Lower Arroyo Seco in the Project area. As there would be no added vehicular traffic, there would be no additional sources of glare due to reflected sunlight from car windshields and headlights. There would be no impact, and no mitigation is required.

3.1.7 CUMULATIVE IMPACTS

Cumulative impacts associated with aesthetics are generally limited to the immediate vicinity, or the viewshed, of a location. The geographic context for cumulative visual impacts is generally the City of South Pasadena and Pasadena and those areas within adjacent jurisdictions, including the City of Los Angeles, that share viewsheds or lines of sight, such as continuous arterial corridors between one city and another and hillside areas of the San Gabriel Mountains to the north. As discussed under Cumulative Impacts Methodology, related projects within approximately one-quarter mile of each of the sites that may be constructed at the same time is limited to two residential additions in the single-family neighborhood to the east-southeast of the San Pascual site within South Pasadena.

The Project would be aesthetically compatible with the surrounding uses, and continue to emphasize the naturalized condition of the Lower Arroyo Seco, with proposed wetland, landscaping and trail features. Such improvements would not notably modify the existing visual character or quality of the area, but instead would likely enhance and improve the aesthetics of the area. A discussion analysis of improvements to the overall visual character is included under Threshold 3.1a, above. The long-term visual change associated with the Project would improve the views, as currently both San Pascual and San Rafael are overgrown and inaccessible. The Project proposes new green passive recreation space with a significant number of new natives trees (at least twice as many as the number currently exists), new native plant and shrubs, and a new water feature.

The construction effects of the two residential additions would be localized and temporary in nature and would not meaningfully compound with effects from the Project to result in cumulative adverse impacts related to aesthetics. Additionally, for these two future projects, each development may be required to evaluate potential aesthetic impacts and demonstrate, to the extent feasible, that it would avoid or substantially lessen potentially significant aesthetic impacts through features such as building design (including massing, bulk, and height), landscaping, and lighting. The two future projects are small-scale residential additions located in an established residential neighborhood, and these additions are not anticipated to introduce new land uses, intensify development patterns, or substantially alter the visual character of the area. The residential context and existing development patterns would be maintained, and any new structures would be consistent in scale, design, and materials with the surrounding homes. When considered together with the proposed Project, the cumulative aesthetic effect would not be adverse, as the overall visual character of the Lower Arroyo Seco and adjacent residential neighborhoods would be maintained.

Additionally, it is noted that the Project San Rafael site, would be required to comply with the Arroyo Seco Design Guidelines that would ensure a cohesive and aesthetically pleasing character for the Project internally and a development compatible with the general

characteristics of the area. Therefore, the Project would not considerably contribute to cumulatively significant impacts, and no additional mitigation is required.

3.1.8 MITIGATION MEASURES

No significant impacts related to Aesthetics would occur, and no mitigation is required.

3.1.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed Project would not result in potentially significant Aesthetic impacts. Impacts associated with aesthetics would be less than significant and no mitigation is required.

3.1.10 REFERENCES

California Department of Transportation (Caltrans). 2025 (November 11, last accessed). *California Scenic Highway Map*. Sacramento, CA: Caltrans. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa.

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3.2 AIR QUALITY

This section discusses the existing air quality setting of the Project site and assesses the Project's potential impacts related to air quality.

3.2.1 METHODOLOGY

The air quality analysis for the Project was conducted in accordance with the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Analysis Guidance, including applicable portions of the SCAQMD CEQA Air Quality Handbook, current mass emission significance thresholds, and supplemental guidance for evaluating construction and operational emissions. SCAQMD's guidance provides recommended methodologies, emission factors, screening criteria, and significance thresholds for assessing a project's potential to generate criteria pollutant and toxic air contaminant emissions under the California Environmental Quality Act (CEQA). Consistent with this guidance, the analysis evaluates short-term construction emissions and long-term operational emissions, compares estimated emissions to SCAQMD regional and localized significance thresholds, as applicable, and considers the Project's consistency with applicable air quality plans and policies. Where appropriate, qualitative assessment methods are applied for project components that do not result in sustained emission sources.

California Emissions Estimator Model

Land uses such as the Project affect air quality through construction-source and operational-source emissions. The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates, as such the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NOX, SOX, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (CAPCOA 2023). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for construction activity are provided in Appendix B-1.

i-Tree

The i-Tree Planting Calculator, developed by the U.S. Forest Service, is used to determine the changes in GHGs, criteria pollutants, and energy associated with tree planting and removal. For the purposes of this analysis, the tool was applied to quantify the potential air quality and GHG emissions changes related to proposed removal and replacement of on-site trees and other vegetation during the interim condition (USFS 2006). Output from the model runs is provided in Appendix B-2.

Local Concentrations of Criteria Pollutants from On-Site Sources

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology). The SCAQMD has established that localized impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs). The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4.[1] LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses. The analysis makes use of methodology included in the *LST Methodology*.

For this Project, the appropriate source receptor area (SRA) for the LST analysis is the SCAQMD West San Gabriel Valley (SRA 8). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- Identify the maximum daily on-site emissions that will occur during construction activity:
    - The maximum daily on-site emissions could be based on information provided by the Project Applicant; or
    - The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds and CalEEMod User's Guide Appendix A: Calculation Details for CalEEMod can be used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod (SCAQMD 2026a) (CAPCOA 2017).
        - If the total acreage disturbed is less than or equal to 5 acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in lbs/day that can be compared to CalEEMod outputs.
        - If the total acreage disturbance is greater than 5 acres per day, then LST impacts may still be conservatively evaluated using the LST look-up tables for a 5-acre disturbance area. Use of the 5-acre disturbance area thresholds can be used to show that even if the daily emissions from all construction activity were emitted within a 5-acre area, and therefore

[1] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

concentrated over a smaller area which would result in greater site adjacent concentrations, the impacts would still be less than significant if the applicable 5-acre thresholds are utilized.

- The LST Methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

Based on SCAQMD's *LST Methodology*, emissions of concern during construction activities are on-site NO_X, CO, $PM_{2.5}$, and PM_{10}. The *LST Methodology* clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (SCAQMD 2008)." As such, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

The "acres disturbed" for analytical purposes are based on specific equipment type for each subcategory of construction activity and the estimated maximum area a given piece of equipment can pass over in an 8-hour workday (as shown on Table 3.2-1). The equipment-specific grading rates are summarized in the SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix C: Emission Calculation Details for CalEEMod* (SCAQMD 2026a) (CAPCOA 2022). The disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day. Based on Table 3.2-1, the Project's construction activities could actively disturb approximately 0.5 acre per day during demolition, 0.5 acre per day during site preparation, and 1 acre per day during grading activities.

TABLE 3.2-1
MAXIMUM DAILY DISTURBED-ACREAGE

Construction Activity	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Demolition	Crawler Tractors	1	0.5	8	0.5
	Total acres disturbed per day during Demolition				0.5
Site Preparation	Crawler Tractors	1	0.5	8	0.5
	Total acres disturbed per day during Site Preparation				0.5
Grading	Crawler Tractors	2	0.5	8	1
	Total acres disturbed per day during Grading				1

CO Hotspots

The analysis of potential CO hotspots for the Project involves a discussion of ambient measurement data of CO concentrations relative to the ambient air quality standards, emissions rates associated with current automobile legislation and electric vehicle adoption, and vehicle trips attributable to the Project.

3.2.2 EXISTING CONDITIONS

Climate and Meteorology

The Project site is located in the Los Angeles portion of the South Coast Air Basin (SoCAB), and, for air quality regulation and permitting, is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SoCAB is a 6,600-square-mile area bound by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and the San Diego County line to the south. The SoCAB includes all of Orange County, the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and the San Gorgonio Pass area of Riverside County

The SoCAB's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive semi-arid climate, which is characterized by moderate temperatures, oceanic influence, and precipitation that is normally limited to a few storms during the winter (i.e., November through April). The SoCAB has light winds and poor vertical mixing compared to other large urban areas in the United States. Dominant airflows provide the driving mechanism for the transport and dispersion of air pollution in the SoCAB. The mountains surrounding the SoCAB form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Los Angeles area is transported inland until it reaches the mountains, where the combination of mountains and inversion layers generally prevents further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between daytime and nighttime flows. The SoCAB also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The combination of poor dispersion and abundant sunshine, which drives the photochemical reactions that form pollutants (such as ozone [O_3]), provides conditions especially favorable to the formation of smog. The unfavorable combination of meteorology, topography, and emissions from the nation's second largest urban area results in the SoCAB having some of the worst air quality in the United States.

Air Pollutants

Criteria Pollutants

Air quality regulations were first promulgated with the Federal Clean Air Act (CAA) of 1970. Air quality is defined by ambient air concentrations of seven "criteria air pollutants," which are a group of common air pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to the health and welfare of the general public. Federal and State governments regulate criteria air pollutants by using ambient standards based on criteria regarding the health and/or environmental effects of each pollutant. The seven "criteria" air pollutants defined by the USEPA are ozone (O_3); carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); respirable particulate matter with a diameter of 10 microns or less (PM_{10}), and fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), and lead (USEPA 2026). A description of each criteria air pollutant, including source types and health effects, is provided below.

Nitrogen Dioxide

Nitrogen gas, normally relatively inert (nonreactive), comprises approximately 78 percent of the air (UCAR 2024). At high temperatures (e.g., in a combustion process) and under certain other conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitrogen oxides (NO_x). Nitric oxide (NO), NO_2, and nitrous oxide (N_2O) are important constituents of NO_x. NO is converted to NO_2 in the atmosphere. Motor vehicle emissions are the main source of NO_x in urban areas.

NO_2 is a red-brown pungent gas and is toxic to various animals and to humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membranes, and skin. In animals, long-term exposure to NO_2 increases susceptibility to respiratory infections, lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations of NO_2 can suffer lung irritation and, potentially, lung damage. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

While the National Ambient Air Quality Standards (NAAQS) only address NO_2, both NO and NO_2 are precursors in the formation of O_3 and $PM_{2.5}$, as discussed below. Because of this, and the fact that NO emissions largely convert to NO_2, NO_x emissions are typically examined when assessing potential air quality impacts. NO_2 levels in the SoCAB are in attainment with the State and federal 1-hour and annual standards.

Ozone

O_3 is a secondary pollutant, meaning that it is not directly emitted. It is a gas that is formed when volatile organic compounds (VOCs) (also referred to as reactive organic gases) and NO_x undergo photochemical reactions that occur only in the presence of sunlight (USEPA 2025a). The primary source of VOC emissions is unburned hydrocarbons in motor vehicles and other internal combustion engine exhaust. NO_x forms as a result of the combustion

process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O_3 to form;[2] as a result, ozone is known as a summertime air pollutant. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, and both O_3 and its precursors are transported by wind, high O_3 concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems, including:

- Lung irritation that can cause inflammation;
- Wheezing, coughing, pain when taking a deep breath, and breathing difficulties during exercise or outdoor activities;
- Permanent lung damage to those with repeated exposure to O_3 pollution; and
- Aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis.

Ground-level O_3 can have detrimental effects on plants and ecosystems. These effects include:

- Interfering with the ability of sensitive plants to produce and store food, making them more susceptible to certain diseases, insects, other pollutants, competition, and harsh weather;
- Damaging the leaves of trees and other plants; and
- Reducing crop yields and forest growth, potentially impacting species diversity in ecosystems.

O_3 levels in the SoCAB are not in attainment with the State and federal 1-hour and 8-hour standards.

Particulate Matter

Particulate matter includes both aerosols and solid particles of a wide range of size and composition. Of particular concern are PM_{10} and $PM_{2.5}$. Particulate matter size refers to the aerodynamic diameter of the particle. Smaller particles are of greater concern because they can penetrate deeper into the lungs than large particles.

PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or from the resuspension of dust, most typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances.

[2] Ground-level O_3 is not to be confused with atmospheric O_3 or the "ozone layer", which occurs very high in the atmosphere and shields the planet from some ultraviolet rays.

$PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x), and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne particulate matter are on the respiratory system. Short term- exposure to high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits; a decline in respiratory function is also associated with short-term exposure to high PM_{10} levels. Long-term exposure to high $PM_{2.5}$ levels is associated with premature mortality and development of chronic respiratory disease. According to the USEPA, some people are much more sensitive than others to breathing PM_{10} and $PM_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

Particulate matter tends to occur primarily in the form of fugitive dust. This dust appears to be generated by both local sources and by region-wide dust during moderate- to high-wind episodes. These regional episodes tend to be multidistrict and sometimes interstate in scope. The principal sources of dust in urban areas are from grading, construction, disturbed areas of soil, and dust entrained by vehicles on roadways. PM_{10} levels in the SoCAB are in compliance with federal 24-hour standards; nevertheless, PM_{10} levels in the SoCAB are not in attainment with State 24-hour standards. In addition, $PM_{2.5}$ levels in the SoCAB are not in attainment with State and federal 24-hour and annual standards.

Carbon Monoxide

CO is a colorless and odorless gas which, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease, and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high CO concentrations are typically found near crowded intersections; along heavily used roadways carrying slow moving traffic; and at or near ground level. Even under the most severe meteorological and traffic conditions, concentrations of CO are limited to locations within a relatively short distance (i.e., up to 600 feet or 185 meters) of heavily traveled roadways. Overall, CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO levels in the SoCAB are in attainment with the State and federal 1-hour and 8-hour standards.

Sulfur Dioxide

SO_x is a class of compounds of which SO_2 and sulfur trioxide (SO_3) are of greatest importance. Ninety-five percent of pollution-related SO_x emissions are in the form of SO_2. SO_x emissions are typically examined when assessing potential air quality impacts of SO_2. The primary contributor of SO_x emissions is fossil fuel combustion for generating electric power. Industrial processes, such as nonferrous metal smelting, also contribute to SO_x emissions. SO_x are also formed during combustion of motor fuels; however, most of the sulfur has been removed from fuels, greatly reducing SO_x emissions from vehicles.

SO_2 combines easily with water vapor, forming aerosols of sulfurous acid (H_2SO_3), a colorless, mildly corrosive liquid. This liquid may then combine with oxygen in the air, forming the even more irritating and corrosive sulfuric acid (H_2SO_4). Peak levels of SO_2 in the air can cause temporary breathing difficulty for people with asthma who are active outdoors. Longer-term exposures to high levels of SO_2 gas and particles cause respiratory illness and aggravate existing heart disease. SO_2 reacts with other chemicals in the air to form tiny sulfate particles that are measured as $PM_{2.5}$. SO_2 levels in the SoCAB are in attainment with State and federal 1-hour and 24-hour standards.

Lead

Lead is a stable compound, which persists and accumulates both in the environment and in animals. In humans, it affects the body's blood-forming (or hematopoietic), nervous, and renal systems. In addition, lead has been shown to affect the normal functions of the reproductive, endocrine, hepatic, cardiovascular, immunological, and gastrointestinal systems, although there is significant individual variability in response to lead exposure. Since 1975, lead emissions have been in decline due, in part, to the introduction of catalyst-equipped vehicles and the decline in the production of leaded gasoline. In general, an analysis of lead is limited to projects that emit significant quantities of the pollutant (i.e., lead smelters) and are not applied to transportation sources of emissions. Lead levels in the Los Angeles County portion of the SoCAB are not in attainment with federal 3-month rolling average standards.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including motor vehicles, gasoline stations, dry cleaners, industrial operations, painting operations, and research and teaching facilities.

TACs are different than the "criteria" pollutants previously discussed in that ambient air quality standards have not been established for them. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and

chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

Diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's $PM_{2.5}$ air quality problems.

The SCAQMD provides three thresholds of significance for TACs: the Maximum Incremental Cancer Risk threshold of greater than 10 in 1 million (highest individual lifetime cancer risk at any location), the Cancer Burden threshold of greater than 0.5 excess cancer cases in areas ≥ 1 in 1 million (total expected cancer cases across the exposed population), and the Chronic and Acute Hazard Index of greater than 1.0 (long-term exposure effects based on lifetime or years of exposure) (SCAQMD 2023).

Carcinogenic risks (i.e., cancer risks) are estimated as the incremental probability that an individual will develop cancer over his/her lifetime as a direct result of exposure to potential carcinogens. The estimated risk is expressed as a probability (e.g., 10 in 1 million). A risk level of 1 in 1 million implies a likelihood that up to 1 person out of 1 million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the specific concentration over 70 years (an assumed lifetime). This would be in addition to those cancer cases that would normally occur in an unexposed population of 1 million people.

Different from carcinogenic risks, the Hazard Index (HI) expresses the potential for chemicals to result in non-cancer-related health impacts. HIs are expressed using decimal notation (e.g., 0.001). A calculated HI exposure of less than 1.0 will likely not result in adverse non-cancer-related health effects over a lifetime of exposure. Although a value of 1.0 is a commonly accepted CEQA significance threshold, an HI greater than 1.0 does not necessarily mean that adverse effects will occur.

The Multiple Air Toxics Exposure Study V (MATES V) is a monitoring and evaluation study conducted in the SoCAB. According to the MATES V, the carcinogenic risk from air toxics in the SoCAB has continued to improve over time. While toxic air pollutants decreased by more than 54 percent from 2012 to 2018, the cancer risk for residents of the SoCAB was 455 in 1 million in the year 2018. The results of the MATES V indicate that diesel exhaust is the primary contributor to air toxics risk within the SoCAB.

Sensitive Air Quality Receptors

Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities. Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as "sensitive receptors". These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use to the Project site where an individual could remain for 24 hours has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

Per the SCAQMD's *LST Methodology*, commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically on-site for 8 hours or less. However, *LST Methodology* explicitly states that "*LSTs based on shorter averaging periods, such as the NO_2 and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours* (SCAQMD 2008)." Therefore, any adjacent land use where an individual could remain for 1 or 8 hours, that is located at a closer distance to the Project site than the receptor used for PM_{10} and $PM_{2.5}$ analysis, must be considered to determine construction and operational LST air impacts for emissions of NO_2 and CO since these pollutants have an averaging time of 1 and 8 hours.

Localized air quality impacts were evaluated at sensitive receptor land uses nearest the Project site. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site.

The nearest sensitive receptor to the San Rafael site is a residence located on the hilltop approximately 100 feet to the north of the site near the South San Rafael Avenue and Laguna Road intersection at an elevation of approximately 40 feet above the site. The nearest sensitive receptors to the San Pascual site are the residences located across San Pascual Avenue approximately 60 feet to the north at the nearest points and approximately 120 feet to the northwest at the nearest points. For purposes of analysis, the nearest sensitive receptor represented by the existing residences, located approximately 60 feet (18 meters) north of the Project site, will be used to conservatively evaluate the localized impacts at both sites.

The SCAQMD recommends that the nearest sensitive receptor be considered when determining a Project's impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$ (since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time). The nearest receptor used for evaluation of localized impacts of PM_{10} and $PM_{2.5}$ are the existing residences located approximately 60 feet (18 meters) to the north at the Project site.

As previously stated, and consistent with LST Methodology, the nearest industrial/commercial use to the Project site can be used to determine construction and operational LST air impacts for emissions of NO_X and CO as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assume that an individual could be present at these sites for periods of 1 to 8 hours. However, in this case, the existing residence is located at a closer distance than the nearest industrial/commercial use. As such, the same receptor will be used for evaluation of localized NO_x and CO.

It should be noted that the LST Methodology explicitly states that "It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters (SCAQMD 2008)." As such a 25-meter receptor distance will be used for evaluation of localized PM_{10}, $PM_{2.5}$, NO_X, and CO.

Ambient Air Quality

The SCAQMD has designated general forecast areas and air monitoring areas (referred to as Source Receptor Areas [SRA]) throughout the district in order to inform Southern California residents about the air quality conditions. The Project site is located within SRA 8. It should be noted that the monitoring station within SRA 8 only reports air quality data for O_3, CO, NO_2, and $PM_{2.5}$, and as such the station from SRA 1 will be used to report air quality data for PM_{10}.

- SRA 8 (West San Gabriel Valley – 2.50 miles northeast of the Project site) - O_3, CO, NO_2, and $PM_{2.5}$
- SRA 1 (Central L.A. – 5.13 miles southwest of the Project site) – PM_{10}

It should be noted that data from the Central L.A. monitoring station was utilized in lieu of the West San Gabriel monitoring station only in instances where data was not available.

The most recent three (3) years of data available is shown in Table 3.2-2, which identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2021 through 2023 was obtained from the SCAQMD Air Quality Data Tables (SCAQMD 2026b). Additionally, data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

TABLE 3.2-2
PROJECT AREA AIR QUALITY MONITORING SUMMARY 2021–2023

Pollutant	Standard	Year		
		2021	2022	2023
O_3				
Maximum Federal 1-Hour Concentration (ppm)	-	0.104	0.143	0.109
Maximum Federal 8-Hour Concentration (ppm)	-	0.087	0.102	0.090
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	12	12	24
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	32	23	34
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	1.9	1.6	1.3
Maximum Federal 8-Hour Concentration	> 20 ppm	1.6	1.3	1.0
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.077	0.066	0.049
Annual Federal Standard Design Value	-	0.014	0.013	0.011
PM_{10}				
Maximum Federal 24-Hour Concentration (µg/m³)	> 150 µg/m³	64	60	57
Annual Federal Arithmetic Mean (µg/m³)	-	25.5	28.9	24.3
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m³	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 µg/m³	3	4	2
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration (µg/m³)	> 35 µg/m³	63.6	22.1	22.2
Annual Federal Arithmetic Mean (µg/m³)	> 12 µg/m³	10.74	9.11	8.74
Number of Days Exceeding Federal 24-Hour Standard	> 35 µg/m³	2	0	0

ppm = Parts Per Million
µg/m3 = Microgram per Cubic Meter
Source: Data for O3, CO, NO2, PM_{10}, and $PM_{2.5}$ was obtained from SCAQMD Air Quality Data Tables.

3.2.3 REGULATORY FRAMEWORK

The Project site is located in the SoCAB. Air quality in the SoCAB is regulated by the USEPA, SCAQMD, and the California Air Resources Board (CARB). Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Both State and local regulations may be more, but not less, stringent than USEPA regulations. The Southern California Association of Governments (SCAG) is an important partner to the SCAQMD and produces estimates of anticipated future growth and vehicular travel in the basin that are used for air quality planning. The federal, State, regional, and local regulations for criteria air pollutants and TACs are discussed below.

Federal

United States Environmental Protection Agency

The USEPA is responsible for implementing the Clean Air Act (CAA), which was first enacted in 1955[3] and amended numerous times thereafter. The CAA established federal air quality standards known as the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for criteria pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe (with an adequate margin of safety) to protect the public's health and welfare. The USEPA is responsible for setting and enforcing the NAAQS for criteria pollutants. The NAAQS are shown in Table 3.2-3, California and National Ambient Air Quality Standards. (CARB 2026a and CARB 2026b)

The USEPA directly regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives while stationary sources of emissions such as from industrial uses are regulated by local air pollution control districts. The USEPA requires each State with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP). In addition, the USEPA requires states to regulate other sources of emissions through the SIP. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution and thereby bring areas of nonattainment into attainment and maintain federal air quality standards by using a combination of performance standards and market-based programs within the SIP-identified time frame (USEPA 2025b and USEPA 2025c).

[3] The Air Pollution Control Act, the predecessor to the Clean Air Act, was enacted in 1955.

TABLE 3.2-3
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[a]	Secondary[b]
O_3	1 Hour	0.09 ppm (180 µg/m³)	–	–
	8 Hour	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)	Same as Primary
PM10	24 Hour	50 µg/m³	150 µg/m³	Same as Primary
	AAM	20 µg/m³	–	–
PM2.5	24 Hour	–	35 µg/m³	Same as Primary
	AAM	12 µg/m³	9.0 µg/m³	15.0 µg/m³
CO	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	–
	8 Hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	–
NO_2	AAM	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	Same as Primary
	1 Hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	–
SO_2	24 Hour	0.04 ppm (105 µg/m³)	–	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m³)
	1 Hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	–
Lead	30-day Avg.	1.5 µg/m³	–	–
	Calendar Quarter	–	1.5 µg/m³	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m³	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m³)		

O_3: ozone, ppm: parts per million, µg/m³: micrograms per cubic meter, –: No Standard; PM_{10}: respirable particulate matter with a diameter of 10 microns or less, AAM: Annual Arithmetic Mean, $PM_{2.5}$: fine particulate matter with a diameter of 2.5 microns or less, CO: carbon monoxide, mg/m³: milligrams per cubic meter, NO_2: nitrogen dioxide, SO_2: sulfur dioxide, km: kilometer.

[a] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

[b] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Note: More detailed information in the data presented in this table can be found at the CARB website (www.arb.ca.gov).

Source: CARB 2026a and CARB 2026b.

As indicated previously, the SoCAB is a nonattainment area for PM_{10} (State), $PM_{2.5}$ (State and federal), and O_3 (State and federal); additionally, the L.A. County portion of the SoCAB is a nonattainment area for lead. An area falls into nonattainment when that specific area fails to meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for a NAAQS. An area is considered to be in attainment when that area meets the national primary or secondary ambient air quality standard for a NAAQS (USEPA 2025d).

State

California Air Resources Board

The California Air Resources Board (CARB), as part of the California Environmental Protection Agency (CalEPA), is responsible for coordinating and administering both the federal and State air pollution control programs in California. In this capacity, CARB establishes the California Ambient Air Quality Standards (CAAQS), as shown in Table 3.2-3, which are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility-reducing particulates, sulfates, hydrogen sulfide, and vinyl chloride.

In addition, CARB conducts research, compiles emissions inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan (SIP). The SIP is based on an emissions inventory for the State based emissions information provided from each of the 35 local air districts. CARB requires the air districts in regions that do not attain the CAAQS to prepare plans for attaining the standards. CARB reviews each of these plans and determines whether each region is demonstrating sufficient progress toward attainment of State and federal ambient air quality standards. These plans are then integrated into the State SIP. The latest adopted SIP is the 2022 State SIP Strategy. (CARB 2022). SIPs are generally enforced by the State but the USEPA has authorization to take enforcement action against violators for federally approved SIPs. The public can also file citizen suits under the federal Clean Air Act to address violations of SIPs.

CARB establishes emissions standards for motor vehicles sold in California, consumer products (e.g., hair spray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel and emission specifications to further reduce on-road and off-road vehicular emissions.

Attainment Status

Based on monitored air pollutant concentrations, the USEPA and CARB designate an area's status in attaining the NAAQS and the CAAQS, respectively, for selected criteria pollutants. These attainment designations for the SoCAB are shown in Table 3.2-4, Attainment Status of Criteria Pollutants in the South Coast Air Basin. As shown, the SoCAB is a nonattainment area for PM_{10} (State), $PM_{2.5}$ (State and federal), and O_3 (State and federal) and the LA County portion of the SoCAB is in nonattainment for lead.

TABLE 3.2-4
ATTAINMENT STATUS OF CRITERIA POLLUTANTS
IN THE SOUTH COAST AIR BASIN

Pollutant	State	Federal
O_3 (1-hour)	Nonattainment	No Standards
O_3 (8-hour)	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	No Standard	Attainment/Nonattainment*
All others	Attainment/Unclassified	No Standards

O_3: ozone; PM_{10}: particulate matter 10 microns or less in diameter; $PM_{2.5}$: particulate matter 2.5 microns or less in diameter; CO: carbon monoxide; NO_2: nitrogen dioxide; SO_2: sulfur dioxide.

* The Los Angeles County portion of the SoCAB is designated nonattainment for lead; the remainder of the SoCAB is designated attainment.

Source: SCAQMD 2016

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the SIP for meeting federal clean air standards for California. The AQMP for the SoCAB is discussed below under Regional Regulatory Framework.

Title 24 Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The current applicable standards are the 2025 Standards, effective January 1, 2026 (CBSC 2026a). The requirements of the energy efficiency standards result in the reduction of natural gas and electricity consumption. Since using natural gas produces criteria pollutant emissions, a reduction in natural gas consumption results in a related reduction in air quality emissions.[4] Additional discussion of the Title 24 energy efficiency standards is included in Section 3.5, Greenhouse Gas Emissions. The 2022 Energy Code focuses on four key areas in newly constructed homes and businesses:

- Encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units.
- Establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking, and electric vehicle (EV) charging options whenever they choose to adopt those technologies.

[4] Because electricity would not be generated on the Project site, the emissions associated with electricity generation are not included in the emissions calculations.

- Expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available onsite and complement the state's progress toward a 100 percent clean electricity grid.
- Strengthening ventilation standards to improve indoor air quality.

California Green Building Standards Code

The 2025 California Green Building Standards Code (CCR, Title 24, Part 11), also known as the "CALGreen Code," contains mandatory requirements and voluntary measures for new residential and non-residential buildings (including buildings for retail uses, office uses, public schools, and hospitals) throughout California (CEC 2026). The development of the CALGreen Code is intended to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the following construction practices: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental quality. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction (CBSC 2026b).

Additional discussion of the CALGreen Code is included in Section 3.5, Greenhouse Gas Emissions.

Regional

South Coast Air Quality Management District

In the SoCAB, the SCAQMD is the agency responsible for protecting public health and welfare through the administration of federal and State air quality laws, regulations, and policies. The SCAQMD is 1 of 35 local air districts responsible for regional air quality planning, controlling emissions primarily from stationary sources. The SCAQMD administers air quality improvement grant programs and is CARB's primary partner in efforts to ensure that those located within the SoCAB breathe clean air. Included in the SCAQMD's tasks are the monitoring of air pollution, the preparation of the AQMP for the SoCAB, and the promulgation of rules and regulations (CARB 2024).

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the federally designated Metropolitan Planning Organization and the State-designated transportation planning agency for six counties: Riverside, San Bernardino, Los Angeles, Ventura, Imperial, and Orange. SCAG serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. On April 4, 2024, SCAG's Regional Council adopted the 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal). The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS

includes a strong commitment to reduce emissions from transportation sources in order to improve public health, to meet the NAAQS as set forth by the CAA.

The SCAQMD and SCAG are jointly responsible for formulating and implementing the AQMP for the SoCAB. SCAG's Regional Mobility Plan and Growth Management Plan form the basis for the land use and transportation control portion of the AQMP.

Air Quality Management Plan

The current regional plan applicable to the Project is the SCAQMD's 2022 Air Quality Management Plan (AQMP). The SCAQMD is responsible for ensuring that the SoCAB meets the NAAQS and CAAQS by reducing emissions from stationary (area and point), mobile (cars, trucks and buses, ships, trains, airplanes, and construction equipment), and indirect sources. According to the SCAQMD, indirect sources constitute any facility, building, structure, or installation, or combination thereof, which generates or attracts mobile source activity that results in emissions of any pollutant (or precursor) for which there is a State Ambient Air Quality Standard (SCAQMD 2022). Indirect sources include, but are not limited to, collegiate and professional sports stadiums/arenas, shopping centers, and warehouses. To accomplish this goal, the SCAQMD prepares AQMPs in conjunction with the SCAG, County transportation commissions, and local governments; develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

The 2022 AQMP was adopted on December 2, 2022, by the SCAQMD Governing Board. The 2022 AQMP evaluates integrated strategies and measures to meet the following NAAQS for the following criteria pollutants in which the SoCAB is in a state of nonattainment (SCAQMD 2022):

- 8-hour O_3 target of 80 parts per billion (ppb) by 2024, 75 ppb by 2032, 70 ppb by 2038;
- Annual $PM_{2.5}$ (12 micrograms per cubic meter [$\mu g/m^3$]) by 2025;
- 1-hour O_3 (120 ppb) by 2023; and
- 24-hour $PM_{2.5}$ (35 $\mu g/m^3$) by 2023.

South Coast Air Quality Management District Rules

The Project would be required to comply with existing SCAQMD rules for the reduction of fugitive dust and criteria pollutant emissions. The following rules are most relevant to the Project.

SCAQMD Rule 201 requires a "Permit to Construct" prior to the installation of any equipment (such as blast/cupola furnaces, spray booths, dry-cleaning equipment, or metal finishing/plating equipment) "the use of which may cause the issuance of air contaminants." and Regulation II provides the requirements for the application for a Permit to Construct.[5]

SCAQMD Rule 203 similarly requires a Permit to Operate.

SCAQMD Rule 219, **Equipment not Requiring a Written Permit Pursuant to Regulation II**, identifies "equipment, processes, or operations that emit small amounts of contaminants that shall not require written permits . . .". This Rule provides a list of equipment that is exempt from Rules 201 and 203.

SCAQMD Rule 401, Visible Emissions states that "a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or is of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (b)(1)(A) of this rule."

SCAQMD Rule 402, Nuisance states that a project shall not "discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

SCAQMD Rule 403, Fugitive Dust requires actions to prevent, reduce, or mitigate fugitive particulate matter emissions. These actions include applying water or chemical stabilizers to disturbed soils; managing haul road dust by applying water; covering all haul vehicles before transporting materials; restricting vehicle speeds on unpaved roads to 15 miles per hour (mph); and sweeping loose dirt from paved site access roadways used by construction vehicles. In addition, Rule 403 requires that vegetative ground cover be established on disturbance areas that are inactive within 30 days after active operations have ceased. Alternatively, an application of dust suppressants can be applied in sufficient quantity and frequency to maintain a stable surface.

[5] SCAQMD Rule 201 would be applicable to any equipment the use of which may cause the issuance of air contaminants including the soil venting system and building protection system.

3.2.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. The project would result in a significant adverse air quality impact if it would:

Threshold 3.2a Conflict with or obstruct implementation of the applicable air quality plan;

Threshold 3.2b Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;

Threshold 3.2c Expose sensitive receptors to substantial pollutant concentrations; and/or

Threshold 3.2d Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

3.2.5 REGULATORY REQUIREMENTS

The following Regulatory Requirements pertaining to Air Quality are applicable to the Project.

RR AQ-1 SCAQMD Rule 401, Visible Emissions states that "a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or is of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (b)(1)(A) of this rule."

RR AQ-2 SCAQMD Rule 402, Nuisance states that a project shall not "discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

RR AQ-3 SCAQMD Rule 403, Fugitive Dust requires actions to prevent, reduce, or mitigate fugitive particulate matter emissions. These actions include applying water or chemical stabilizers to disturbed soils; managing haul road dust by applying water; covering all haul vehicles before transporting materials; restricting vehicle speeds on unpaved roads to 15 mph; and sweeping loose dirt from paved site access roadways used by construction vehicles. In addition, Rule 403 requires that vegetative ground cover be established on disturbance areas that are inactive within 30 days after active operations have ceased. Alternatively, an application of dust suppressants can be applied in sufficient quantity and frequency to maintain a stable surface.

3.2.6 ENVIRONMENTAL IMPACTS

Threshold 3.2a ***Would the project conflict with or obstruct implementation of the applicable air quality plan?***

The Project site is located within the SoCAB, which is characterized by relatively poor air quality. In the SoCAB, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards. Currently, certain state and federal air quality standards are exceeded in most parts of the SoCAB on some days of the year. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the *Final 2022 AQMP* (*2022 AQMP*). The *2022 AQMP* evaluates current integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (SCAQMD 2022). The *2022 AQMP* incorporates scientific and technological information and planning assumptions, including the *2020-2045 RTP/SCS*, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (SCAG 2020). The Project's consistency with the *2022 AQMP* is discussed below.

It should be noted that although SCAG has released an updated 2024-2050 RTP, the 2022 AQMP is based on the 2020-2045 RTP. Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the *1993 CEQA Handbook* (SCAQMD 1993). These indicators are discussed below:

Consistency Criterion No. 1

The violations that Consistency Criterion No. 1 refer to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

As evaluated, the Project's localized and regional construction-source emissions would not exceed applicable regional significance thresholds or LST thresholds. As such, a less than significant impact is expected. As evaluated, the Project's localized and regional operation-source emissions would not also exceed applicable regional significance thresholds or LST thresholds. As such, a less than significant impact is expected. On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

Consistency Criterion No. 2

Potential to exceed the assumptions in the AQMP based on the years of Project build-out phase. The *2022 AQMP* demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in each site's respective General Plan is considered to be consistent with the AQMP*.* As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

The Project sites, San Rafael and San Pascual, are within the cities of Pasadena, South Pasadena, and Los Angeles. The entirety of the San Rafael site is within Pasadena except for the portion extending along the western side of San Rafael Creek that is within an LACFCD easement. Most of the San Pascual site is within South Pasadena except for approximately the northern quarter of the site that is in Los Angeles. Pasadena, South Pasadena, and Los Angeles all have a General Plan land use designation and zoning designation of OS/Open Space for each respective city's portions of the two sites.

Per the City of Pasadena Municipal Code (PMC), the OS zoning district is applied to sites with open space, parks, and recreational facilities of a landscaped, open character having a minimum contiguous site area of two acres. The Project is consistent with the City of Pasadena's land use designation and zoning district.

Per the City of South Pasadena Municipal Code (SPMC), the OS zoning district is applied to areas suitable for open space land uses including parks, natural open space areas, recreational facilities, and areas used for flood control. Additionally, the OS zone includes hiking trails, nature preserves, and accessory uses (City of South Pasadena 2026). The Project is consistent with South Pasadena's land use designation and zoning code.

Per the City of Los Angeles Municipal Code (LAMC), the OS zoning district allows for parks and recreation facilities, including bicycle trails, equestrian trails, walking trails, nature trails, park land/lawn areas, children's play areas, childcare facilities, picnic facilities, and athletic fields (not to exceed 200 seats in park) used for park and recreation purposes as well as water conservation areas, including percolation basins and flood plain areas (City of Los Angeles 2026). The Project is consistent with Los Angeles' land use designation and zoning code.

The proposed Project involves improvements of two regional stormwater capture and treatment facilities. As previously stated, the Project's proposed uses are consistent with the current land use and zoning designations and would not require a General Plan Amendment or Zone Change. Project implementation would not result in population growth nor increases in the number of emission sources in the surrounding cities. The Project would improve water quality discharged from the San Rafael Creek and the Arroyo Seco Channel which would benefit local water supplies through infiltration to the local groundwater basin and increased used of captured stormwater (i.e., non-potable water) for irrigation. Use of local water supplies would reduce the need for imported water which is more energy and air

pollution intensive as compared to use of local water supplies. The Project on an individual basis does not have an impact and as such, the proposed Project would not conflict with the goals and objectives of the AQMP. Furthermore, the Project, as evaluated herein would not exceed the regional or localized air quality significance thresholds.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

AQMP Consistency Conclusion

The Project would not have the potential to result in or cause NAAQS or CAAQS violations. The Project's proposed uses are consistent with the land use and zoning designations. The Project would not exceed the regional or localized construction or operational thresholds; the Project's development intensity is consistent with the development intensities allowed within the General Plans as previously stated. As such, the Project would not conflict with or obstruct implementation of the AQMP. Impacts in this regard are less than significant.

Threshold 3.2b: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?

The SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions.[6] These significance thresholds are updated as needed to appropriately represent the most current technical information and attainment status in the SoCAB.

Table 3.2-5, SCAQMD Air Quality Significance Thresholds, presents the current SCAQMD significance thresholds, including regional daily thresholds for short-term construction and long-term operational emissions; maximum incremental cancer risk and HIs for TACs; and maximum ambient concentrations for exposure of sensitive receptors to localized pollutants. A project with daily emission rates, risk values, or concentrations below these thresholds is generally considered to have a less than significant effect on air quality.

The effects of criteria air pollutants are evaluated against the NAAQS or CAAQS which have been developed to provide air pollution standards that are protective of public health. Exceedance of these air quality standards does not describe the prevalence or magnitude of health effects, but rather assesses the potential for a project-related health effect to occur. Project level assessments of air pollutant concentrations cannot provide an estimate of specific health effects such as asthma, bronchitis, or other specific respiratory ailments due to a broad variety of uncertainties which include modeling limitations. One example provided by the SCAQMD was related to health impacts from emissions related to the ozone (smog) formation. Reactive organic gases (ROGs) and NO_x are pollutants that contribute to the formation of ozone, otherwise known as ozone precursors. It would be too speculative to determine how an individual project could affect the formation of ozone, and how it could

[6] https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25

affect the health for a specific receptor: ozone does not fully form within the proximity of a project site, and the formation of ozone is affected by solar irradiance, meteorological conditions, presence of ozone precursors from other sources, and other factors. As such, modeling of ozone concentrations is conducted on the "macro" scale of an air basin for all pollutant sources within the basin, and not for an individual project. Consequently, the use of NAAQS and CAAQS focuses on a project-level analysis of the four criteria pollutants of greatest concern (CO, NO_x, PM_{10}, and $PM_{2.5}$) and provides a level at which it is considered harmful to public health but does not provide direct causation to specific health impacts. These regional emission thresholds cannot be used to correlate whether a specific health impact would occur to an individual receptor. These thresholds were developed to assist Lead Agencies with a consistent threshold that could be used to determine whether a project's emissions could significantly contribute to the total emissions occurring within an air basin. The totality of the air basin's emissions would determine whether it would be in attainment of the CAAQS and NAAQS.

Construction Emissions – Regional

Criteria pollutant emissions would occur during construction from operation of construction equipment; excavation and earth-moving activities, which would generate fugitive dust; import of soil; import of construction materials; paving and painting; and operation of vehicles driven to and from the site by construction workers. Emissions would vary from day to day, depending on the level of activity, the specific type of construction activity occurring, and, for fugitive dust, prevailing weather conditions.

Construction activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction-related emissions are expected from the following construction activities:

San Rafael site:

- Demolition
- Site Preparation
- Grading
- Infrastructure Construction
- Paving

San Pascual site:

- Site Preparation
- Grading
- Infrastructure Construction
- Paving

Demolition Activities

The Project site is currently vacant, open space land and will include the removal of existing vegetation and a limited extent of concrete demolition, resulting in approximately 30 cubic feet (1.03 tons or slightly over 1 cubic yard) of demolition debris and 3,000 cubic yards of greenwaste, which would be hauled off-site. Demolition debris is anticipated to be disposed of at Scholl Canyon Landfill, located 2.5 miles from the Project site. Notwithstanding, for purposes of analysis, the CalEEMod default trip length of 20-miles was conservatively utilized to determine emissions associated with demolition hauling activities.

TABLE 3.2-5
SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Mass Daily Thresholds[a]		
Pollutant	**Construction**	**Operation**
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
TACs, Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to South Coast AQMD Rule 402	
GHG	10,000 MT/yr CO_2e for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants[b, c]		
NO_2 1-hour average annual arithmetic mean	The South Coast AQMD is in attainment; the Project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (State) 0.03 ppm (State) and 0.0534 ppm (federal)	
PM_{10} 24-hour average annual average	 10.4 µg/m³ (construction)[c] & 2.5 µg/m³ (operation) 1.0 µg/m³	
$PM_{2.5}$ 24-hour average	 10.4 µg/m³ (construction)[c] & 2.5 µg/m³ (operation)	
SO_2 1-hour average 24-hour average	 0.25 ppm (State) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (State)	
Sulfate 24-hour average	 25 µg/m³ (State)	

TABLE 3.2-5
SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Mass Daily Thresholds[a]	
CO	South Coast AQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:
1-hour average	20.0 ppm (State) and 35 ppm (federal)
8-hour average	9.0 ppm (State/federal)
Lead	
30-day average	1.5 µg/m^3 (State)
Rolling 3-month average	0.15 µg/m^3 (federal)

NO_x: nitrogen oxides, lbs/day: pounds per day, VOC: volatile organic compound, PM_{10}: respirable particulate matter with a diameter of 10 microns or less, $PM_{2.5}$: fine particulate matter with a diameter of 2.5 microns or less, SO_x: sulfur oxides, CO: carbon monoxide, TACs: toxic air contaminants, GHG: greenhouse gases, MT/yr CO_2e: metric tons per year of carbon dioxide equivalents, NO_2: nitrogen dioxide, ppm: parts per million, µg/m^3: micrograms per cubic meter; South Coast AQMD: South Coast Air Quality Management District

[a] Source: South Coast AQMD CEQA Handbook (South Coast AQMD 1993)
[b] Ambient air quality thresholds for criteria pollutants based on South Coast AQMD Rule 1303, Table 2 unless otherwise stated
[c] Ambient air quality threshold is based on South Coast AQMD Rule 403

Source: SCAQMD 2023

Grading Activities

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on information provided by the Project team, the San Rafael site would require 2,000 cubic yards of export for earthwork activities, and the San Pascual site would require 4,000 cubic yards of export for earthwork activities. As a result, the Project would require a total of 6,000 cubic yards of export for earthwork activities. The CalEEMod default trip length of 20-miles will be used to analyze the emissions associated with export activities.

Rule 403 measures include regular watering of active grading areas and unpaved roads, limiting vehicle speeds on unpaved surfaces, stabilizing stockpiled earth, and curtailing grading operations during high wind conditions (SCAQMD 2005). Watering of active grading areas is included in the CalEEMod emissions analysis and results in reduced PM_{10} and $PM_{2.5}$ emissions. It should be noted that some Project requirements and features (such as watering grading areas), although required Project elements, are shown in the CalEEMod format as mitigation measures. The emission reductions associated with compliance with this rule have been included in the emissions calculations.

On-Road Trips

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. The number of workers, vendors, and hauling trips per phase is presented below in Table 3.2-6. Worker trips are based on CalEEMod defaults, while vendor and hauling trips are based on information provided by the Project applicant.

TABLE 3.2-6
CONSTRUCTION TRIP ASSUMPTIONS

Site	Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
San Rafael	Demolition	13	0	8
	Site Preparation	8	0	8
	Grading	8	0	8
	Infrastructure Construction	0	6	0
	Paving	5	0	0
San Pascual	Site Preparation	8	0	12
	Grading	15	0	12
	Infrastructure Construction	0	12	0
	Paving	5	0	0

Construction Duration

For purposes of analysis, construction for the San Rafael site will begin September 2026 and would last through May 2027. Construction for the San Pascual site will begin January 2027 and would last through January 2028. It should be noted that construction for both sites would occur simultaneously for 5 months. The construction schedule utilized in the analysis, shown in Table 3.2-7, represents a "conservative" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[7] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per the *CEQA Guidelines* (AEP 2025).

[7] As shown in the CalEEMod User's Guide Version 2022, Appendix G, "Table G-11. Statewide Average Annual Offroad Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3.2-7
CONSTRUCTION DURATION

Site	Construction Activity	Start Date	End Date	Days
San Rafael	Demolition	9/1/2026	9/29/2026	21
	Site Preparation	9/30/2026	10/29/2026	22
	Grading	10/30/2026	12/29/2026	43
	Infrastructure Construction	12/30/2026	4/29/2027	87
	Paving	4/30/2027	5/31/2027	22
San Pascual	Site Preparation	1/1/2027	3/18/2027	55
	Grading	3/19/2027	7/1/2027	75
	Infrastructure Construction	7/2/2027	12/29/2027	129
	Paving	12/30/2027	1/31/2028	23

Construction Equipment

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3.2-8 is assumed to operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the City of Pasadena code. It should be noted that construction equipment was based on information provided by the Project applicant.

TABLE 3.2-8
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Site	Construction Activity	Equipment[1]	Quantity	Hours
San Rafael	Demolition	Excavators	1	8
		Skid Steer Loaders	1	8
		Tractors/Loaders/Backhoes	1	8
		Crawler Tractors	1	8
		Other Construction Equipment	1	8
	Site Preparation	Excavators	1	8
		Skid Steer Loaders	1	8
		Crawler Tractors	1	8
	Grading	Excavators	1	8
		Skid Steer Loaders	1	8
		Crawler Tractors	1	8
	Infrastructure Construction	Cranes	1	8
		Excavators	1	8
		Skid Steer Loaders	1	8
		Pumps	1	8
	Paving	Pavers	1	8
		Rollers	1	8
San Pascual	Site Preparation	Excavators	1	8
		Skid Steer Loaders	1	8
		Crawler Tractors	1	8
	Grading	Excavators	2	8
		Skid Steer Loaders	2	8
		Crawler Tractors	2	8
	Infrastructure Construction	Cranes	1	8
		Excavators	1	8
		Skid Steer Loaders	1	8
		Pumps	1	8
	Paving	Pavers	1	8
		Rollers	1	8

1 In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes.

Construction Emissions Summary

CalEEMod calculates maximum daily emissions for summer and winter periods. As such, the estimated maximum daily construction emissions without mitigation for both summer and winter periods are summarized in Table 3.2-9. Detailed unmitigated construction model outputs are presented in Appendix B-1. Under the assumed scenarios, emissions resulting from the Project construction would not exceed criteria pollutant thresholds established by the SCAQMD.

TABLE 3.2-9
CONSTRUCTION EMISSIONS SUMMARY

Year	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	$PM_{10}T$	$PM_{2.5}T$
Summer						
2026	0.76	7.45	10.08	0.02	0.66	0.40
2027	1.46	14.33	17.29	0.03	1.33	0.69
Winter						
2026	0.61	5.94	6.13	0.02	0.60	0.28
2027	1.46	14.40	17.16	0.03	1.33	0.69
2028	0.27	2.27	3.29	0.00	0.16	0.10
Maximum Daily Emissions	1.46	14.40	17.29	0.03	1.33	0.69
SCAQMD Regional Thresholds	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO
Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix B-1.						

Operational Emissions – Regional

The proposed Project primarily involves air quality emissions from construction activity. However, long-term air quality emissions would result from mobile and energy source emissions. For on-going operations, mobile emissions would be generated by the motor vehicles traveling to and from the Project sites during on-going maintenance. The Project would involve the infrequent occurrence of, on average, one round trip to both sites per month related to inspection and maintenance activities. It is expected that maintenance personnel would travel to and from the sites in one to two vehicles – such as a pickup truck, or pickup truck and a vacuum truck, for instance. Occasional additional visits for more intensive maintenance activity or to respond to equipment issues may occur. However, the Project would generate a nominal number of traffic trips for periodic maintenance and inspections and would not result in any substantive new long-term emissions sources.

Energy source emissions would also result from electricity use needed to operate a small flow pump that operates year-round, bigger pumps that operate when it rains and once every three weeks to ensure proper operation, and a water harvester. The air pollutant emissions associated with these long-term sources on most days would be near zero and would be too low a concentration to be meaningfully quantified. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment.

Effects of Tree Removal on Air Quality

The Project's removal and addition of trees would occur across two sites, San Rafael and San Pascual, located within the jurisdictions of Pasadena, South Pasadena, and Los Angeles. At the San Rafael site within the City of Pasadena, the Project would involve the removal of a total of 6 trees and the addition of 61 new trees. At the San Pascual site within the City of South Pasadena, the Project would involve the removal of a total of 119 trees and the

addition of 107 new trees. At the San Pascual site within the City of Los Angeles, the Project would involve the removal of a total of 11 trees and the addition of 48 new trees.

Summary of UC Davis/Caltrans Study

According to the UC Davis and Caltrans study*, Practical Mitigation Measures for Diesel Particulate Matter: Near-Road Vegetation Barriers Study*, the addition of a near-road vegetation barrier was shown to reduce PM_{10} levels at approximately 4 to 120 kg/year or estimated PM_{10} concentration reduction ranging from approximately 0.16% to 4.6%. The study demonstrated an overall decrease in PM_{10} with the addition of a vegetation barrier to a particular site (UC Davis and Caltrans 2009). However, given the multiple variables, such as mixing height, tree density, and leaf composition, that influence the effectiveness of a vegetation barrier in reducing PM_{10} concentrations and the absence of a definitive quantitative method for calculating PM_{10} reduction, the results of this study are inconclusive. While other studies focus on the design features for an effective vegetation barrier or the scientific mechanism by which a vegetation barrier captures pollutants, few focus on quantifying the actual emissions reduction. Without a standardized method to quantify these reduction impacts, the results remain inconclusive and further research is needed to validate the overall effectiveness of vegetation barriers as a mitigation measure to reduce pollutants.

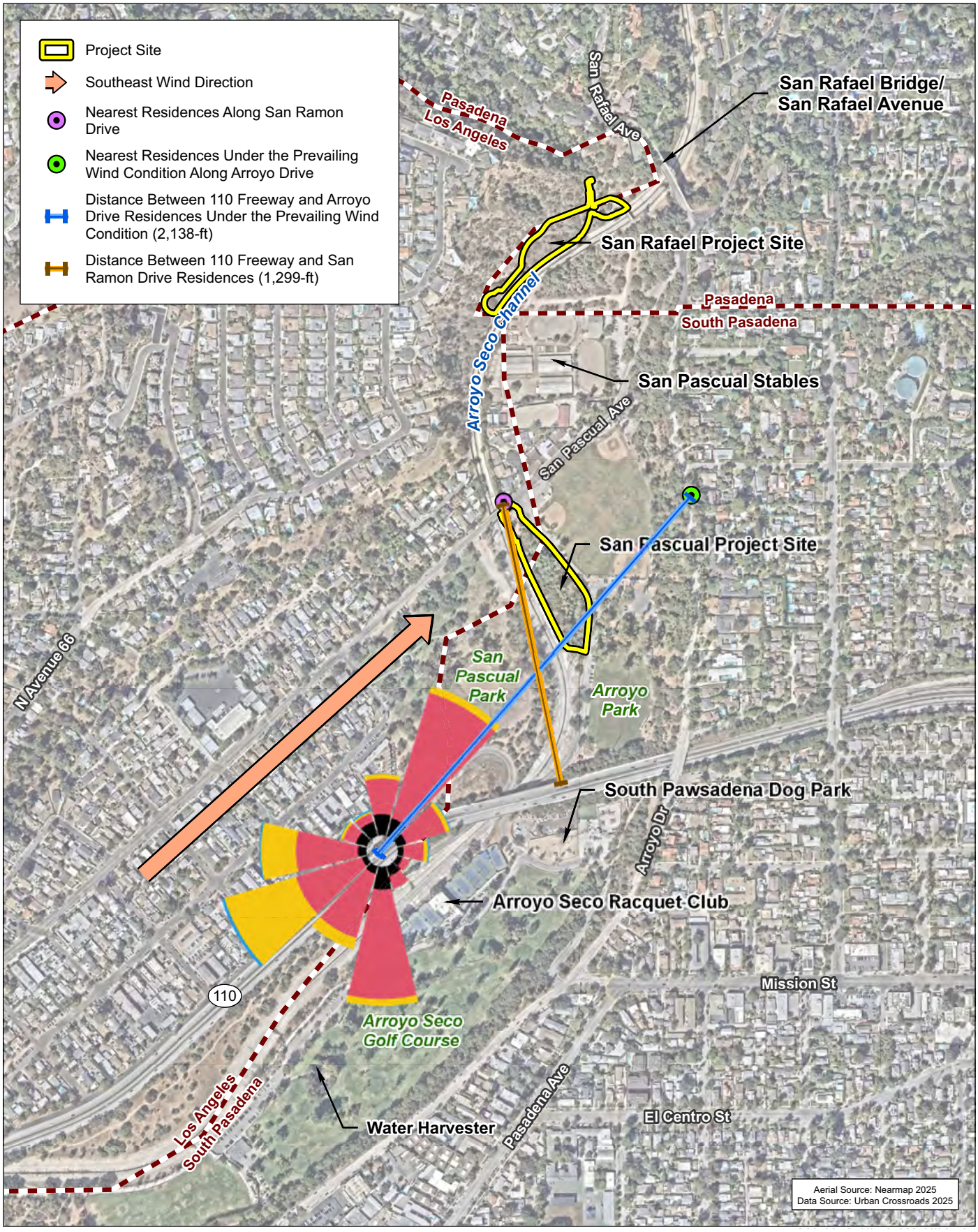
Potential Increase in Air Pollution from Tree Replacement

The removal of existing trees will result in a temporary interim condition during the period required for the replacement trees to reach maturity, which may result in a temporarily reduced vegetative barrier to air pollution sources in areas surrounding the Project site. Although the UC Davis and Caltrans study indicates that PM_{10} concentrations may be reduced by up to approximately 4.6% with the use of vegetation barriers, the results are inconclusive due to the absence of a definitive quantitative method for calculating PM_{10} reduction.

Additionally, conducting an accurate or otherwise useful health risk assessment would be complicated given the multiple variables, such as mixing height, tree density, and leaf composition, that influence the effectiveness of a vegetation barrier in reducing diesel particulate matter (DPM) concentrations.

To determine the potential transport and dispersion of pollutants in the Project area, a wind rose diagram was prepared using regional meteorological data from the nearest SCAQMD monitoring station (SRA 1) to show the prevailing vector (blowing to) wind direction (SCAQMD 2026c). As shown in Exhibit 3.2-1, the majority of wind blows from the south and southwest, with a frequency distribution indicating a predominant direction.[8] Considering the 110 Freeway as the primary source of air pollution in the project vicinity (with no other high-volume roadways or industrial point sources in the vicinity), as a result of the prevailing

[8] To interpret the wind rose exhibit, note that each spoke (wedge) points in the direction that wind comes from. The length of the spoke represents how frequently wind comes from that direction. In this case, longer spokes from the south and southwest indicate that winds most often originate from those directions. The colors within each spoke represent the wind speed ranges, with the highest speeds shown toward the outer edge of the spoke.



D:\Projects\2PAS\Arroyo_Seco_WR\Graphics\EIR\ex_Wind_Rose.ai

Wind Rose for Project Area

Exhibit 3.2-1

Arroyo Seco Water Reuse Project

N W E S

Map not to scale

PSOMAS

(03/12/2026) R:\Projects\2PAS\2PAS010303 - Arroyo Seco EIR\Graphics\EIR\ex_Wind_Rose.pdf

winds blowing towards the north-northeastern direction, pollution from this roadway may be transported into the neighborhoods near the Project site.

Land uses surrounding the San Rafael site include the soft-bottom portion of San Rafael Creek and an undeveloped slope with the nearest residence on the hilltop to the north at an elevation of approximately 40 feet above the site; the Arroyo Seco Channel, Arroyo Seco open space, and San Pascual Avenue to the east; San Pascual Stables located at 221 San Pascual Avenue, South Pasadena, to the south and southeast across the Arroyo Seco Channel; and undeveloped slopes and residences on the hilltop to the west at elevations 160 to 200 feet above the San Rafael site. The nearest sensitive receptors to the San Rafael site are the residences on the hilltop to the north near the South San Rafael Avenue and Laguna Road intersection.

Land uses surrounding the San Pascual site include San Pascual Avenue and residences on San Ramon Drive to the north; the Burke, Clarich, Nelson Fields (649 Stoney Drive, South Pasadena) and Arroyo Park (614 Stoney Drive, South Pasadena) beyond Stoney Drive to the east; Stoney Drive and the Arroyo Seco Channel to the south; and San Pascual Park (930 San Pascual Avenue, Los Angeles) across the Arroyo Seco Channel to the west; and residences on North Avenue 67 to the northwest. The nearest sensitive receptors to the San Pascual site are the residences located across San Pascual Avenue approximately 60 feet to the north at the nearest points and approximately 120 feet to the northwest at the nearest points.

As the Project proposes to replace existing trees, during the interim condition, prior to the replacement trees reaching maturity, the vegetation onsite could have a reduced efficacy as a vegetative barrier to sources of air pollution. Based on California Air Resources Board (CARB) and SCAQMD emissions and modeling analyses of a distribution center as a pollutant source, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from the source[9]. Similarly, based on studies showing that air pollutant concentrations decrease dramatically within approximately 300-500 feet of freeways, CARB recommends avoiding siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day (SCAQMD 2005).

In the case of the Project, the San Pascual site is located in between the 110 Freeway and residences to the north. The closest of these residences is located approximately 1,300 feet from the 110 Freeway, well beyond CARB's recommended 500-foot siting distance. Furthermore, as shown in Exhibit 3.2-1. These residences are crosswind and not downwind from the 110 Freeway during prevailing wind conditions (winds blowing towards the north-northeastern direction), and the existing trees would not be a barrier to air pollutants blowing from the Freeway to these homes in this prevailing wind pattern. When considering the direction of the prevailing wind conditions, the nearest sensitive receptors that could receive vegetative barrier benefit from the trees on the San Pascual site would be the residences along Arroyo Drive to the northeast of the San Pascual site, which are located

[9] Based on California Air Resources Board (CARB) and SCAQMD emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center.

approximately 2,140 feet downwind of the Freeway, well beyond CARB's recommended 500-foot siting distance.

As previously stated, the Project would involve the removal of a total of 136 trees and the addition of 216 new trees at the San Rafael and San Pascual sites. For the purposes of this analysis, these quantities, assumed tree species, and other related parameters were used to estimate the Project's potential carbon sequestration and air quality impacts. Overall, the Project would result in a net increase in trees across all jurisdictions.

Air Quality Emissions from Tree Removal

While operational impacts would be negligible, the Project would temporarily remove existing trees and replace them with new plantings. Therefore, this analysis evaluates Project-related emissions and/or sequestration associated with tree removal and replacement from an impact perspective. Sequestration associated with the Project was calculated by CalEEMod using the United States Forest Service (USFS) i-Tree Planting tool. Detailed operation model outputs for the Project are presented in Appendix B-2. Even with removal and replacement of trees, Project operations would not exceed SCAQMD thresholds, the Project would not violate air quality standards or contribute to an existing violation. Therefore, Project operations would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment, and impacts would be less than significant.

TABLE 3.2-10
SUMMARY OF EMISSIONS RESULTING FROM REPLACEMENT TREES

Site	Jurisdiction	Emissions (lbs/day)			
		NO_X	SO_2	$PM_{10}T$	$PM_{2.5}T$
San Rafael	Pasadena	-0.013	-0.001	-0.002	-0.001
San Pascual	South Pasadena	0.041	0.003	0.004	0.001
	Los Angeles	-0.004	0.000	0.000	0.000
Maximum Daily Emissions		0.024	0.002	0.002	0.000
SCAQMD Regional Thresholds		55	150	150	55
Threshold Exceeded?		NO	NO	NO	NO

Threshold 3.2c: Would the Project expose sensitive receptors to substantial pollutant concentrations?

A significant impact may occur when a project would generate pollutant concentrations to a degree that would significantly affect sensitive receptors, which include populations that are more susceptible to the effects of air pollution than the population at large. Exposure of sensitive receptors is addressed for the following situations: CO hotspots, criteria pollutants, and toxic air contaminants.

Carbon Monoxide Hotspot

A CO hotspot is defined as a localized concentration of carbon monoxide exceeding the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. At the time the most recent CEQA Air Quality Handbook (1993) was published by SCAQMD, the air basin was designated as non-attainment, requiring projects to perform hotspot analyses to ensure they did not worsen the existing conditions. Over the last two decades, background CO concentrations have been significantly reduced due to regulatory controls on tailpipe emissions, which have culminated in the air basin achieving attainment status for CO.

The 2003 AQMP's findings underscore that CO hotspots are highly unlikely due to the reduced background concentrations and the effectiveness of California's air quality management strategies. The substantial reduction in CO levels from the vehicle fleet and the state's attainment status for CO further diminish the need for detailed microscale hotspot analyses, reinforcing that existing monitoring and regulatory frameworks adequately address potential air quality concerns.

In 2003, the SCAQMD as part of its AQMP development process prepared modeling to determine the potential for CO Hotspots at the four busiest intersections in the air basin. As summarized in the 2003 AQMP, even at one of the busiest intersections at that time, only 0.7 ppm of CO is attributable to vehicular traffic and the remaining 7.7 ppm were due to ambient background conditions. As shown on Table 3.2-2 in this report, the background 1-hour and 8-hour concentrations are well below the applicable AAQS. The 2003 AQMP's findings underscore that CO hotspots are highly unlikely due to the reduced background concentrations and the effectiveness of California's air quality management strategies. The substantial reduction in CO levels from the vehicle fleet and the state's attainment status for CO further diminish the need for detailed microscale hotspot analyses, reinforcing that existing monitoring and regulatory frameworks adequately address potential air quality concerns.

As such, Project-related traffic at any intersections within the Project area would not cause or contribute to a CO hotspot since the background concentrations are low; moreover, the Project would result in negligible trips associated with maintenance.

Criteria Pollutants from On-Site Construction and Project Operation

Localized Thresholds for Construction Activity

Since the total acreage disturbed is 0.5 acre per day for demolition, 0.5 acre per day for site preparation, and 1 acre per day for grading activities, the SCAQMD's screening look-up tables are utilized in determining impacts. It should be noted that since the look-up tables identify thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized to determine localized significance screening thresholds. Additionally, it should be noted that a 1 acre per day disturbance area for demolition and site preparation activities was utilized as this is the SCAQMD look-up tables minimum acreage. Consistent with SCAQMD guidance, the thresholds presented in Table 3.2-11 were calculated by interpolating the threshold values for the Project's disturbed acreage.

TABLE 3.2-11
MAXIMUM DAILY LOCALIZED CONSTRUCTION EMISSIONS THRESHOLDS

Construction Activity	Construction Localized Thresholds			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Demolition	69 lbs/day	535 lbs/day	4 lbs/day	3 lbs/day
Site Preparation	69 lbs/day	535 lbs/day	4 lbs/day	3 lbs/day
Grading	69 lbs/day	535 lbs/day	4 lbs/day	3 lbs/day
Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008				

Construction-Source Localized Emissions

Table 3.2-12 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Without mitigation, localized construction emissions would not exceed the applicable SCAQMD LSTs for emissions of any criterial pollutant. For analytical purposes, emissions associated with peak construction activities are considered for purposes of LSTs since these phases represent the maximum localized emissions that would occur. Any other construction phases of development that overlap would result in lesser emissions and consequently lesser impacts than what is disclosed herein. Outputs from the model runs for unmitigated construction are provided in Appendix B-1.

TABLE 3.2-12
LOCALIZED CONSTRUCTION-SOURCE EMISSIONS

On-Site Emissions	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition				
Maximum Daily Emissions	6.75	9.02	0.37	0.32
SCAQMD Localized Threshold	69	535	4	3
Threshold Exceeded?	NO	NO	NO	NO
Site Preparation				
Maximum Daily Emissions	4.06	4.98	0.35	0.21
SCAQMD Localized Threshold	69	535	4	3
Threshold Exceeded?	NO	NO	NO	NO
Grading				
Maximum Daily Emissions	7.62	9.91	0.65	0.37
SCAQMD Localized Threshold	69	535	4	3
Threshold Exceeded?	NO	NO	NO	NO
Source: CalEEMod unmitigated localized construction-source emissions are presented in Appendix B-1.				

Operational-Source Localized Emissions

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse

buildings). As the Project consists of two regional stormwater capture and treatment facility improvements and would result in negligible onsite operational emissions, no localized operational impacts are expected.

Toxic Air Contaminants Impacts

The greatest potential for toxic air contaminant (TAC) emissions during Project activities would be related to diesel particulate emissions associated with heavy equipment operations during construction. Project construction activities would be intermittent and temporary. The assessment of cancer risk is typically based on a 30-year exposure period. Because exposure to diesel exhaust would be relatively short in comparison to the full exposure period, the relatively small number of construction equipment used, and the dispersion conditions associated with a relatively large area for which construction activities would occur, Project construction activities would not result in an elevated cancer risk to exposed persons due to the brevity of air pollutant exposure at any one specific location. As such, Project-related toxic emission impacts during Project construction would be less than significant, and no mitigation is required. Also, as discussed previously, the Project would not exceed the South Coast AQMD air quality significance thresholds, which identifies whether significant levels of emissions would occur.

Conclusion

Results of the LST analysis indicate that the Project would not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction and impacts would be less than significant.

Additionally, the Project would not exceed the SCAQMD localized significance thresholds during operational activity. Further Project traffic would not create or result in a CO "hotspot." Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations and impacts would be less than significant.

Threshold 3.2d: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries

- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature, would cease upon completion of the respective phase of construction, and would not adversely affect a substantial number of people and are thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with current solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors and other emissions (such as those leading to odors) associated with construction and operations activities of the proposed Project would be less than significant and no mitigation is required (SCAQMD 1976).

3.2.7 CUMULATIVE IMPACTS

As previously shown in Table 3.2-4, the CAAQS designates the Project site as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the Project site as nonattainment for O_3 and $PM_{2.5}$. The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (SCAQMD 2003). In this report the SCAQMD clearly states (Page D-3):

> *"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."*

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SoCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Conversely, project-level construction and operational emissions that exceed SCAQMD thresholds would be considered cumulatively considerable.

Construction-Source Emission Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional or localized thresholds. Therefore, proposed Project construction-source emissions would be considered less than significant on a Project-specific and cumulative basis.

Operational-Source Emission Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operation-source air pollutant emissions would not result in exceedances of regional or localized thresholds. Therefore, the proposed Project operation-source emissions would be considered less than significant on a project-specific and cumulative basis.

3.2.8 MITIGATION MEASURES

No significant impacts related to Air Quality would occur, and no mitigation is required.

3.2.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed Project would not result in potentially significant Air Quality impacts. Impacts associated with Air Quality would be less than significant, and no mitigation is required.

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3.3 BIOLOGICAL RESOURCES

3.3.1 METHODOLOGY

A literature review and field studies were conducted to document the biological resources as well as jurisdictional drainage features on and adjacent to the sites using the methods described below. An additional temporary staging area, the parking lot located on the southeast corner of the intersection of San Pascual Avenue and Stoney Drive was included in all field surveys at the San Pascual Site. The analysis of this section is based on information from the *Updated Biological Resources Assessment Report for the Arroyo Seco Water Reuse Project* (Psomas 2025c). Additional details regarding survey methods and findings are provided in Appendix C, Biological Resources Assessment Report, including attached focused survey results.

Literature Review

Prior to the surveys, a literature review was conducted to identify special status plants, wildlife, and habitats that have been reported to occur in the vicinity of the survey area. The California Native Plant Society's (CNPS') Inventory of Rare and Endangered Plants (CNPS 2025) and the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CDFW 2025a) were reviewed. Database searches included the U.S. Geological Survey's (USGS') Pasadena and Los Angeles 7.5-minute quadrangles. Resources reviewed to assist in the delineation of jurisdictional features included the U.S. Department of Agriculture, Natural Resources Conservation Service's (USDA NRCS') Web Soil Survey, the USDA NRCS' Hydric Soils List (USDA NRCS 2023), and the U.S. Fish and Wildlife Service's (USFWS') National Wetlands Inventory Wetland Mapper (USFWS 2023).

Vegetation Mapping and General Survey

Psomas Senior Biologist Sarah Thomas conducted a general plant and wildlife survey and verified vegetation within the Project's survey area on June 16, 2023. An additional field visit was conducted May 1, 2025, to verify previously documented existing conditions. Vegetation was mapped on a 1-inch equals 100-foot (1″=100′) scale color aerial. Nomenclature for vegetation types generally follows that of A Manual of California Vegetation (Sawyer et. al. 2009) when feasible. All plant species observed were recorded in field notes. Plants were identified using taxonomic keys, descriptions, and illustrations in Jepson Flora Project (2025), Baldwin et al. (2012), Hickman (1993), and Munz (1974). Nomenclature of plant taxa conform to the Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2025c) for special status species and the Jepson eFlora (Jepson Flora Project 2025) for all other taxa.

All wildlife species detected during the survey were documented in field notes. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic signs, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows the Special Animals List (CDFW

2025b) for special status species; for other species, Center for North American Herpetology (2015) for amphibians and reptiles, the American Ornithological Society (2024) for birds, and the Smithsonian National Museum of Natural History (2011) for mammals.

Jurisdictional Delineation

Section 404 of the federal Clean Water Act (CWA) and Section 1602 of the California Fish and Game Code regulate activities affecting resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and the CDFW, respectively. Waters of the United States (WOTUS) under the jurisdiction of the USACE include navigable coastal and inland waters, lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce. The CDFW has jurisdictional authority over resources associated with rivers, streams, and lakes. Section 401 of the CWA provides the Regional Water Quality Control Board (RWQCB) with the authority to regulate, through a Water Quality Certification, any proposed federally permitted activity that may affect water quality. The RWQCB also has jurisdiction over isolated wetlands and waters of the State under the Porter-Cologne Water Quality Control Act.

A delineation of jurisdictional water resource boundaries was conducted by Psomas Senior Regulatory Specialist David Hughes and Biologist Trevor Bristle on February 10, 2022, to describe the type and extent of waters regulated by the USACE, the RWQCB, and/or the CDFW within the survey area. Jurisdictional features were mapped on an aerial. Non-wetland waters of the United States under the jurisdiction of the USACE were assessed based on the presence of an Ordinary High Water Mark (OHWM). The presence of wetland waters of the United States was assessed using a three-parameter approach for wetland hydrology, hydrophytic vegetation, and hydric soils, as described in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). It should be noted that the RWQCB shares USACE jurisdiction unless isolated conditions are present. If conditions indicating isolated waters are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands methods. The CDFW's jurisdiction is generally defined as the top of the bank of a river, stream, or lake or to the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, or lake. Detailed methodologies are provided in the Jurisdictional Delineation for the Arroyo Seco Water Reuse and Natural Stream Restoration Project (Psomas 2023), provided in Appendix C, Attachment A.

Focused Special Status Plant Survey

Botanical surveys were floristic in nature and consistent with the protocols created by the CDFW (CDFW 2018). Prior to the field surveys, a literature search was conducted to identify special status plant species reported from the vicinity of the Project sites. Sources reviewed included the USGS Pasadena, Burbank, Hollywood, Los Angeles, El Monte, and Mt. Wilson 7.5-minute quadrangles in the CNPS' Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025) and the CDFW's California Natural Diversity Database (CDFW 2025a).

Rainfall received in the winter and spring determines the germination of many annual and perennial herb species. The region received approximately 9.96 inches of precipitation between July 2021 and June 2022 (data taken from Burbank Station) (CIMIS 2023). The average annual precipitation for this area is approximately 13.91 inches.

Reference populations were monitored for annual and difficult-to-detect target species to ensure that the surveys were comprehensive. This is especially relevant during periods of unusual rainfall patterns or below average rainfall. If conditions at a nearby reference population are suitable for germination and growth, then it can be inferred that conditions would also be suitable on the Project sites. Reference populations were not monitored for species with a California Rare Plant Rank (CRPR) of 3 or 4, large perennials which would be identifiable throughout the year, or for species lacking a publicly accessible reference population.

Psomas Biologist Sarah Thomas conducted special status plant survey for special status plants on June 16, 2022. An additional field visit was conducted May 1, 2025, to confirm whether conditions and potential for plants species to occur remained the same as previously documented and the 2022 plant survey remained valid. The region received approximately 9.22 inches of rain between July 2024 and June 2025. The plant survey area included the entire boundary of the Project sites. The potentially suitable habitats for special status plants on the Project sites were systematically surveyed to the extent possible during the site visit. All plant species observed were recorded in field notes. Plants were identified using taxonomic keys, descriptions, and illustrations in Jepson Flora Project (2025), Baldwin et al. (2012), Hickman (1993), and Munz (1974). Nomenclature of plant taxa conform to the Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2025b) for special status species and the Jepson eFlora (Jepson Flora Project 2025) for all other taxa.

Any special status plant species observed on the Project sites would be mapped using a Garmin handheld Global Positioning System unit and data would be collected on the number and phenology of individuals (estimated for large populations) and microsite characteristics (e.g., slope, aspect, soil texture, surrounding habitat, and associated species). Detailed methodologies are provided in the Focused Special Status Plant Survey for the Arroyo Seco Water Reuse and Natural Stream Restoration Project (Psomas 2025a), provided in Appendix C, Attachment B.

Tree Survey

A tree survey was conducted by Psomas Certified Arborists David Hughes (International Society of Arboriculture [ISA] Certificate WE-7752A) and Trevor Bristle (ISA Certificate WE-10233A) on February 3, 2022, and September 9, 2022, to document tree resources within the Project survey area. An updated tree survey was conducted on October 20 and 22, 2025, to identify any trees that had died since the initial survey and other trees that may have grown to meet the minimum size for regulated trees. Specifically, the objective of the tree surveys was to identify and quantify trees regulated by the cities of Pasadena, South Pasadena, Los Angeles, and/or the California Fish and Game Code, and to assess impacts resulting from Project implementation. Detailed methods and results can be found

in the *Tree Report for the Arroyo Seco Water Reuse and Natural Stream Restoration Project* (Tree Report, Psomas 2025b), provided in Appendix C, Attachment C.

3.3.2 EXISTING CONDITIONS

The Arroyo Seco Water Reuse Project survey area is generally centered along a portion of the Arroyo Seco Channel that begins just south of the San Rafael Avenue bridge overpass of the Arroyo Seco Channel in the City of Pasadena and extends approximately ½-mile south (downstream) to immediately north of the State Route 110 overpass in the City of South Pasadena. The survey area referenced herein includes the following: (1) the San Rafael area at the northern end of the survey area, which consists of a concrete-lined drain that conveys water from adjacent residential areas located northwest of the survey area and drain into the Arroyo Seco Channel; (2) the Arroyo Seco Channel, which consists of the concrete-lined channel extending between the Project site along with an adjacent dirt trail that runs along the eastern bank adjacent to the San Pascual Stables; and (3) the San Pascual area, a densely vegetated area that accepts flows diverted from the Arroyo Seco Channel through existing infrastructure and is located immediately northwest of Arroyo Park. The Golf Course maintenance yard was not included in the survey area because it is in a heavily disturbed condition and no special status biological resources are present within the fenced area. The survey area captures all direct and indirect jurisdictional waters and biological resources that may be affected by Project implementation. The Project area assessed for impacts to biological resources encompasses the two discrete Project sites, construction staging areas, and adjacent areas.

Vegetation communities and other land cover types within the survey area include disturbed coast live oak woodland, coast live oak–western sycamore woodland, Peruvian pepper tree-coast live oak woodland, nonnative ornamental woodland, disturbed blue elderberry-laurel sumac scrub, non-native grassland, bare ground, disturbed areas, and developed areas (Exhibit 3.3-1). The survey area contains pedestrian trails and is heavily used by the local public for passive recreation activities such as dog walking. Vegetation in the San Pascual area shows evidence of recent fires and/or physical disturbance from unauthorized bicycle motorcross course establishment and/or unhoused encampment development. This area exhibits a high level of anthropogenic disturbance, including the accumulation of trash and debris. Additionally, non-native invasive weeds and non-native ornamental trees are also present in relatively high percent cover throughout the survey area.

Topography in the survey areas consists of mostly flat ground. The San Rafael site gently slopes downward toward the southwest with site elevations ranging from 620 feet above mean sea level (MSL) along the base at the north end of the site to approximately 615 feet MSL at the southwest corner of the site. The San Pascual site has a gently sloping hill in the northernmost portion of the survey area. Elevations in the survey area are approximately 602 feet above MSL in the north to 596 feet above MSL in the south.



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Vegetation Types and Other Areas

Exhibit 3.3-1

Arroyo Seco Water Reuse Project

N W E S

0 150 300 Feet

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SURVEY RESULTS

Vegetation Types and Other Landcovers

The survey area consists of disturbed coast live oak woodland, coast live oak-western sycamore woodland, Peruvian pepper tree – coast live oak woodland, non-native ornamental woodland, disturbed blue elderberry – laurel sumac scrub, non-native grassland, bare ground, disturbed, and developed areas (Exhibit 3.3-1).

Disturbed Coast Live Oak Woodland (0.87 acre)

Disturbed coast live oak woodland occurs directly adjacent to trails, channels, and within generally disturbed areas within and near the San Rafael site and within the Arroyo Seco Channel. This vegetation type consists of coast live oak (*Quercus agrifolia*) as the dominant tree, with a mostly closed overstory. Other tree species also occurring include blue elderberry (*Sambucus nigra* ssp. *caerulea*). Understory species include but are not limited to western poison oak (*Toxicodendron diversilobum*), hollyleaf redberry (*Rhamnus ilicifolia*), toyon (*Heteromeles arbutifolia*), dwarf nettle (*Urtica urens*), and foxtail chess (*Bromus madritensis*). This vegetation type corresponds to the *Quercus agrifolia* Woodland Alliance in Sawyer et. al. (2009). It is not considered a sensitive natural community by the CDFW.

Coast Live Oak – Western Sycamore Woodland (1.52 acres)

Coast live oak – western sycamore woodland occurs on the south end of the Project, along the edges of the San Pascual site. This vegetation type consists mostly of areas with mature coast live oaks and western sycamore (*Platanus racemosa*) trees with a closed canopy. Other tree species also occurring include blue elderberry, black willow (*Salix gooddingii*), toyon (*Heteromeles arbutifolia*), and shamel ash (*Fraxinus uhdei*). The understory is relatively sparse with species such as but not limited to mule fat (*Baccharis salicifolia* ssp. *salicifolia*), sisymbrium (*Sisymbrium* sp.), golden currant (*Ribes aureum*), common horehound (*Marrubium vulgare*), toyon, and brome. This vegetation type corresponds to the *Platanus racemosa* – *Quercus agrifolia* Alliance in Sawyer et. al. (2009). It is considered a sensitive natural community by the CDFW.

Peruvian Pepper Tree – Coast Live Oak Woodland (0.41 acre)

Peruvian pepper tree – coast live oak woodland occurs along the eastern edge of survey area, adjacent to the Arroyo Seco Channel and opposite the San Rafael site. This vegetation type consists mostly of areas with large Peruvian pepper trees and coast live oaks with a closed canopy. Other tree species also occurring include blue elderberry. The understory is relatively sparse with species such as, but not limited to, mule fat (*Baccharis salicifolia* ssp. *salicifolia*), sisymbrium (*Sisymbrium* sp.), bitter gooseberry, common horehound (*Marrubium vulgare*), toyon, and brome.

This vegetation type does not correspond to a named alliance or association in Sawyer et. al. (2009). Its composition is similar to the western sycamore – coast live oak riparian woodlands, though the cover of coast live oak is less than the required cover (i.e., greater

than 50 percent) for that alliance. Since the alliance is not considered a sensitive natural community by the CDFW, the Peruvian pepper tree – coast live oak woodland within the survey area is not considered sensitive.

Disturbed Blue Elderberry – Laurel Sumac Scrub (2.30 acres)

Disturbed blue elderberry – laurel sumac scrub occurs in the north side of the survey area throughout the San Rafael site west of San Rafael Creek, in open areas to the west of the Creek that show signs of past disturbance and maintenance, and along the western edge of the survey area adjacent to the Arroyo Seco Channel. These areas are dominated by laurel sumac (*Malsoma laurina*) and blue elderberry with an open canopy. The understory is sparse, but some co-occurring species include California sagebrush, toyon, and horehound.

This vegetation type does not correspond to a named alliance or association in Sawyer et. al. (2009). Its composition is similar to the *Malosma laurina* Shrubland Alliance, though the cover of laurel sumac is less than the required cover (i.e., greater than 50 percent) for this alliance. Since this alliance is not considered a sensitive natural community by the CDFW, the disturbed blue elderberry – laurel sumac scrub within the survey area is not considered sensitive.

Non-Native Grassland (0.08 acre)

Non-native grassland occurs in a small strip in the northeastern corner of the survey area. This vegetation type is dominated by brome. This vegetation type corresponds to the *Bromus rubens – Schismus (arabicus, barbatus)* Herbaceous Semi-Natural Alliance in Sawyer et. al. (2009). Being dominated by a non-native species, it is not considered a sensitive natural community by the CDFW.

Non-Native Ornamental Woodland (1.16 acres)

Non-native ornamental woodland consists of planted or volunteer non-native tree species that provide an ornamental or landscaped character. Within the survey area, this vegetation type is found as linear stands along the Arroyo Seco Channel and across the central portion of the San Pascual site. Common species include Brazilian pepper tree (*Schinus terebinthifolius*), eucalyptus (*Eucalyptus* sp.), Mexican fan palm (*Washingtonia robusta*), Chinese elm (*Ulmus parviflora*), carob (*Ceratonia siliqua*), and Shamel ash (*Fraxinus uhdei*).

Bare Ground (0.65 acre)

Bare ground consists of undeveloped areas devoid of any vegetation. Bare ground areas in the survey area includes the unpaved trails on either side of the Arroyo Seco Channel.

Disturbed (0.20 acre)

Disturbed areas show signs of past disturbance and are unvegetated or contain sparse weedy vegetation. Disturbed areas in the survey area occur at the intersection of San Pascual Avenue and Stoney Drive adjacent to the channel at the northeast corner of the San Pascual site.

Developed (4.36 acres)

Developed areas in the survey area consist of paved roads and highways, buildings and structures, and concrete flood control facilities (i.e., Arroyo Seco Channel and San Rafael Creek). One additional developed area, the concrete bridge over San Rafael Creek, is not reflected because it located under the adjacent woodland canopy at the San Rafael site. A discussion of individual tree resources, separate from vegetation types, is provided in impacts section further below.

Jurisdictional Resources

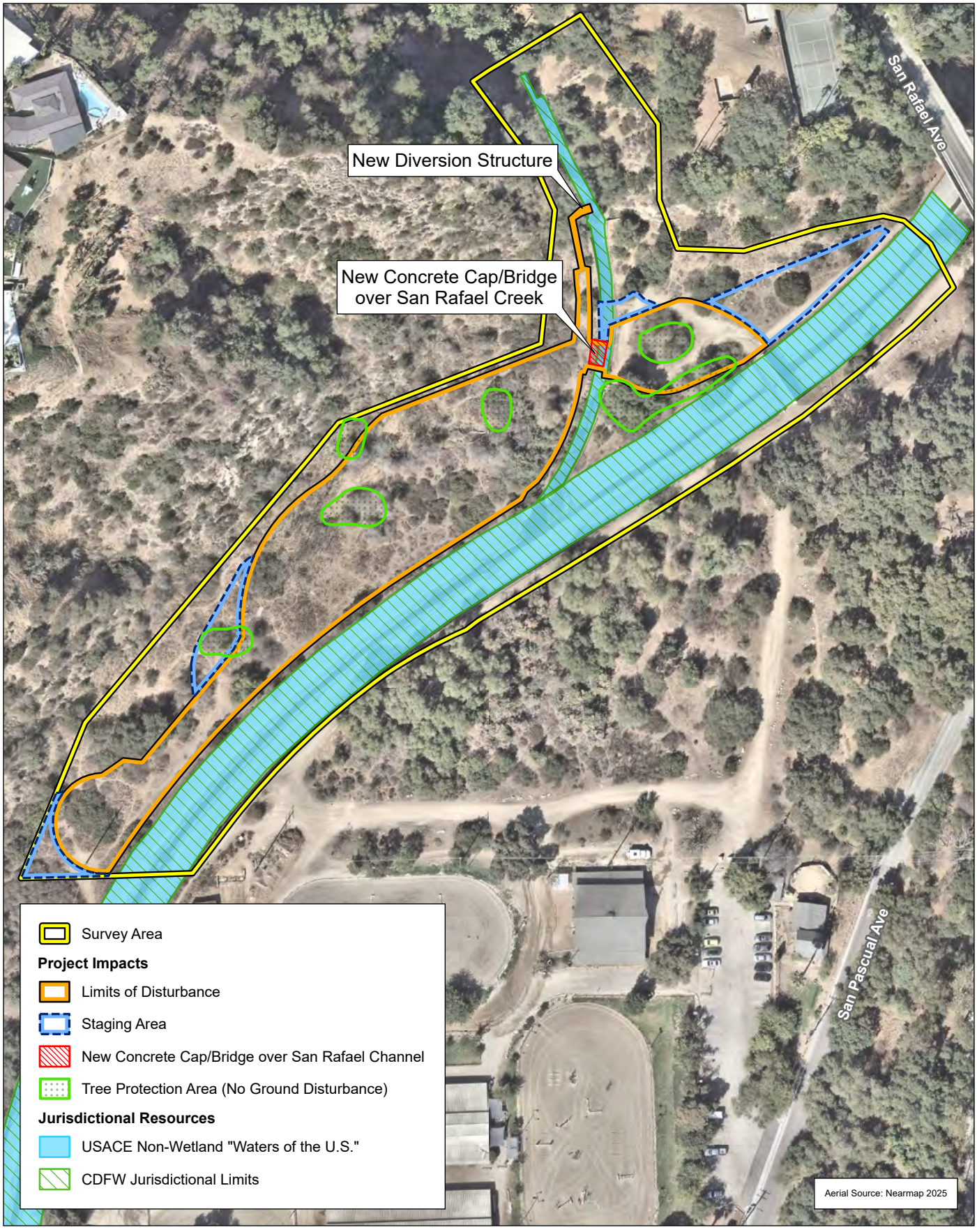
As previously described, the survey area encompasses the two discrete Project sites, construction staging areas, and adjacent areas which are divided into three general sub-areas for ease of reference. These sub-areas include the following: (1) the San Rafael site at the northern end of the survey area, which consists of a concrete-lined drain that conveys water from adjacent residential areas located northwest of the survey area and drain into the Arroyo Seco Channel; (2) the Arroyo Seco Channel, which consists of the concrete-lined channel extending between the Project site along with an adjacent dirt trail than runs along the eastern bank adjacent to the San Pascual Stables; and (3) the San Pascual site, a densely vegetated area that accepts flows diverted from the Arroyo Seco Channel through existing infrastructure and is located immediately northwest of Arroyo Park. Within the survey area, an interconnected drainage system flows downstream from San Rafael Creek and from the Arroyo Seco Channel and exits in part via an existing diversion into the San Pascual site and in part continuing downstream through the Arroyo Seco Channel. This drainage system is shown on Exhibits 3.3-2a and 3.3-2b. A summary of these resources within the survey area is provided in Table 3.3-1 below.

TABLE 3.3-1
SUMMARY OF JURISDICTIONAL RESOURCES IN THE SURVEY AREA

Survey Area	Latitude/Longitude (decimal degrees)		Feature Length (lf)	OHWM Width Range (feet)	USACE Jurisdiction (acres)		RWQCB Jurisdiction (acres)		CDFW Jurisdiction (acres)
	Upstream End	Downstream End			Wetland	Non-Wetland	Wetland	Non-Wetland	
San Rafael Creek Area	34.125844°, -118.166938°	34.124887°, -118.166877°	405	6–10	0.000	0.098	0.00	0.098	0.098
Arroyo Seco Channel	34.125528°, -118.166729°	34.119197°, -118.167141°	2,730	40–50	0.000	2.604	0.00	2.604	3.018
San Pascual Area	34.121016°, -118.167599°	34.119819°, -118.167001°	580	5–36	0.064	0.219	0.064	0.221	1.798
				Totals	**0.064**	**2.921**	**0.064**	**2.923**	**4.914**

lf: linear feet; OHWM: Ordinary High Water Mark; USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife.

Three sampling points were assessed for the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. All three points were located within the San Pascual site as it was the only portion of the survey area that contained an earthen-bottom drainage feature.



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Impacts to Jurisdictional Waters – San Rafael Site

Exhibit 3.3-2a

Arroyo Seco Water Reuse Project

N W E S

0 60 120 Feet

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Impacts to Jurisdictional Waters – San Pascual Site

Exhibit 3.3-2b

Arroyo Seco Water Reuse Project

N W E S

0 60 120 Feet

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One of these points, located at the southern end of the San Pascual site, was determined to contain all three wetland parameters (i.e., wetland hydrology, hydrophytic vegetation, and hydric soil). The extent to which all three of these parameters occurred in the vicinity of this sampling point defined the limit of wetland conditions in that area. The other two sampling points, located upstream within the site, did not meet the criteria for wetland conditions and are mapped as non-wetland WOTUS.

Wildlife Habitat

The survey area provides moderately suitable habitat for wildlife, with patches of native vegetation and some connectivity to upstream and downstream areas. However, frequent human and dog activity, chain-link fencing, and the concrete box channel substantially reduce its habitat value compared to intact foothill or mountain environments. The area is heavily infested with non-native and ornamental plant species, and structural barriers further limit wildlife movement, resulting in the absence of many species typical of undisturbed riparian woodland systems. Wildlife present are generally those tolerant of human disturbance and urbanized conditions. Although habitat is limited locally, giving the site relatively higher value within its immediate surroundings, much higher-quality habitat occurs to the north within the undeveloped lands of the Angeles National Forest.

No fish species were observed during the biological resource surveys on the sites and the drainages in the survey area provide minimal habitat for fish due to the limited amount, depth of surface water present, and the isolated nature of the drainages in the survey area. During storm events and/or releases from Devil's Gate Dam located approximately 4.5 miles upstream of the survey area, fish may pass through the Arroyo Seco. No native fish breeding habitat occurs in the survey area. Fish species that may occur include, but are not limited to, common species such as the non-native, historically stocked, rainbow trout (*Onocorhynchus mykiss*); green sunfish (*Lepomis cyanellus*); and western mosquitofish (*Gambusia affinis*).

No amphibian species were observed during the biological surveys. Common species that may occur include black-bellied slender salamander (*Batrachoseps nigriventris*), garden slender salamander (*Batrachoseps major major*), California toad (*Anaxyrus boreas halophilus*), and Baja California treefrog (*Pseudacris hypochondriaca*).

One reptile species was observed during the surveys, the common side-blotched lizard (*Uta stansburiana*). Other common species that may occur include western fence lizard (*Sceloporus occidentalis*), western skink (*Plestiodon skiltonianus*), southern alligator lizard (*Elgaria multicarinata*), California kingsnake (*Lampropeltis californiae*), gopher snake (*Pituophis catenifer*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*).

Bird species observed on or adjacent to the survey area include mourning dove (*Zenaida macroura*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), Anna's hummingbird (*Calypte anna*), acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), northern rough-winged swallow (*Stelgidopteryx serripennis*), California scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), oak titmouse (*Baeolophus inornatus*), bushtit (*Psaltriparus minimus*), wrentit (*Chamaea fasciata*),

Bewick's wren (*Thryomanes bewickii*), California thrasher (*Toxostoma redivivum*), northern mockingbird (*Mimus polyglottos*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), hooded oriole (*Icterus cucullatus*), spotted towhee (*Pipilo maculatus*), California towhee (*Melozone crissalis*), song sparrow (*Melospiza melodia*), and yellow-rumped warbler (*Setophaga coronata*).

One mammal species was observed during the surveys, the California ground squirrel (*Otospermophilus beecheyi*). Other common species that may occur include, but are not limited to, Botta's pocket gopher (*Thomomys bottae*), common raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), bobcat (*Lynx rufus*), and coyote (*Canis latrans*). Common bat species with potential to forage in the survey area include canyon bat (*Parastrellus hesperus*).

Wildlife Movement

Within large open space areas where few or no man-made or naturally occurring physical constraints to wildlife movement are present, wildlife corridors may not yet exist. However, once open space areas become constrained and/or fragmented as a result of urban development or the construction of physical obstacles (e.g., roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food, and water and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

The survey area is located at the urban-wildland interface. Residential development, stables, community parks, parking lots, roadways, and flood control facilities surround the area. Within the survey area, vehicular use is low and pedestrian, bicyclist, and/or equestrian use is moderate to high in some areas and low in others. Vehicular use is typically restricted to maintenance vehicles along the channel and pedestrian use is mainly limited to the walkways east and north within the survey area.

Wildlife movement within the survey area is primarily limited to species commonly found in urban and suburban environments, including generalist birds, flying invertebrates, reptiles, and amphibians capable of persisting in small habitat patches, as well as adaptable mammals such as coyote, raccoon, striped skunk, and Virginia opossum. While some localized movement may occur along the broader greenbelt of the Arroyo Seco, these species also routinely move through adjacent suburban neighborhoods and developed lands. As a result, the survey area does not function as a critical or regionally important wildlife movement corridor for native species, nor is it expected to provide essential connectivity between larger blocks of intact habitat.

Special Status Vegetation Types

The CDFW Vegetation Classification and Mapping Program provides a list of vegetation Alliances, Associations, and Special Stands that are considered "Sensitive Natural Communities" based on their rarity and threat (CDFW 2025d). Determination of the level of imperilment is based on the NatureServe Heritage Program Status Ranks that rank both

species and vegetation types on a global (G) and statewide (S) basis according to their rarity; trend in population size or area; and recognized threats (e.g., proposed developments, habitat degradation, and non-native species invasion). The ranks are scaled from 1 to 5. NatureServe considers G1 or S1 communities to be critically imperiled and at a very high risk of extinction or elimination due to extreme rarity, very steep declines, or other factors; G2 or S2 communities to be imperiled and at high risk of extinction or elimination due to very restricted range, very few populations or occurrences, steep declines, or other factors; G3 or S3 communities to be vulnerable and at moderate risk of extinction or elimination due to a restricted range, relatively few populations or occurrences, recent and widespread declines, or other factors; G4 or S4 communities to be apparently secure and uncommon but not rare with some cause for long-term concern due to declines or other factors; and G5 or S5 communities to be secure. All vegetation alliances[1]that have State ranks of S1 to S3 are considered highly imperiled and are considered special status or "sensitive" within this Section. One vegetation type present in the survey area, coast live oak – western sycamore woodland, is considered sensitive by the CDFW.

Special Status Plant and Wildlife Species

In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given special status recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss. Table 3.3-2, Special Status Plant Species Reported from the Survey Area Vicinity, and Table 3.3-3, Special Status Wildlife Species Reported from the Survey Area Vicinity, provide a summary of each special status plant and wildlife species known to occur in the vicinity of the Project area including information on the status, likelihood for occurrence, and definitions for the various status designations. In addition, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, State, and local government conservation programs. Sources used to determine the special status of biological resources are as follows:

- **Plants –** the CNPS' Electronic Inventory of Rare and Endangered Vascular Plants of California; the CDFW's California Natural Diversity Database (CNDDB); various *Federal Register* notices from the USFWS regarding listing status of plant species; and the CDFW's *List of Special Vascular Plants, Bryophytes, and Lichens.*
- **Wildlife –** the CDFW's California Wildlife Habitat Relationships Database System; the CNDDB; various USFWS *Federal Register* notices regarding listing status of wildlife species; and the CDFW's *List of Special Animals*.

Special Status Plants

Fifty-six special status plant species have been reported in the vicinity of the survey area (CNPS 2025; CDFW 2025a) summarized in Table 3.3-2 below.

[1] A vegetation alliance is "a classification unit of vegetation, containing one or more associations and defined by one or more diagnostic species, often of high cover, in the uppermost layer or the layer with the highest canopy cover" (Sawyer et al. 2009).

TABLE 3.3-2
SPECIAL STATUS PLANT SPECIES REPORTED FROM
THE SURVEY AREA VICINITY

Scientific Name	Common Name	State Status	Federal Status	CRPR	Species Background	Potential
Acanthoscyphus parishii var. *parishii*	Parish's oxytheca			4.2	Annual herb. Sandy to gravelly soil in chaparral and lower montante coniferious forest; 4,002–8,528 ft. Southern California County Distribution: Los Angeles, San Bernardino, Ventura. Blooming period: June–September	Not expected to occur; outside current known elevational range.
Arctostaphylos glandulosa ssp. gabrielensis	San Gabriel manzanita			1B.2	Evergreen shrub. Rocky soil in chaparral; 1,952–4,920 ft. Southern California County Distribution: Los Angeles, San Bernardino. Blooming period: March	Not expected to occur; outside current known elevational range.
Arenaria paludicola	marsh sandwort	FE	SE	1B.1	Perennial stoloniferous herb. Sandy soils in marshes and swamps with brackish freshwater; 10–558 ft. Southern California County Distribution: Los Angeles, San Bernardino (Presumed extirpated). Blooming period: May–August	Not expected to occur; no suitable habitat.
Asplenium vespertinum	western spleenwort			4.2	Perennial rhizomatous herb. Rocky areas in chaparral, cismontane woodland, and coastal scrub; 590–3,281 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura. Blooming period: February–June	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Astragalus brauntonii	Braunton's milk-vetch	FE		1B.1	Perennial herb. Recently burned and disturbed areas, in sandstone and carbonite soils, in chaparral, coastal scrub, and grasslands; 13–2,099 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, Ventura. Blooming period: January–August	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Atriplex parishii	Parish's brittlescale			1B.1	Annual herb. Alkaline soils in chenopod scrub, playas, and vernal pools; 82–6,232 ft. Southern California County Distribution: Los Angeles (Presumed extirpated), Orange (Presumed extirpated), Riverside, San Bernardino (Presumed extirpated), San Diego. Blooming period: June–October	Not expected to occur; no suitable habitat.
Atriplex serenana var. *davidsonii*	Davidson's saltscale			1B.2	Annual herb. Alkaline conditions in coastal bluff scrub and coastal scrub; 32–656 ft. Southern California County Distribution: Los Angeles (Presumed extirpated; Occurrence confirmed, but possibly extirpated), Orange, Riverside, San Diego, Ventura. Blooming period: April–October	Not expected to occur; no suitable habitat.
Berberis nevinii	Nevin's barberry	FE	SE	1B.1	Evergreen shrub. Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub; 898–2,707 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino, San Diego. Blooming period: March–June	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Calochortus catalinae	Catalina mariposa lily			4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, and grassland; 49–2,296 ft. Southern California County Distribution: Los Angeles, Orange, San Bernardino, San Diego, Ventura. Blooming period: February–June	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Calochortus clavatus var. *clavatus*	club-haired mariposa			4.3	Perennial bulbiferous herb. Clay, rocky, or serpentine soils in chaparral, coastal scrub, cismontane woodland, grassland; 246–4,264 ft. Southern California County Distribution: Los Angeles, Ventura. Blooming period: May–June	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Calochortus clavatus var. *gracilis*	slender mariposa lily			1B.2	Perennial bulbiferous herb. Chaparral, coastal scrub, grassland; 1,050–3,280 ft. Southern California County Distribution: Los Angeles, Ventura. Blooming period: March–June	Not expected to occur; outside current known elevational range.
Calochortus plummerae	Plummer's mariposa lily			4.2	Perennial bulbiferous herb. Granitic and rocky areas in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and grassland; 328–5,576 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino, Ventura. Blooming period: May–July	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Calochortus weedii var. *intermedius*	intermediate mariposa lily			1B.2	Perennial bulbiferous herb. Rocky and calcareous areas in chaparral, coastal scrub, and grassland; 345–2,804 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino. Blooming period: May–July	Not expected to occur; limited, marginally suitable habitat; few records in the region; not observed during focused surveys.
Calystegia felix	lucky morning-glory			3.1	Annual rhizomatous herb. Currently known from irrigated landscapes, but historically from meadows and seeps that are sometimes alkaline and alluvial riparian scrub; 98–705 ft. Southern California County Distribution: Los Angeles (Presumed extirpated), Riverside (Presumed extirpated), San Bernardino. Blooming period: March–September	Not expected to occur; no suitable habitat.
Camissoniopsis lewisii	Lewis' evening-primrose			3	Annual herb. Sandy or clay soils in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and grassland; 0–984 ft. Southern California County Distribution: Los Angeles, Orange (Presumed extirpated), San Diego. Blooming period: March–June	Not expected to occur; no suitable habitat.
Centromadia parryi ssp. *australis*	southern tarplant			1B.1	Annual herb. Found within the margin of marshes and swamps, vernally mesic soils in grassland, and vernal pools; 0–1,574 ft. Southern California County Distribution: Los Angeles, Orange, San Diego, Ventura. Blooming period: May–November	Not expected to occur; no suitable habitat.
Centromadia pungens ssp. *laevis*	smooth tarplant			1B.1	Annual herb. Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, and grassland; 0–2,100 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino, San Diego. Blooming period: April–September	Not expected to occur; limited, marginally suitable habitat; few records in the region; not observed during focused surveys.
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	FC	SE	1B.1	Annual herb. Sandy soil in coastal scrub and grassland; 492–4,002 ft. Southern California County Distribution: Los Angeles, Orange (Presumed extirpated), Ventura. Blooming period: April–July	Not expected to occur; no suitable habitat.

TABLE 3.3-2
SPECIAL STATUS PLANT SPECIES REPORTED FROM
THE SURVEY AREA VICINITY

Scientific Name	Common Name	State Status	Federal Status	CRPR	Species Background	Potential
Chorizanthe parryi var. parryi	Parry's spineflower			1B.1	Annual herb. Sandy or rocky openings in chaparral, coastal scrub, cismontane woodland, and grassland; 902–4,001 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino. Blooming period: April–June	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Cladium californicum	California sawgrass			2B.2	Perennial rhizomatous herb. Meadows, seeps, marshes, and swamps either alkaline or freshwater; 197–2,837 ft. Southern California County Distribution: Los Angeles (Presumed extirpated), Riverside, San Bernardino. Blooming period: June–September	Not expected to occur; no suitable habitat.
Convolvulus simulans	small-flowered morning-glory			4.2	Annual herb. Friable clay soils or serpentine seeps in chaparral openings, coastal scrub, and grassland; 98–2,297 ft. Southern California County Distribution: Kern, Los Angeles, Orange, Riverside, San Diego. Blooming period: March–July	Not expected to occur; no suitable habitat.
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder			2B.2	Parasitic annual vine. Marshes and freshwater swamps; 49–918 ft. Southern California County Distribution: Los Angeles, San Bernardino (Presumed extirpated). Blooming period: July–October.	Not expected to occur; no suitable habitat.
Dodecahema leptoceras	slender-horned spineflower	FE	SE	1B.1	Annual herb. Sandy soils in chaparral, cismontane woodland, and alluvial fan coastal scrub; 656–2,493 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino. Blooming period: April–June	Not expected to occur; no suitable habitat.
Dudleya multicaulis	many-stemmed dudleya			1B.2	Perennial herb. Often in clay soils in chaparral, coastal scrub, and grassland; 49–2,591 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino, San Diego. Blooming period: April–July	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Galium angustifolium ssp. *gabrielense*	San Antonio Canyon bedstraw			4.3	Perennial herb. Granitic, sandy, or rocky soil in chaparral, lower montane coniferous forest; 3,936–8,692 ft. Southern California County Distribution: Los Angeles, San Bernardino. Blooming period: April–August	Not expected to occur; outside current known elevational range.
Galium angustifolium ssp. *gracillimum*	slender bedstraw			4.2	Perennial herb. Granitic to rocky soil in Joshua tree woodland and Sonoran desert scrub; 426–5,084 ft. Southern California County Distribution: Riverside, San Bernardino. Blooming period: April–June	Not expected to occur; no suitable habitat.
Galium grande	San Gabriel bedstraw			1B.2	Deciduous shrub. Chaparral, cismontane woodland, broad-leafed upland and lower montane coniferous forest; 1,394–4,920 ft. Southern California County Distribution: Los Angeles. Blooming period: January–July	Not expected to occur; outside current known elevational range.
Galium jepsonii	Jepson's bedstraw			4.3	Perennial rhizomatous herb. Granitic, rocky, or gravelly soil in lower and upper montane coniferous forest; 5,051–8,200 ft. Southern California County Distribution: Los Angeles, San Bernardino. Blooming period: July–August	Not expected to occur; outside current known elevational range.
Galium johnstonii	Johnston's bedstraw			4.3	Perennial herb. Chaparral, lower montane coniferous forest, Pinyon and juniper woodland, riparian woodland; 4,001–7,544 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino, San Diego (Uncertain about distribution or identity). Blooming period: June–July	Not expected to occur; outside current known elevational range.
Harpagonella palmeri	Palmer's grapplinghook			4.2	Annual herb. Clay soils in chaparral, grasslands, coastal sage scrub; 65–3,132 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Diego. Blooming period: March–May	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Heuchera caespitosa	urn-flowered alumroot			4.3	Perennial rhizomatous herb. Rocky soil in montane riparian forest, cismontane woodland, lower and upper montane coniferous forest; 3,788–8,692 ft. Southern California County Distribution: Kern, Los Angeles, San Bernardino, Ventura. Blooming period: May–August	Not expected to occur; outside current known elevational range.
Hordeum intercedens	vernal barley			3.2	Annual herb. Coastal dunes, coastal scrub, saline flats and depressions in grassland, and vernal pools; 16–3,280 ft. Southern California County Distribution: Kern, Los Angeles, Orange, Riverside, San Diego, Ventura. Blooming period: March–June	Not expected to occur; no suitable habitat.
Horkelia cuneata var. puberula	mesa horkelia			1B.1	Perennial herb. Sandy and gravelly soils in maritime chaparral, cismontane woodland, and coastal scrub; 229–2,657 ft. Southern California County Distribution: Los Angeles, Orange, Riverside (Presumed extirpated), San Bernardino, San Diego (Presumed extirpated), Ventura. Blooming period: February–July(September)	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Juglans californica	Southern California black walnut			4.2	Deciduous tree. Alluvial areas in chaparral, cismontane woodland, and coastal scrub; 164–2,952 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura. Blooming period: March–August	Not expected to occur; not observed in the survey area during focused surveys; suitable habitat.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields			1B.1	Annual herb. Coastal salt marsh, coastal salt swamps, playas, vernal pools; 3–4,001 ft. Southern California County Distribution: Kern (Presumed extirpated), Los Angeles (Presumed extirpated), Orange, Riverside, San Bernardino (Presumed extirpated), San Diego, Ventura. Blooming period: February–June	Not expected to occur; no suitable habitat.
Lepechinia fragrans	fragrant pitcher sage			4.2	Perennial herb. Chaparral; 66–4,297 ft. Southern California County Distribution: Los Angeles, San Bernardino, Ventura (Uncertain about distribution or identity). Blooming period: March–October	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass			4.3	Annual herb. Openings in chaparral and sage scrub; below 2,900 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura. Blooming Period: January–July	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Lilium humboldtii ssp. *ocellatum*	ocellated Humboldt lily			4.2	Perennial bulbiferous herb. Openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland; 98–5,904 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura. Blooming period: March–July(August)	Not expected to occur; not observed during focused surveys; marginally suitable habitat.

TABLE 3.3-2
SPECIAL STATUS PLANT SPECIES REPORTED FROM
THE SURVEY AREA VICINITY

Scientific Name	Common Name	State Status	Federal Status	CRPR	Species Background	Potential
Malacothamnus davidsonii	Davidson's bush-mallow			1B.2	Deciduous shrub. Chaparral, coastal scrub, cismontane and riparian woodland; 607–2,804 ft. Southern California County Distribution: Kern, Los Angeles, Ventura. Blooming period: June–January	Not expected to occur; not observed during focused surveys; suitable habitat.
Mimulus johnstonii	Johnston's monkeyflower			4.3	Annual herb. In the scree, disturbed areas, roadsides, and rocky to gravelly soils in lower montane coniferous forest; 3,198–9,578 ft. Southern California County Distribution: Los Angeles, San Bernardino. Blooming period: May–August	Not expected to occur; outside current known elevational range.
Muhlenbergia californica	California muhly			4.3	Perennial rhizomatous herb. Mesic soils and seeps and streambeds; 328–6,560 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino. Blooming period: June–September	Not expected to occur; no suitable habitat.
Navarretia prostrata	prostrate vernal pool navarretia			1B.1	Annual herb. Mesic coastal scrub, meadows and seeps, alkaline grassland, and vernal pools; 49–3,968 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino (Presumed extirpated; Occurrence confirmed, but possibly extirpated), San Diego. Blooming period: April–July	Not expected to occur; no suitable habitat.
Phacelia hubbyi	Hubby's phacelia			4.2	Annual herb. Gravelly to rocky soil or talus in chaparral, coastal scrub, grassland; 0–3,280 ft. Southern California County Distribution: Kern, Los Angeles, Ventura. Blooming period: April–July	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Phacelia stellaris	Brand's star phacelia			1B.1	Annual herb. Coastal dunes, coastal scrub; 3–1,312 ft. Southern California County Distribution: Los Angeles (Presumed extirpated; Occurrence confirmed, but possibly extirpated), Orange, Riverside, San Bernardino, San Diego. Blooming period: March–June	Not expected to occur; records in the region are historic; not observed during focused surveys.
Pseudognaphalium leucocephalum	white rabbit-tobacco			2B.2	Perennial herb. Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland; 0–6,888 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Diego. Blooming period: July–December	Not expected to occur; no suitable soils.
Quercus durata var. *gabrielensis*	San Gabriel oak			4.2	Evergreen shrub. Chaparral and cismontane woodland; 1,476–3,280 ft. Southern California County Distribution: Los Angeles. Blooming period: April–May	Not expected to occur; not observed during focused surveys; suitable habitat.
Quercus engelmannii	Engelmann oak			4.2	Deciduous tree. Cismontane woodland, chaparral, riparian woodland, and grassland; 164–4,265 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Diego. Blooming period: March–June	Not expected to occur; not observed during focused surveys; suitable habitat.
Ribes divaricatum var. parishii	Parish's gooseberry			1A	Deciduous shrub. Riparian woodland; 213–984 ft. Southern California County Distribution: Los Angeles (Presumed extirpated), San Bernardino (Presumed extirpated). Blooming period: February–April	Not expected to occur; records in the region are historic; not observed during focused surveys..
Romneya coulteri	Coulter's matilija poppy			4.2	Perennial rhizomatous herb. Chaparral and coastal scrub; often in burned areas; 65–3,936 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Diego. Blooming period: March–July	Not expected to occur; not observed during focused surveys; suitable habitat.
Rupertia rigida	Parish's rupertia			4.3	Perennial herb. Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, grassland, pavement pebble plain; 2,297–8,202 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino, San Diego. Blooming period: June–August	Not expected to occur; outside current known elevational range.
Scutellaria bolanderi ssp. *austromontana*	Southern mountains skullcap			1B.2	Perennial rhizomatous herb. Moist embankments of montane creeks, mesic chaparral, mesic cismontane woodland, and mesic lower montane coniferous forest; 1,394–6,562 ft. Southern California County Distribution: Los Angeles (Presumed extirpated; Occurrence confirmed, but possibly extirpated), Riverside, San Bernardino, San Diego. Blooming period: June–August	Not expected to occur; outside current known elevational range.
Senecio astephanus	San Gabriel ragwort			4.3	Perennial herb. Rocky slopes in coastal bluff scrub and chaparral; 1,312–4,920 ft. Southern California County Distribution: Kern, Los Angeles, San Bernardino, San Diego. Blooming period: May–July	Not expected to occur; outside current known elevational range.
Sidalcea neomexicana	salt spring checkerbloom			2B.2	Perennial herb. Alkaline and mesic soils in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas; 49–5,020 ft. Southern California County Distribution: Kern, Los Angeles (Presumed extirpated), Orange, Riverside, San Bernardino, San Diego, Ventura. Blooming period: March–June	Not expected to occur; no suitable soils.
Spermolepis lateriflora	western bristly scaleseed			2A	Annual herb. Sandy or rocky Sonoran desert scrub; 1,198–2,198 ft. Southern California County Distribution: Los Angeles (Occurrence confirmed, but possibly extirpated), San Diego. Blooming period: March–April	Not expected to occur; outside current known elevational range.
Symphyotrichum defoliatum	San Bernardino aster			1B.2	Perennial rhizomatous herb. Near ditches, streams, and springs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and vernally mesic grassland; 7–6,693 ft. Southern California County Distribution: Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego. Blooming period: July–November	Not expected to occur; no suitable habitat.
Symphyotrichum greatae	Greata's aster			1B.3	Perennial rhizomatous herb. Mesic soils in chaparral, cismontane and riparian woodland, broadleaved upland and lower montane coniferious forest; 984–6,593 ft. Southern California County Distribution: Los Angeles, San Bernardino, Ventura. Blooming period: June–October	Not expected to occur; no suitable habitat.

TABLE 3.3-2
SPECIAL STATUS PLANT SPECIES REPORTED FROM
THE SURVEY AREA VICINITY

Scientific Name	Common Name	State Status	Federal Status	CRPR	Species Background	Potential
Thelypteris puberula var. *sonorensis*	Sonoran maiden fern			2B.2	Perennial rhizomatous herb. Meadows, seeps, and streams; 164–2,001 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino. Blooming period: January–September	Not expected to occur; no suitable habitat.

CRPR: California Rare Plant Rank; ft.: feet

LEGEND:

Federal Status

FT Threatened
FC Federal Candidate for Listing

State Status

SE Endangered

CRPR

1A Plants presumed extirpated in California and either rare or extinct elsewhere
1B Plants Rare, Threatened, or Endangered in California and elsewhere
2B Plants Rare, Threatened, or Endangered in California but more common elsewhere
3 Plants about which we need more information – A Review List
4 Plants of limited distribution – A Watch List

CRPR Threat Code Extensions

None Plants lacking any threat information
.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Fairly threatened in California (20–80% of occurrences threatened; moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known)

* Sources include CDFW 2025a, CNPS 2025, and Jepson Flora Project 2025.

Of the 56 species reported from the literature review, 5 species are federally and/or State-listed Endangered, Threatened, or are candidates for listing: marsh sandwort (*Arenaria paludicola*), Braunton's milk-vetch (*Astragalus brauntonii*), Nevin's barberry (*Berberis nevinii*), San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), and slender-horned spineflower (*Dodecahema leptoceras*).

In addition to species formally listed by the resource agencies, 51 species reported in the vicinity of the survey area have a CRPR. One list 4.3 species, club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*), and one list 4.2 species, Plummer's mariposa-lily (*Calochortus plummerae*), have limited potential to occur due to the presence of marginally suitable habitat. The Project site contains suitable habitat for three list 4.2 species, southern California black walnut, San Gabrial oak, and Englemann oak. However, none of these species were observed in the survey area and so are not expected to occur. The remainder of these 48 species do not have potential to occur in the survey area due to a lack of potentially suitable soils and/or habitat.

Special Status Wildlife

A total of 27 special status wildlife species have been reported in the vicinity of the survey area or were added based on biologist knowledge of the Project region (CDFW 2025a) and are summarized in Table 3.3-3 below.

TABLE 3.3-3
SPECIAL STATUS WILDLIFE SPECIES REPORTED
FROM THE SURVEY AREA VICINITY

Species	General Habitat/Range Description	USFWS	CDFW	Critical Habitat Present in the Study Area[a]	Potential for Occurrence
Invertebrates					
Bombus crotchii Crotch's bumble bee	Occurs in open grassland and scrub habitats; nests underground. Feeds on milkweed (*Asclepias* sp.), pincushion (*Chaenactis* sp,), lupine (*Lupinus* sp.), alfalfa (*Medicago* sp.), phacelia (*Phacelia* sp.), and sage (*Salvia* sp.), among others.	–	FC	–	Not expected to occur for nesting; limited marginally potentially suitable habitat, not enough nectar sources to support nesting. May occur occasionally for foraging.
Fish					
Gila orcuttii arroyo chub	Occurs in coastal freshwater streams and rivers with sustained flows and emergent vegetation with substrates consisting primarily of sand or mud.	–	SSC	–	Not expected to occur; no potentially suitable habitat.
Rhinichthys osculus ssp. 3 Santa Ana speckled dace	Occurs in perennial streams with riffle habitats in clean, rocky-bottomed streams and rivers.	–	SSC	–	Not expected to occur; no potentially suitable habitat.
Catostomus santaanae Santa Ana sucker	Occurs in shallow streams with flows that run from slow to swift. Stream substrates consist of boulders, gravel, and cobble where there are growths of filamentous algae. This species is occasionally found on sandy or muddy substrates.	FT	SSC	No	Not expected to occur; no potentially suitable habitat.
Amphibians					
Taricha torosa Coast Range newt	Found in wet forests, oak forests, chaparral, and rolling grasslands. In Southern California, drier chaparral, oak woodland, and grasslands are used.	–	SSC	–	Not expected to occur; no potentially suitable habitat.
Anaxyrus californicus arroyo toad	Occurs in semi-arid regions near washes or intermittent streams. Streams must be of low velocity with sand or gravel substrate.	FE	SSC	No	Not expected to occur; no potentially suitable habitat.

TABLE 3.3-3
SPECIAL STATUS WILDLIFE SPECIES REPORTED
FROM THE SURVEY AREA VICINITY

Species	General Habitat/Range Description	USFWS	CDFW	Critical Habitat Present in the Study Area[a]	Potential for Occurrence
Rana muscosa Southern Mountain yellow-legged frog	Occurs in small, isolated populations in the San Gabriel, San Bernardino, and San Jacinto Mountains in narrow, rock-walled rivers, perennial creeks, and permanent plunge pools with intermittent creeks and pools in montane riparian and/or chaparral between 1,200 and 7,500 ft above msl.	FE	SE	No	Not expected to occur; no potentially suitable habitat.
Spea hammondii western spadefoot	Occurs in a wide range of habitats; lowlands to foothills, grasslands, open chaparral, pine-oak woodlands. It prefers shortgrass plains, sandy or gravelly soil (e.g., alkali flats, washes, alluvial fans). It is fossorial and breeds in temporary rain pools and slow-moving streams (e.g., areas flooded by intermittent streams).	FC	SSC	–	Not expected to occur; no potentially suitable habitat.
Reptiles					
Emys marmorata western pond turtle	Occurs in ponds, lakes, marshes, rivers, streams, and irrigation ditches with a rocky or muddy bottom and aquatic vegetation at elevations from sea level to approximately 6,696 ft above msl.	FC	–	–	Not expected to occur; no potentially suitable habitat. No suitable breeding habitat (pools), waterways polluted within survey area.
Phrynosoma blainvillii coast horned lizard	Occurs in or very near sandy soils in scrubland, grassland, coniferous forests, and broadleaf woodland vegetation types.	–	SSC	–	Not expected to occur; no potentially suitable habitat.
Aspidoscelis tigris stejnegeri San Diegan tiger whiptail	Occurs in hot and dry areas with sparse foliage and open areas. Found in forests, woodland, chaparral, and riparian areas.	–	SSC	–	May occur; potentially suitable habitat.
Anniella sp. California legless lizard	Requires areas with loose sandy soil, moisture, warmth, and plant cover, including leaf litter. Occurs in coastal dune, valley-foothill, chaparral, and coastal scrub types at elevations between sea level and approximately 1,800 m (6,000 ft).	–	SSC	–	Not expected to occur; no potentially suitable habitat, oak tree understory highly disturbed and isolated.

TABLE 3.3-3
SPECIAL STATUS WILDLIFE SPECIES REPORTED
FROM THE SURVEY AREA VICINITY

Species	General Habitat/Range Description	USFWS	CDFW	Critical Habitat Present in the Study Area[a]	Potential for Occurrence
Arizona elegans occidentalis California glossy snake	Occurs most commonly in desert habitats but also occur in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grass, elevation from below sea level to 7,000 ft. Prefer open sandy areas with scattered brush, but also found in rocky areas.	–	SSC	–	Not expected to occur; no potentially suitable habitat
Birds					
Empidonax traillii extimus southwestern willow flycatcher	Occurs in riparian habitats along rivers, streams, or other wetlands where dense growth of willows, mule fat, arrow-weed (*Pluchea sericea*), tamarisk (*Tamarix* sp.), or other plants are present, often with a scattered overstory of cottonwood	FE	SE	No	Not expected to occur; no potentially suitable habitat.
Athene cunicularia burrowing owl (burrow and wintering sites)	Breeds and forages in grasslands and prefers flat to low, rolling hills in treeless terrain. Nests in burrows, typically in open habitats, most often along banks and roadsides.	–	SCE	–	Not expected to occur; no potentially suitable habitat.
Vireo bellii pusillus least Bell's vireo (nesting)	Riparian habitats dominated by willows with dense understory vegetation between sea level and 1,500 ft above msl.	FE	SE	No	Not expected to occur; no potentially suitable habitat.
Riparia riparia bank swallow	Breeds in riparian areas with vertical cliffs and banks with fine-textured sandy soil in which it digs nesting holes.	–	ST	–	Not expected to occur; no potentially suitable habitat.
Polioptila californica californica coastal California gnatcatcher	In California, this species is an obligate resident of several distinct sub-associations of the coastal sage scrub vegetation type. The gnatcatcher has been recorded from sea level to approximately 3,000 ft above msl (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from between sea level and 820 feet above msl along the coast and between sea level and 1,800 ft above msl inland (Atwood and Bolsinger 1992).	FT	SSC	No	Not expected to occur; very small amount of sage scrub habitat occurs outside the survey area, too isolated and limited in size to support the gnatcatcher.

TABLE 3.3-3
SPECIAL STATUS WILDLIFE SPECIES REPORTED
FROM THE SURVEY AREA VICINITY

Species	General Habitat/Range Description	USFWS	CDFW	Critical Habitat Present in the Study Area[a]	Potential for Occurrence
Setophaga petechia yellow warbler (nesting)	Riparian habitats dominated by willows with dense understory vegetation between sea level and 9,000 ft above msl.	–	SSC	–	Not expected to occur for nesting; no potentially suitable habitat. May occur for foraging.
Mammals					
Puma concolor mountain lion (Southern California/Central Coast ESU)	Inhabits diverse habitat types across California including temperate redwood forest, coniferous/deciduous forest, coastal chaparral, foothills, and mountains. They can be found wherever native or introduced ungulates such as mule deer, elk, bighorn sheep, or feral hogs are present.	–	SC	–	Not expected to occur; urbanized environment too many barriers to movement.
Neotoma lepida intermedia San Diego desert woodrat	Common to abundant in Joshua tree, Pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. Also found in a variety of other habitats. Most abundant in rocky areas with Joshua trees. Elevational range from sea level to 2600 m (8500 ft). Northern and elevational distribution may be limited by temperature.	–	SSC	–	May occur; potentially suitable habitat..
Onychomys torridus southern grasshopper mouse	Primarily found in arid desert habitats of the Mojave Desert and southern Central Valley of California. Alkali desert scrub and desert scrub habitats are preferred, with somewhat lower densities expected in other desert habitats, including succulent shrub, wash, and riparian areas. Also occurs in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats.	–	SSC	–	Not expected to occur; no potentially suitable habitat.

TABLE 3.3-3
SPECIAL STATUS WILDLIFE SPECIES REPORTED
FROM THE SURVEY AREA VICINITY

Species	General Habitat/Range Description	USFWS	CDFW	Critical Habitat Present in the Study Area[a]	Potential for Occurrence
Antrozous pallidus pallid bat	Occurs in grasslands, shrublands, and woodlands and in open habitats with rocky areas or man-made structures for roosting. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Species typically forages in rural or undeveloped, natural areas and is mostly absent in urban and suburban areas.	–	SSC	–	May occur for foraging, not expected for roosting; potentially suitable foraging habitat. No potentially suitable roosting habitat.
Corynorhinus townsendii Townsend's big-eared bat	Occurs in oak woodlands, arid deserts, grasslands, along the coast, and high-elevation forests and meadows. Population centers occur near large, minimally-disturbed cavities, including both natural caves and man-made structures.	–	SSC	–	May occur for foraging; not expected to occur for roosting; potentially suitable foraging habitat, no potentially suitable roosting habitat.
Lasiurus blossevillii western red bat	Roosts in trees typically associated with riparian habitats where cottonwoods, oaks, sycamores, and walnuts are present. Also known to roost in orchards trees.	–	SSC	–	May occur for roosting and foraging, potentially suitable habitat.
Lasiurus xamtjomis western yellow bat	Tree-roosting species most commonly found roosting in groves of palm trees with skirts of dead fronds. Also documented roosting in large cottonwood trees. Found in the arid environment of the southwestern U.S., the Mexican Plateau, and coastal western Mexico.	–	SSC	–	May occur for roosting and foraging, potentially suitable habitat.
Eumops perotis californicus western mastiff bat	Found in many open semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, palm oases, chaparral, desert scrub, and urban areas. Typically forages in open areas with high cliffs and roosts in crevices on cliff faces and occasionally in man-made structures with at least 15 feet of unobstructed space below roost.	–	SSC	–	May occur for foraging; not expected to occur for roosting; potentially suitable foraging habitat, no potentially suitable roosting habitat.

TABLE 3.3-3
SPECIAL STATUS WILDLIFE SPECIES REPORTED
FROM THE SURVEY AREA VICINITY

Species	General Habitat/Range Description	USFWS	CDFW	Critical Habitat Present in the Study Area[a]	Potential for Occurrence

USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife; ft: feet; msl: mean sea level; m: meter.

Status Definitions

Federal (USFWS) Status		**State (CDFW) Status**	
FE	Endangered	SE	Endangered
FT	Threatened	ST	Threatened
FC	Candidate	SCE	Candidate Endangered
		SSC	Species of Special Concern

Notes: (1) Scientific and common names for wildlife species follow the most current list of Special Animals (October 2025) available from the CDFW (https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals); (2) Critical Habitat only applies to USFWS-listed species. As such, any species without a USFWS listing, will have a "–".

Of the species reported from the literature review, ten species are federally and/or State-listed Endangered or Threatened or are candidates for listing: Crotch's bumble bee (*Bombus crotchii*), Santa Ana sucker (*Catostomus santaanae*), arroyo toad (*Anaxyrus californicus*), southern mountain yellow-legged frog (*Rana muscosa*), western spadefoot (*Spea hammondii*), western pond turtle (*Emys marmorata*), southwestern willow flycatcher (*Empidonax traillii extimus*), burrowing owl (burrow and wintering sites) (*Athene cunicularia*), least bell's vireo (*Vireo bellii pusillus*), bank swallow (*Riparia riparia*), coastal California gnatcatcher (*Polioptila californica californica*), and mountain lion (Southern California/Central Coast Evolutionarily Significant Unit ([ESU]) (*Puma concolor*).

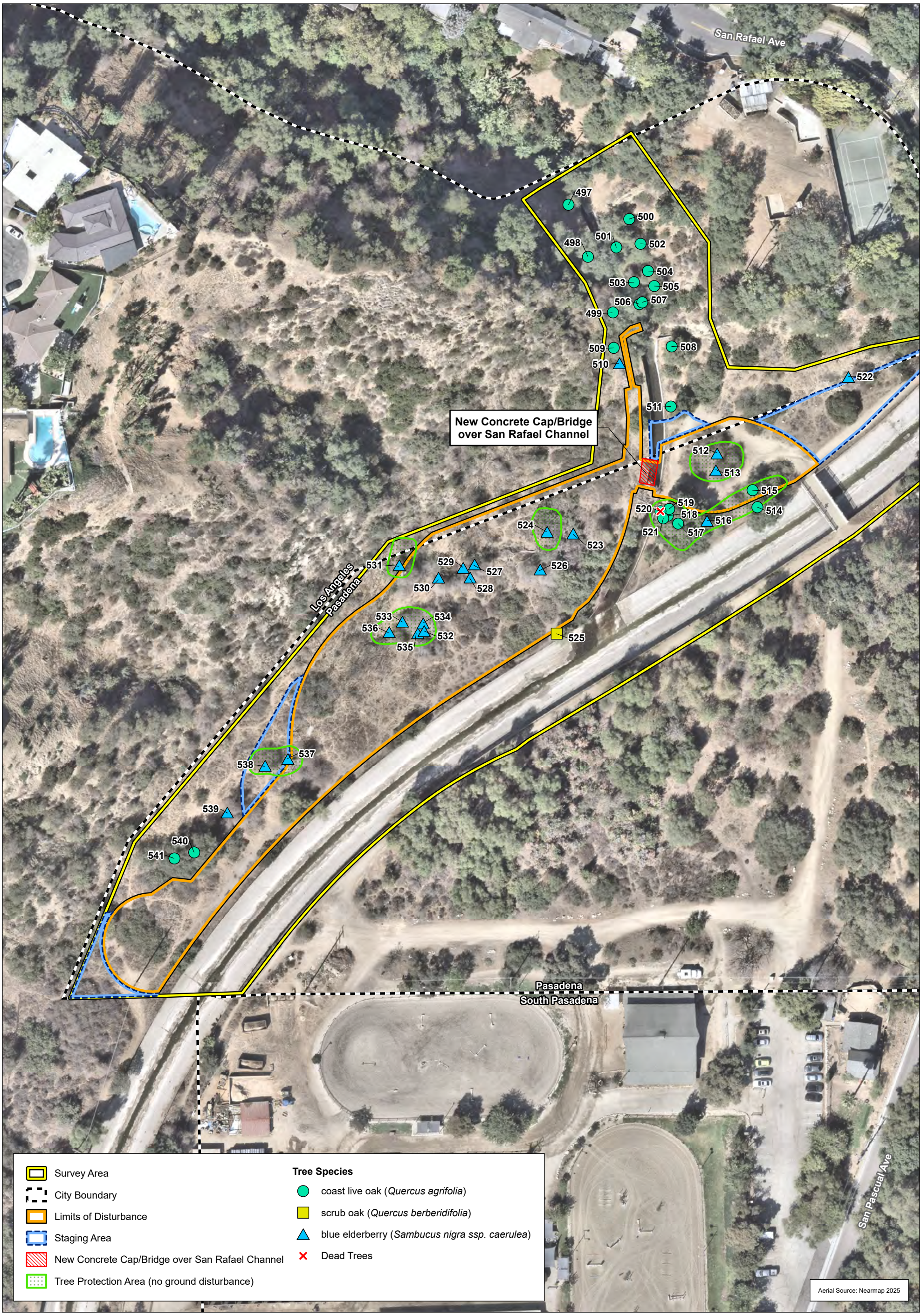
None of these species are expected to occur in the survey area due to a lack of potentially suitable habitat or the presence of significant movement barriers (e.g., fenced concrete box channel, major freeways) such as for the mountain lion. Limited marginal potentially suitable foraging habitat for Crotch's bumble bee is present but nesting is not expected due to thick weedy thatch covering the ground, a lack of a robust suite of nectaring sources, and human disturbances.

In addition to species formally listed by the resource agencies, 11 special status species (i.e., California Species of Special Concern) have been reported near the survey area. Six of these species, the San Diegan tiger whiptail, San Diego desert woodrat, pallid bat, Townsend's big-eared bat, western red bat, western yellow bat, and western mastiff bat may occur in the survey area. The western yellow bat may roost within the survey area, while the rest of the bat species are only expected for foraging as no potentially suitable roosting habitat is present. The remaining seven species are not expected to occur in the survey area due to lack of suitable habitat.

Trees

A total of 212 trees were mapped in the survey area during the 2022 tree inventory[2]. The updated 2025 tree survey identified 17 trees that had died since 2022, along with 6 new trees that grew sufficiently to meet the minimum size for protection pursuant to the updated South Pasadena Municipal Code (Ordinance No. 2409 ([Tree Ordinance] approved on December 17, 2025). Therefore, as of October 2025, there are 201 trees in the Project survey area consisting of 2 carob trees, 1 Shamel ash , 4 toyons, 16 western sycamores, 45 coast live oaks, 1 scrub oak (*Quercus berberidifolia*), 11 black willows, 1 arroyo willow, 32 blue elderberries, 5 Brazilian pepper trees, 1 Chinese elm, and 82 Mexican fan palms. The locations of these trees are shown on Exhibits 3.3-3a and 3.3-3b, and a summary of the jurisdictions in which they are found is provided Section 3.3.5 below.

[2] Three additional trees were mapped in 2022 that occurred outside the survey area boundary and have been removed from this report. These trees include 1 Southern California black walnut (*Juglans californica*), 1 western sycamore (*Platanus racemosa*), and 1 Brazilian pepper (*Schinus terebinthifolia*).



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Tree Impacts – San Rafael Site

Exhibit 3.3-3a

Arroyo Seco Water Reuse Project

N W E S

0 40 80 Feet

PSOMAS

(Rev: 1-22-2026 PLO) R:\Projects\2PAS\2PAS010303 - Arroyo Seco EIR\Graphics\EIR\ex_Tree_Impacts.pdf



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Tree Impacts - San Pascual Site

Exhibit 3.3-3b

Arroyo Seco Water Reuse Project

N W E S

0 40 80 Feet

PSOMAS

(Rev: 1-22-2026 PLO) R:\Projects\2PAS\2PAS010303 - Arroyo Seco EIR\Graphics\EIR\ex_Tree_Impacts.pdf

Critical Habitat

Critical Habitat is designated by the USFWS for the survival and recovery of species listed as Threatened or Endangered under the Federal Endangered Species Act (FESA). Areas designated as Critical Habitat include the physical or biological features that are essential to the survival and eventual recovery of that species. The survey area does not include any designated or proposed Critical Habitat areas for any species.

3.3.3 RELEVANT PROGRAMS AND REGULATIONS

Federal

Section 404 of the Clean Water Act

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into Water of the United States WOTUS under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. Its authority applies to all WOTUS where the material (1) replaces any portion of a WOTUS with dry land or (2) changes the bottom elevation of any portion of any WOTUS. Activities that result in fill or dredge of WOTUS require a permit from the USACE.

On January 18, 2023, the United States Environmental Protection Agency (USEPA) published a final Water Rule in the Federal Register that took effect on March 20, 2023. To conform to the May 25, 2023, ruling by the U.S. Supreme Court (*Sackett v. EPA*), the USEPA issued a revised definition of WOTUS that was published in the Code of Federal Regulations (CFR) on September 8, 2023. The USACE and USEPA announced a proposed rule on November 17, 2025 to clarify aspects of the 2023 WOTUS definition, specifically the meaning of "relatively permanent" and connectivity requirements for wetlands. Additionally, several categories of exempted waters under the CWA are revised in the November 17, 2025 proposed rule.

Based on these rules, the current definition of WOTUS is provided in Title 40 §120.2(a) of the CFR and identifies federal jurisdiction under the CWA as:

1. Traditional Navigable Waters, the territorial seas, and interstate non-wetland waters ("paragraph (a)(1) waters");
2. Impoundments of "waters of the United States" ("paragraph (a)(2) impoundments");
3. Tributaries to paragraph (a)(1) waters or (a)(2) impoundments when the tributaries are relatively permanent, standing or continuously flowing bodies of waters ("jurisdictional tributaries");
4. Wetlands that have a continuous surface connection to paragraph (a)(1) waters, or relatively permanent, standing or continuously flowing jurisdictional tributaries that have a continuous surface connection to paragraph (a)(1) waters; and
5. Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) that are relatively permanent, standing or continuously flowing bodies of water with a

continuous surface connection to paragraph (a)(1) waters or jurisdictional tributaries.

401 of the Clean Water Act and the California Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB), in conjunction with the nine RWQCBs, is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The SWRCB's and RWQCBs' jurisdictions extend to all "waters of the State" and to all WOTUS, including wetlands (isolated and non-isolated).

The Porter-Cologne Act broadly defines "waters of the State" as any surface water or groundwater, including saline waters, within the boundaries of the State." Additionally, the SWRCB asserts jurisdiction over wetland features that meet any historical definition of wetlands utilized by the USACE and USEPA.

Impacts to WOTUS are authorized by the RWQCBs through a Water Quality Certification per Section 401 of the CWA. Impacts to "waters of the State" that are not considered WOTUS would be authorized by Waste Discharge Requirements issued by the RWQCB.

Federal Endangered Species Act

Under provisions of Section 7(a)(2) of the FESA, a federal agency that permits, licenses, funds, or otherwise authorizes a project activity must consult with the USFWS and/or the National Marine Fisheries Service if the activity may affect a listed endangered or threatened species or its designated critical habitat. The purpose of this consultation is to ensure that a federal agency's actions would not jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits activities that result in the direct take (defined as the killing or possession) of an active bird nest.

State

California Native Plant Protection Act

The California Native Plant Protection Act (NPPA) requires all State agencies to use their authority to carry out programs to conserve endangered and rare native plants. The NPPA gives the CDFW the power to designate native plants as "endangered" or "rare" and prohibits the take of such plants, with certain exceptions.

California Department of Fish and Wildlife

Many trees on the survey area are also subject to regulation by the *California Fish and Game Code*. The CDFW is charged with issuing Streambed Alteration Agreements that would allow for the removal of native tree species that occur within the bed, channel, or bank of any river, stream, or lake. The minimum size requirement for regulation by the CDFW is two inches trunk diameter at breast height (dbh). Mitigation/replacement ratios for trees within CDFW jurisdiction is based on the size of the tree dbh (i.e., mitigation ratios increase as the size of the impacted tree increases). It should be noted that many trees on the survey area are subject to regulation by both the various city tree ordinances described above and the *California Fish and Game Code.*

Section 1600 of the California Fish and Game Code

The CDFW regulates activities that may affect rivers, streams, and lakes pursuant to the *California Fish and Game Code* (§§1600–1616). According to Section 1602 of the *California Fish and Game Code,* CDFW has jurisdictional authority over any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Regional

Arroyo Seco Watershed Restoration Plan (ASWRP)

The Project site lies within the boundaries of the Arroyo Seco Watershed Restoration Plan (ASWRP), a regional planning document that provides guidance for habitat enhancement, water quality improvement, flood management, and recreational access throughout the Arroyo Seco watershed. The Project is located specifically within the Lower Arroyo portion of the plan area, where recommended actions emphasize restoring riparian habitat, stabilizing channel banks, improving hydrologic function, and enhancing connectivity among semi-natural open space areas. Although the ASWRP is a non-regulatory guidance document, it serves as an important regional framework for identifying opportunities to improve ecological conditions within the watershed.

City of Pasadena

Trees that are regulated by the City of Pasadena are described in Chapter 8.52 of the Pasadena Municipal Code, hereafter referred to as the Pasadena Tree Ordinance. Under the Pasadena Tree Ordinance, public trees (in addition to native, landmark, specimen, and mature trees) are considered protected and trimming or removal of such trees require approval by the City Manager. Other tree definitions that are pertinent to the resources in the survey area include native trees that have a trunk dbh of at least 8 inches and various other non-native "specimen" trees of varying minimum sizes as provided in the Pasadena Tree Ordinance. The Pasadena Tree Ordinance also protects any tree designated as a

"landmark" tree (trees having significant cultural or historical importance). Native trees that are specified in the Pasadena Tree Ordinance include California buckeye (*Aesculus californica*), white alder (*Alnus rhombifolia*), Southern California black walnut (*Juglans californica*), native oaks (coast live oak [*Quercus agrifolia*], scrub oak [*Q. berberidifolia*], canyon oak [*Q. chrysolepis*], Engelmann oak [*Q. engelmannii*], and valley oak [*Q. lobata*]), western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremonttii*), black cottonwood (*Populus trichocarpa*), arroyo willow (*Salix lasiolepis*), and California bay laurel (*Umbellularia californica*).

Tree replacement requirements for the City of Pasadena are determined by a matrix that indicates tree replacement quantities and sizes based on the size of the tree to be removed. This tree replacement matrix indicates the following:

- Trees with a dbh between 8 and 12.9 inches are to be replaced with 6 15-gallon trees or 3 24-inch box trees;
- Trees with a dbh between 13 and 18.9 inches are to be replaced with 8 15-gallon trees or 4 24-inch box trees or 2 36-inch box trees;
- Trees with a dbh between 19 and 36.9 inches are to be replaced with 8 24-inch box trees or 4 36-inch box trees;
- Trees with a dbh of at least 37 inches are to be replaced with 12 24-inch box trees or 8 36-inch box trees

City of South Pasadena

Pursuant to Ordinance No. 2409 (Tree Ordinance) that was approved on December 17, 2025, the City of South Pasadena defines "protected trees" as the following species that have a trunk dbh of at least 4 inches: various oak species including coast live oak; California bay laurel; desert willow (*Chilopsis linearis*); Catalina ironwood (*Lyonothamnus floribundus*); western sycamore (also commonly known as western sycamore) as well as other sycamore species (*Platanus* spp.); toyon (*Heteromeles arbutifolia*); Southern California black walnut (*Juglans californica*); hollyleaf cherry (*Prunus ilicifolia*); heritage trees (trees specifically designated by City Council as having historical value); and any other trees designated by the South Pasadena Public Works Department.

In addition to protected tree species, the Tree Ordinance defines "significant trees" as any other species that has a minimum dbh of 12 inches. Trunk dbh for multi-trunk trees is determined by combining the diameters of all trunks.

The Tree Ordinance defines "restricted trees in a fire hazard severity zone" as any species identified by the South Pasadena Public Works Department that cannot be planted in a High or Very High Fire Severity Zone.

A tree removal permit from the City of South Pasadena is required for the removal of any protected, significant, or fire hazard zone restricted trees. As part of the tree removal permit approval, replacement trees (24-inch box container) shall be provided for each protected or

significant tree at a rate of 2 replacement trees for every 16-inch increment of trunk diameter of trees to be removed.

Pursuant to Chapter 34.9(d) of the Tree Ordinance, the City of South Pasadena is exempt from the provisions of the Tree Ordinance if a report is provided to the South Pasadena Public Works Director by a Certified Arborist.

City of Los Angeles

The City of Los Angeles regulates trees that are designated as "protected trees" as defined by Section 17.02 of the Los Angeles Municipal Code, hereafter referred to as the Los Angeles Native Tree and Shrub Protection Ordinance (LANTSPO). This category includes all native oak trees, Southern California black walnuts, western sycamores, California bay laurels, toyon, and blue elderberry (*Sambucus nigra* ssp. *caerulea*) that have a minimum trunk dbh of 4 inches. Additionally, the City of Los Angeles requires that all non-protected trees with a minimum dbh of 8 inches are documented. A total of 11 trees (of which 6 are protected) would be removed within the Los Angeles city boundaries.

The LANTSPO requires replacement of protected tree species at a ratio of four replacement trees for each protected tree to be removed.

3.3.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State California Environmental Quality Act (CEQA) Guidelines. A project would result in a significant adverse biological resource impact if it would:

Threshold 3.3a: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

Threshold 3.3b: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

Threshold 3.3c: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

Threshold 3.3d: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

Threshold 3.3e: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or

Threshold 3.3f: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.3.5 REGULATORY REQUIREMENTS

There are no regulatory requirements appliable to the analysis of Biological Resources.

3.3.6 ENVIRONMENTAL IMPACTS

Threshold 3.3a: Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Plants or wildlife may be considered "special status" due to declining populations, vulnerability to habitat change, or restricted distributions. Certain special status species have been listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts.

Special Status Plants

Of the 56 species reported from the literature review, 5 species are federally and/or State-listed Endangered, Threatened, or are candidates for listing: marsh sandwort (*Arenaria paludicola*), Braunton's milk-vetch (*Astragalus brauntonii*), Nevin's barberry (*Berberis nevinii*), San Fernando Valley spineflower (*Chorizanthe parryi* var*. fernandina*), slender-horned spineflower (*Dodecahema leptoceras*). None of these species has potential to occur within the survey area either due to lack of suitable habitat or because the survey area is outside the known range. No impacts on federally or State listed plant species are expected to occur.

In addition to species formally listed by the resource agencies, 51 species reported in the vicinity of the survey area have a CRPR. One list 4.3 species, club-haired mariposa lily (*Calochortus clavatus var. clavatus*), and one list 4.2 species, Plummer's mariposa-lily (*Calochortus plummerae*), have limited potential to occur due to the presence of marginally suitable habitat. One list 4.2 species, southern California black walnut, is known to occur near the survey area. The remainder of these 51 species do not have potential to occur in the survey area due to a lack of potentially suitable soils or habitat. No impacts on CRPR 1B or 2B plant species are expected to occur. Impacts on species with a CRPR of 3 or 4 are not typically considered significant impacts pursuant to CEQA.

No special status plants were observed in the survey area during focused special status plant surveys for the Project (Appendix C, Attachment B). No impacts to special status plants are expected to occur during Project implementation; therefore, no mitigation would be required.

Special Status Wildlife

A total of 27 special status wildlife species have been reported in the vicinity of the survey area. Of the species reported from the literature review, ten species are federally and/or State-listed Endangered or Threatened or are candidates for listing: Crotch's bumble bee (*Bombus crotchii*), Santa Ana sucker (*Catostomus santaanae*), arroyo toad (*Anaxyrus californicus*), southern mountain yellow-legged frog (Rana muscosa), western spadefoot (*Spea hammondii*), western pond turtle (*Emys marmorata*), southwestern willow flycatcher (*Empidonax traillii extimus*), burrowing owl (burrow and wintering sites) (*Athene cunicularia*), least Bell's vireo (*Vireo bellii pusillus*), bank swallow (*Riparia riparia*), coastal California gnatcatcher (*Polioptila californica californica*), and mountain lion (Southern California/Central Coast ESU) (*Puma concolor*).

None of these species are expected to occur in the survey area due to a lack of potentially suitable habitat or the presence of significant movement barriers (e.g., fenced concrete box channel, major freeways) such as for the mountain lion. Limited marginal potentially suitable foraging habitat for Crotch's bumble bee is present but nesting is not expected due to thick weedy thatch covering the ground, a lack of a robust suite of nectaring sources, and human disturbances.

In addition to species formally listed by the resource agencies, 11 special status species (i.e., California Species of Special Concern) have been reported near the survey area. Six of these species, the San Diegan tiger whiptail, San Diego desert woodrat, pallid bat, Townsend's big-eared bat, western red bat, western yellow bat, and western mastiff bat may occur in the survey area. The western yellow bat may roost within the survey area, while the rest of the bat species are only expected for foraging as no potentially suitable roosting habitat is present. The remaining seven species are not expected to occur in the survey area due to lack of suitable habitat.

No impacts on federally or State listed species are expected to occur. Although several other special status wildlife species (i.e., CDFW Species of Special Concern) may occur within the Project sites, these species are only expected to occur temporarily in very limited numbers. Due to the potential for only a small number of individuals to occur on site, Project impacts would not be expected to reduce local populations to below self-sustaining levels, and therefore, would not result in a significant impact under CEQA. Common bat species are discussed further below under Threshold 3.3(d). Project implementation would not expect to result in significant impacts on special status wildlife species; therefore, no mitigation is required.

Indirect Impacts

Implementation of the Project would have potential indirect impacts on wildlife due to noise and other human activities. Invasive exotic plant species may also indirectly impact the remaining open space. While nighttime lighting can be a source of indirect impacts, no nighttime lighting would be utilized during or after construction of the proposed Project. Thus, there would be no lighting-related impacts.

Noise

Implementation of the proposed Project would result in a temporary increase of existing noise levels during construction, as identified in Section 3.8, Noise. This increase in noise would temporarily disturb wildlife species occurring in the survey area. The species expected to occur would be adapted to a moderate level of human activity due to baseline conditions in the Project vicinity. Temporary construction in a relatively small disturbance footprint is expected to temporarily disturb a very limited number of special status and common wildlife species, but they would be expected to return to baseline activity levels post-construction. Because species in the vicinity of the study area are not listed as Threatened or Endangered by State or federal resource agencies, these impacts are considered adverse but not significant, and mitigation would not be warranted.

Human Activity

Project implementation within the San Rafael portion of the site is not expected to significantly increase human activity post-construction. The site is on public, open space land, which is open daily from sunrise to sunset. The San Rafael site is fully accessible to the public via public and private transportation routes, and/or by various trails for pedestrians, bicyclists, and equestrians. The existing trail network in and around the San Rafael site is the sole existing recreational feature and is not significantly used. The Project would improve the section of Arroyo Seco Trail along the length of the San Rafael site and provide new pathways to and around the treatment wetlands as stabilized decomposed granite (DG) trails. A portion of the new or improved trails would be designed to allow maintenance vehicle access, as well as equestrian and pedestrian use; and a portion of the new trails would be designed to be pedestrian-only paths. This would expand public access for passive recreation opportunities throughout the San Rafael site, enhance the existing trail network connecting Pasadena and South Pasadena, and contribute to regional trail connectivity through the length of the Arroyo Seco. However, it should be noted that the types of recreation uses allowed post construction are passive. As such, increased travel to and use of the site, such that would result in significant human activity and associated impacts, would not result.

Currently, baseline human activity in the San Pascual area is moderate to high due to ongoing unsanctioned recreational usage and unsheltered populations, which persist due to limited visibility. Dense, unmanaged vegetation, dominated by non-native species such as Mexican fan palm, limits visibility and enables persistent unauthorized occupation. These conditions contribute to recurring issues such as fires, unsheltered populations and trash accumulation.

The proposed Project includes selective vegetation thinning and the installation of a walking trail at the San Pascual site. These actions would improve visibility, enhance public safety, and facilitate passive recreational use of the restored wetland area. While human presence would continue, the character of activity is expected to shift from unauthorized habitation to low-impact, passive recreation with signage to direct users to authorized paths. Although human activity constitutes an adverse impact, the Project is not expected to increase the level of human activity and has the potential to reduce unauthorized use and further limit human activity in vegetated areas. Therefore, the human activity related to the Project is not considered a significant impact, and no mitigation is warranted.

Invasive Exotic Plant Species

The proposed Project includes landscaping. If the Project's landscaping includes planting ornamental species that are known to be particularly invasive, this impact would be considered potentially significant because the Project is adjacent to natural open space. However, the Project does not propose the use of any invasive, exotic plant species and the Project Landscape Plan ensures that no such species would be used in any proposed landscaping. Only native species from the local watersheds are planned to be used in landscaping throughout the Project.

Increased Dust and Urban Pollutants

Grading activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and herbs. The respiratory function of the plants in the area would be impaired when dust accumulation is excessive. This potential indirect effect of construction of the proposed Project on the native vegetation in the construction area's immediate vicinity is considered adverse, but less than significant since it would not reduce plant populations below self-sustaining levels. Therefore, no mitigation would be required.

Additional impacts on biological resources in the area could occur as a result of changes in water quality. Runoff of silt from the Project site or improper disposal of petroleum and chemical products from construction equipment could temporarily impact water quality during construction. Urban runoff from Project infrastructure or landscaping could permanently impact water quality during operation of the proposed Project. Adverse effects on water quality could affect populations of aquatic species, including special status species, by reducing the amount of available habitat, smothering eggs of aquatic species, and may result in direct mortality. Adverse effects on water quality could also impact populations of terrestrial wildlife species that use riparian areas by affecting the plant species that are used by terrestrial species, which would reduce the available riparian habitat, the food web interactions affecting prey (e.g., insects, tadpoles, fish, and other aquatic prey), or through bio-magnification (i.e., the buildup of pesticides to toxic levels in higher trophic levels).

The Applicant is required to obtain coverage under the State Water Resources Control Board's General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit) (RR HYD-1). Compliance with this permit is mandatory and includes preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that incorporates appropriate Best Management Practices (BMPs) for erosion

control, sediment management, and pollution prevention (RR HYD-2). Implementation of these mandatory BMPs would prevent or minimize the potential for indirect water quality impacts during construction. Because the Project must comply with the Construction General Permit and associated SWPPP requirements, construction-related water quality impacts would be less than significant, and no mitigation measures are required.

Threshold 3.3b: Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The CDFW regulates the removal of native trees and/or riparian habitat associated with stream channels via the *California Fish and Game Code*. Therefore, effects to both individual trees that may be under CDFW jurisdiction and mapped riparian habitat (limited to Coast live oak-western sycamore woodland) are discussed below.

Trees

The CDFW is charged with issuing Streambed Alteration Agreements that would allow for the removal of native tree species that occur within the bed, channel, or bank of any river, stream, or lake. A total of 38 trees would be removed or encroached upon that fall under the CDFW's jurisdiction within the riparian habitat (10 of these trees are toyon and blue elderberry that CDFW often considers as large shrubs and may not require compensatory mitigation). A multitude of these trees are also subject to regulation by the respective city tree ordinances described further below in Threshold 3.3(e). The Project would acquire appropriate jurisdictional approval from the cities of Pasadena, South Pasadena, and Los Angeles, as applicable, prior to tree removal or trimming. The precise number of replacement trees for affected trees under CDFW's jurisdiction would be dependent on negotiation with CDFW during the Streambed Alteration Agreement permitting process, subsequent to the CEQA process, and would be a minimum of a 1:1 replacement ratio. Additionally, MM BIO-2 defines protective measures that shall be implemented for all trees to be preserved on-site during construction. With implementation of MM BIO-2 and compliance with local and federal permitting requirements, potential impacts to trees under CDFW jurisdiction would be reduced to a less than significant level.

Riparian Habitat

The CDFW Vegetation Classification and Mapping Program provides a list of vegetation Alliances, Associations, and Special Stands that are considered "Sensitive Natural Communities" based on their rarity and threat. Information on rarity is based on the range and distribution of a given type of vegetation, and the proportion of occurrences that are of good ecological integrity. Threats and trends are considered in categories like residential and commercial development; agriculture, energy production, and mining; and invasive and other problematic plant species. One vegetation type present in the survey area, coast live oak–western sycamore woodland, is considered a special status vegetation type by the CDFW.

Activities within the construction footprint of the sites would be considered permanent impacts. For the San Rafael site, four separate, irregularly-shaped areas at the Project footprint boundary have been identified for staging and collectively encompass 0.25 acre of temporary impacts. For the San Pascual site, the paved parking lot has been identified as a staging and laydown area, which encompasses 0.25 acre. Impacts related to the vegetation communities shown below consider the extent of adverse effects within the Project's disturbance footprint and staging areas.

The Project would temporarily and permanently impact a variety of vegetation types. However, most of these impacts, at both the San Rafael and San Pascual sites, are either minimal in extent (under one acre of an individual vegetation type) or would affect degraded and/or non-native/ornamental vegetation or unvegetated areas. Acreage of impacts from both temporary and permanent are listed in Table 3.3-4, Summary of Impacts to Vegetation Types and Other Areas, below.

TABLE 3.3-4
SUMMARY OF IMPACTS TO VEGETATION TYPES AND OTHER AREAS

Vegetation Type	San Rafael Site Impacts (acres)		San Pascual Site Impacts (acres)		Total Impacts (acres)	
	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
Disturbed coast live oak woodland	0.00	0.066	0.00	0.00	0.00	0.066
Coast live oak-western sycamore woodland	***0.00***	***0.00***	***0.00***	***1.234***	***0.00***	***1.234***
Non-native ornamental woodland	0.00	0.00	0.00	0.705	0.00	0.705
Disturbed blue elderberry - laurel sumac scrub	0.143	1.288	0.00	0.00	0.143	1.288
Bare ground	0.098	0.056	0.00	0.00	0.098	0.056
Developed	0.011	0.009	0.25	0.133	0.261	0.142
Disturbed	0.00	0.00	0.00	0.137	0.00	0.137
TOTALS	**0.252**	**1.419**	**0.250**	**2.209**	**0.502**	**3.628**

Note: ***Bold italics*** indicate a special status vegetation type and a riparian habitat
Source: Psomas 2025c. Appendix C.

As shown in Table 3.3-4, there would be no special status vegetation types impacted at the San Rafael site. At the San Pascual site, 1.23 acres of coast live oak-western sycamore woodland (a CDFW special status vegetation type and a riparian habitat) would be permanently impacted (i.e., not temporarily during the construction period only). However, the Project would also result in the removal of 2.90 acres of non-special status vegetation types and other areas.

Impact Analysis

The San Pascual site is lacking in understory vegetation among the trees and large shrubs. As such, the area mapped as coast live oak-western sycamore woodland on the site, as well as non-native ornamental woodland, is comprised largely of individual trees and large shrubs. The Project would involve removal of 130 existing trees on the San Pascual site, consisting of 6 protected tree species (per the LANTSPO); 17 protected trees and 14

significant trees (per the South Pasadena Tree Ordinance); and 93 other trees that are not protected by either City Ordinance (9 black willows, 2 blue elderberries, and 82 Mexican fan palms). Mexican fan palms are the primary species mapped in the non-native ornamental woodland present in the central portion of this site. The Mexican fan palms are not protected by the South Pasadena Tree Ordinance because they are non-native and considered invasive. The Los Angeles Tree Ordinance does not provide protection for this species because it is not listed as a protected species. Table 3.3-5, Comparison of Existing Protected/Significant Trees and Proposed Trees at the San Pascual Site, summarizes the number of protected or significant trees and large shrubs that would be removed and the proposed quantity of replacement trees to be planted at this site as part of the Project.

TABLE 3.3-5
COMPARISON OF EXISTING PROTECTED/SIGNIFICANT TREES AND PROPOSED TREES AT THE SAN PASCUAL SITE

Tree Species	Quantity Existing	Quantity Removed	Quantity Proposed to be Planted
carob *Ceratonia siliqua*	2	2	0
Shamel ash *Fraxinus uhdei*	1	1	0
toyon *Heteromeles arbutifolia*	4	2	12
western sycamore *Platanus racemosa*	16	6	17
coast live oak *Quercus agrifolia*	23	11	24
black willow *Salix gooddingii*	11	2	0
arroyo willow *Salix lasiolepis*	1	1	72
blue elderberry *Sambucus nigra* ssp. *caerulea*	11	6	26
Brazilian pepper *Schinus terebinthifolia*	5	5	0
Chinese elm *Ulmus parviflora*	1	1	0
western redbud *Cercis occidentalis*	0	0	4
Totals	**75**	**37**	**155**
Please note: non-native species that are removed will not be replaced in kind. Removal of non-natives are offset via establishment of native species.			

As shown, at the San Pascual site the Project would replace more than four times the number of protected trees with the same species, except the non-native species, that are all associated with coast live oak-western sycamore woodland. Additionally, the proposed plant palette includes four western redbud (*Cercis occidentalis*), a native tree species, in the northernmost portion of the San Pascual site. Further, the landscape concept includes extensive planting of native shrub and groundcover species as an understory to the remaining and newly installed trees. The shrub and groundcover species include those appropriate for a coast live oak-western sycamore woodland as well as riparian-related species. Understory vegetation, in combination with trees and large shrubs, is an important component of habitat and its presence creates higher habitat quality than a similar acreage with no or minimal understory coverage. This is because a habitat area with multiple layers (i.e., heights) of vegetation provides a greater number and diversity of food sources and increased cover, perching, foraging, and nesting opportunities. This is in part due to the provision of a higher number of ecological niches resulting in a greater number and diversity of animal species that would utilize the site. Additionally, because the proposed plant palette is comprised of solely native species, the resulting habitat would also better support native wildlife species that have specific, specialized habitat requirements. Therefore, coast live oak-western sycamore woodland with robust understory comprised of native species, as proposed, represents a higher quality habitat than the same trees without the understory vegetation, as in the existing condition. Accordingly, the Project is expected to result in a net benefit to coast live oak-western sycamore woodland vegetation and other riparian corridor features and improve overall habitat functions and values for native species of the region. The number and type of trees proposed on the conceptual landscape plan may be refined as part of permitting processes with the affected agencies (i.e., City of Pasadena and CDFW). However, all required tree replacements to fully meet each agency's requirements will be planted and will be located within the Project site.

Although there are no existing special status vegetation types on the San Rafae site, implementation of the Project would result in improved habitat functions and values for native species in the region than a similar acreage in the existing condition, which is comprised of non-native or degraded vegetation communities. Table 3.3-6, Comparison of Existing Protected Trees and Proposed Trees at the San Rafael Site, summarizes the species and number of protected trees and large shrubs that would be removed and the species proposed to be planted at this site as part of the Project.

TABLE 3.3-6
COMPARISON OF EXISTING PROTECTED TREES
AND PROPOSED TREES AT THE SAN RAFAEL SITE

Tree Species	Quantity Existing	Quantity Removed	Quantity Proposed to be Planted
coast live oak *Quercus agrifolia*	22	0	0
scrub oak *Quercus berberidifolia*	1	0	0
blue elderberry *Sambucus nigra* ssp. *caerulea*	21	6	26*
Totals	**44**	**6**	**26****

*Based on using 24-inch box specimens as replacement trees per Pasadena tree replacement matrix
** In addition, Coast Live Oak, Arroyo Willow and Western Sycamores will be planted for a total of 61 new trees

As shown, at the San Rafael site the Project proposes to plant more than four times the number of protected trees with the same species and two complementary species–coast live oak and western sycamore. As discussed for the San Pascual site, the landscape concept for the San Rafael site includes extensive planting of native shrub and groundcover species as an understory to the remaining and newly installed trees, increasing the quality of the habitat substantively compared to the existing condition. As discussed, the number and type of trees proposed on the conceptual landscape plan may be refined as part of permitting processes with the affected agencies (i.e., City of Pasadena and CDFW). However, all required tree replacements to fully meet each agency's requirements would be planted and would be located within the Project site.

As noted above, Project construction would result in temporary impacts related to staging areas. Specifically, at the San Rafael site, approximately 0.25 acres across four separate areas adjacent to the Project footprint would be used for staging. These areas were carefully selected to avoid trees and are comprised of disturbed blue-elderberry-laurel sumac scrub, bare ground, and developed areas. At the San Pascual site, an approximate 0.25-acre developed land (paved parking lot) would be used for staging. No special status vegetation types would be affected by temporary impacts.

Therefore, both temporary and permanent Project impacts on trees, riparian habitat, and/ or other special status vegetation communities would be considered less than significant, and no mitigation is required.

Threshold 3.3c: Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Jurisdictional resources were delineated throughout the survey area. Within the survey area, an interconnected drainage system flows downstream from San Rafael Creek and from the

Arroyo Seco Channel and exits in part via an existing diversion into the San Pascual site and in part continuing downstream through the Arroyo Seco Channel.

Impacts to USACE "Waters of the U.S."

Impacts to USACE[3] WOTUS[4] would result from creating a diversion structure within San Rafael Creek. The proposed Project modifications include modifying the side wall and channel bottom of the San Rafael Creek to divert water into proposed water treatment wetlands in areas that are currently uplands. This would be a permanent impact to WOTUS at the site, though it would not affect flows to downstream waters other than a beneficial impact through improving the quality of the water flowing into the Arroyo Seco Channel from the San Rafael Creek drainage area. There would be an increased diversion of dry and wet weather flows from the San Rafael Creek, at the San Rafael site. San Pascual would only divert dry weather flows and take the same amount of water as the pre-construction amount. However, there is no habitat being supported by runoff downstream of the sites that would be adversely affected by the 320-acre feet average annual water capture for water supply resulting from Project implementation. Runoff from this watershed drains to over 50 linear miles of the Los Angeles River, which is largely channelized, and then to the Pacific Ocean.

Permanent impacts to WOTUS would also occur in the San Pascual site from grading activities and vegetation removal to construct the proposed facilities. A summary of Project impacts related to WOTUS is provided in Table 3.3-7, Summary of Impacts to Waters of the U.S. (USACE Jurisdiction).

TABLE 3.3-7
SUMMARY OF IMPACTS TO WATERS OF THE U.S. (USACE JURISDICTION)

Agency	Impact Type	Impacts (acres)			Totals
		San Rafael Site	Arroyo Seco Channel	San Pascual Site	
Wetlands					
USACE	Existing	0.000	0.000	0.064	**0.064**
	Permanent	0.000	0.000	0.064	**0.064**
	Temporary	0.000	0.000	0.000	**0.000**
Non-wetland waters					
USACE	Existing	0.098	2.604	0.219	**2.921**
	Permanent	0.001	0.000	0.219	**0.220**
	Temporary	0.000	0.000	0.000	**0.000**

USACE: U.S. Army Corps of Engineers
Source: Psomas 2023, Appendix C, Attachment A.

[3] Section 404 of the federal Clean Water Act (CWA) regulate activities affecting resources under the jurisdiction of the USACE.

[4] WOTUS under the jurisdiction of the USACE include navigable coastal and inland waters, lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce,

Impacts to RWQCB "Waters of the State"

Impacts to Los Angeles RWQCB "waters of the State"[5] largely mirror those of WOTUS. The construction of a diversion structure is considered a permanent impact to the unvegetated, concrete-lined, San Rafael Creek. The Project also proposes a concrete cap or bridge over San Rafael Creek. While the USACE regulates discharges to jurisdictional waterways only, the RWQCB typically considers the installation of structures that cover channels (such as this concrete cap/bridge) to be a permanent, though indirect, impact because it may have an impact on water quality. Impacts to jurisdictional "waters of the State" slightly exceed those of WOTUS at the San Pascual site because the basin includes an existing side channel that drains adjacent upland areas into the San Pascual site. This side channel is not considered WOTUS but still falls under the jurisdiction of the Los Angeles RWQCB as an isolated feature. A summary of Project impacts related to "waters of the State" under the jurisdiction of the Los Angeles RWQCB is provided in Table 3.3-8, Summary of Impacts to Waters of the State (Los Angeles RWQCB Jurisdiction).

TABLE 3.3-8
SUMMARY OF IMPACTS TO WATERS OF THE STATE
(LOS ANGELES RWQCB JURISDICTION)

Agency	Impact Type	Impacts (acres)			Totals
		San Rafael Creek	Arroyo Seco Channel	San Pascual Basin	
Wetlands					
LARWQCB	Existing	0.000	0.000	0.064	**0.064**
	Permanent	0.000	0.000	0.064	**0.064**
	Temporary	0.000	0.000	0.000	**0.000**
Non-wetland Waters					
LARWQCB	Existing	0.098	2.604	0.221	**2.923**
	Permanent	0.008	0.000	0.221	**0.229**
	Temporary	0.000	0.000	0.000	**0.000**

LARWQCB: Los Angeles Regional Water Quality Control Board
Source: Psomas 2023, Appendix C, Attachment A.

Impacts to CDFW Jurisdictional Waters

Impacts to CDFW[6] jurisdictional waters would result from modifications to San Rafael Creek to create the diversion structure to allow water to reach the proposed treatment wetlands. The proposed construction of the concrete cap/bridge over San Rafael Creek would likely not be considered as an impact by the CDFW because there is no aquatic habitat in the

[5] Section 401 of the Clean Water Act provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed federally permitted activity that may affect water quality. The RWQCB also has jurisdiction over isolated wetlands and waters of the State under the Porter-Cologne Water Quality Control Act.

[6] Section 1602 of the *California Fish and Game Code* regulate activities affecting resources under the jurisdiction of the CDFW. The CDFW has jurisdictional authority over resources associated with rivers, streams, and lakes.

concrete channel. A summary of Project impacts to CDFW jurisdictional areas is provided in Table 3.3-9, Summary of Impacts to CDFW Jurisdictional Waters.

TABLE 3.3-9
SUMMARY OF IMPACTS TO CDFW JURISDICTIONAL WATERS

Agency	Impact Type	Impacts per Project Area (acres)			Totals
		San Rafael Creek	Arroyo Seco	San Pascual Basin	
CDFW	Existing	0.098	3.018	1.798	**4.914**
	Permanent	0.001	0.000	1.617	**1.618**
	Temporary	0.000	0.000	0.000	**0.000**

CDFW: California Department of Fish and Wildlife
Source: Psomas 2023, Appendix C, Attachment A.

As impacts to jurisdictional waters would result from the Project, as described for each agency above, the Project would acquire jurisdictional permits pursuant to the Clean Water Act prior to any impacts on jurisdictional resources. Specifically, prior to any impacts on waters under the regulatory authority of the RWQCB, the USACE, or the CDFW, the City of Pasadena (Pasadena) must prepare and process a RWQCB Report of Waste Discharge, USACE 404 application, and a CDFW Section 1602 Notification of Lake or Streambed Alteration, as applicable. Pasadena must ensure implementation of and compliance with all measures required by the RWQCB, USACE, and CDFW permits. Compensatory mitigation may include restoration (i.e., reestablishment or rehabilitation), establishment (i.e., creation), enhancement, and/or preservation of jurisdictional resources. Compensatory mitigation may occur through permittee-responsible mitigation, payment to an in-lieu fee program, or purchase of compensatory mitigation credits from an approved mitigation bank. As part of the required permitting process, mitigation ratios (i.e., the amount of mitigation acreage compared to the amount of impacted habitat) would be negotiated with the regulatory agencies with a minimum 1:1 replacement of impacted jurisdictional resources with jurisdictional resources of equivalent or higher quality habitat value.

A temporary bridge would span the Arroyo Seco Channel to have access to the San Rafael site that would accommodate the potential weight of all anticipated construction vehicles. The abutments on either side of the temporary bridge would not touch the limits of the Channel itself. Therefore, there would be no impacts to jurisdictional features related to the temporary bridge at the San Rafael site.

Through compliance with required Clean Water Act and California Department of Fish and Game Code permitting requirements, potential impacts to protected wetlands would be reduced to a less than significant level.

Threshold 3.3d: Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursey sites?

Wildlife movement typically consists of (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water, defending territories, or searching for mates, breeding areas, or cover). This movement is necessary to maintain healthy wildlife populations, especially where open space is limited in size or otherwise isolated from other open space areas.

Wildlife Movement

The Project site is located at the urban-wildland interface. Residential development, stables, community recreation facilities, parking lots, roadways, and flood control facilities surround the area. Within the Project vicinity, vehicular use is low and pedestrian and/or equestrian use is moderate to high in some areas and low in others. Vehicular use is typically restricted to maintenance vehicles along the channel and pedestrian use is mainly limited to the walkways east and north within the survey area.

Wildlife movement through the Project vicinity consist largely of species common in urban or suburban landscapes such as common birds, flying invertebrates, reptiles, and amphibians able to persist in small habitat patches and within developed lands as well as mammals such as coyote, common raccoon, striped skunk, and Virginia opossum, among others. Regional movement for these species may occur to a greater degree along green belts such as the Arroyo Seco but movement is also expected to occur throughout the suburban landscape. Implementation of the Project components would not create any additional constraints to wildlife movement and local wildlife are expected to move throughout the Project sites and surrounding areas in a similar manner to existing conditions. Therefore, impacts on wildlife movement would be less than significant, and no mitigation is required.

Migratory Bird Treaty Acy

The federal MBTA protects migratory birds and their nests and eggs, both common and special status. Bird species protected under the provisions of the MBTA are identified by the List of Migratory Birds (50 CFR §10.13, as amended). Birds have the potential to nest in the vegetation in the survey area, and their nests may be impacted by the Project. In addition to the MBTA, Sections 3503 and 3503.5 of the *California Fish and Game Code* protect nesting migratory birds and raptors. Impacts to nesting birds, both on and adjacent to the Project site, would be considered a significant impact prior to mitigation. Therefore, if Project construction, on either site, is initiated during the typical breeding season for nesting birds (i.e., February 1 to September 15) and nesting raptors (i.e., as early as January 1 for some raptors to June 30), MM BIO-3 requires a pre-construction nesting bird/raptor survey to ensure compliance with the MBTA and describes the process for protecting any active nests identified while construction is ongoing. If construction activities are initiated during the non-breeding season, implementation of MM BIO-3 would not be required and there would

be no potential impact to nesting birds and raptors. With implementation of MM BIO-3, potential impacts to nesting migratory birds and raptors during their breeding seasons due to Project construction would be reduced to a less than significant level.

Roosting Bats

Several common bat species may forage throughout the Project sites and roost in mature trees or under bridges. However, large roosting colonies have not been documented on or near the Project sites and are not expected to occur. Indirect impacts on individual roosting bats or small colonies (i.e., less than ten individuals) may occur with Project implementation and may result in bats avoiding the site temporarily. Therefore, the Project would implement MM BIO-4, which requires a two-step tree removal process to be implemented to prevent bat mortality. With implementation of MM BIO-4, potential impacts to roosting bats would be reduced to a less than significant level.

Threshold 3.3e: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Project includes properties in three cities that regulate impacts to trees: Pasadena, South Pasadena, and Los Angeles, as discussed below. Many of these trees are also subject to regulation by the CDFW, as previously discussed in Threshold 3.3(b). Exhibit 3.3-3a, Tree Impacts at San Rafael Site, and Exhibit 3.3-3b, Tree Impacts at San Pascual Site, show the location, survey number, and species of all trees within the survey area. Trees within the disturbance footprint are shown, including those with tree protection areas that would be avoided and protected in place as part of the Project.

City of Pasadena

Trees that are regulated by Pasadena are described in Chapter 8.52, City Trees and Tree Protection Ordinance, of the Pasadena Municipal Code, hereinafter referred to as the Pasadena Tree Ordinance. Under the Pasadena Tree Ordinance, removal of or injury to any protected trees requires a permit from Pasadena. Protected trees are defined in Section 8.52.020(T) as "a native, specimen, landmark, landmark-eligible, mature (except for the trees in RS or RM-12 zones), or public tree". Additionally, the Pasadena Tree Ordinance states that "Special consideration shall be afforded mature, public, landmark, landmark-eligible, native and specimen trees as set forth in this chapter". Native trees that are specified in the Pasadena Tree Ordinance include California buckeye (*Aesculus californica*), white alder (*Alnus rhombifolia*), Southern California black walnut (*Juglans californica*), native oaks (coast live oak [*Quercus agrifolia*], scrub oak [*Q. berberidifolia*], canyon oak [*Q. chrysolepis*], Engelmann oak [*Q. engelmannii*], and valley oak [*Q. lobata*]), western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), black cottonwood (*Populus trichocarpa*), arroyo willow (*Salix lasiolepis*), and California bay laurel (*Umbellularia californica*). Replacement requirements under the Pasadena Tree Ordinance are determined on a case-by-case basis by a matrix in which the quantity of replacement trees to be required is based on the size of trees to be removed and the size of trees that are subsequently planted.

A total of 6 trees, all native blue elderberry, would be removed at the San Rafael site and all fall under Pasadena's jurisdiction, as summarized in Table 3.3-10, Trees Proposed for Removal Protected by the Pasadena Tree Ordinance. The data in each table summarizing protected trees is consistent with the data required to be documented under each city's tree ordinance.

TABLE 3.3-10
TREES PROPOSED FOR REMOVAL PROTECTED
BY THE PASADENA TREE ORDINANCE

Tree No.	Tree Species	Quantity	DBH Range (in)	Height Range (ft)	Canopy Diameter Range (ft)
523, 526–530	blue elderberry *Sambucus nigra* ssp. *caerulea*	6	15.1–31.4	10–40	20–30
	Total	**6**			

DBH: diameter at breast height; in: inches; ft: feet.
Source: Psomas 2025 (Appendix C, Attachment C)

The Project would implement MMs BIO-1 and BIO-2, which define the requirements and processes to protect special status natural resources and trees, respectively, to be preserved on-site during construction process. With implementation of MMs BIO-1 and BIO-2 and compliance with Pasadena Tree Ordinance requirements, potential impacts to City of Pasadena trees would be reduced to a less than significant level.

City of South Pasadena

South Pasadena regulates impacts to "protected", "significant", and "heritage" trees that are defined in Section 34.1 of the South Pasadena Municipal Code, hereafter referred to as the South Pasadena Tree Ordinance. Analysis of tree impacts is based on revisions to the South Pasadena Tree Ordinance that were approved by the South Pasadena City Council on December 17, 2025. Protected trees include the following species that have a trunk dbh of at least 4 inches: various oak species including coast live oak; California bay laurel; desert willow (*Chilopsis linearis*); Catalina ironwood (*Lyonothamnus floribundus*); western sycamore (also commonly known as western sycamore) as well as other sycamore species (*Platanus* spp.); toyon (*Heteromeles arbutifolia*); Southern California black walnut (*Juglans californica*); and hollyleaf cherry (*Prunus ilicifolia*). Significant trees include any tree species with a minimum dbh of 12 inches. Heritage trees include those specifically designated by the City Council as having historical value. For multi-trunk trees, all of the trunk diameters are summed to determine their size pursuant to the dbh thresholds described above. A total of 31 trees would be removed or encroached upon that fall under South Pasadena's jurisdiction, as summarized in Table 3.3-11, Tree Proposed for Removal Considered Protected or Significant by the South Pasadena Tree Ordinance.

TABLE 3.3-11
TREES PROPOSED FOR REMOVAL CONSIDERED PROTECTED BY THE SOUTH PASADENA TREE ORDINANCE

Tree No.	Tree Species	Quantity	DBH Range (in)	Height Range (ft)	Canopy Diameter Range (ft)
Protected Tree Species					
303, 314	toyon *Heteromeles arbutifolia*	2	10.3–17.6	10–15	12–15
308, 309, 316, 322, 361, 376	western sycamore *Platanus racemosa*	6	6.3–67.7	30–60	10–35
304, 306, 307, 312, 315, 356, 374, 542, 543	coast live oak *Quercus agrifolia*	9	4.4–35.3	10–60	8–40
Subtotal Protected Trees		17			
Significant Tree Species					
359, 360	carob *Ceratonia siliqua*	2	14.5–18.6	20–20	20–20
363	Shamel ash *Fraxinus uhdei*	1	15.9	45	15
354, 547	blue elderberry *Sambucus nigra* ssp. *caerulea*	2	12.5–21.4	20–25	15–25
375, 380	black willow *Salix gooddingii*	2	14.0–16.5	20–35	15–18
302, 319, 320, 323, 379	Brazilian pepper *Schinus terebinthifolia*	5	15.2–60.8	15–30	15–30
317	Chinese elm *Ulmus parviflora*	1	37.9	30	20
Subtotal Significant Trees		14			
Total		**31**			

DBH: diameter at breast height; in: inches; ft: feet.
Source: Psomas 2025 (Appendix C, Attachment C)

Construction at the San Pascual site would require removal of 77 Mexican fan palms (*Washingtonia robusta*) that occur within the City of South Pasadena limits. However, these tree species are not considered protected by the South Pasadena Tree Ordinance. To reduce impacts to trees to be protected in place during construction, the Project would implement MM BIO-2 that defines the process to protect trees to be preserved on-site during the construction process. With implementation of MM BIO-2 and compliance with South Pasadena Tree Ordinance requirements, potential impacts to South Pasadena trees would be reduced to a less than significant level.

City of Los Angeles

Los Angeles regulates trees that are designated as "protected trees" as defined by Section 17.02 of the Los Angeles Municipal Code, hereafter referred to as the Los Angeles Tree Ordinance. This category includes all native oak trees, Southern California black walnuts, western sycamores, California bay laurels, toyon, and blue elderberry (*Sambucus nigra* ssp. *caerulea*) that have a minimum trunk dbh of 4 inches. Additionally, Los Angeles requires that all non-protected trees with a minimum dbh of 8 inches are documented. A total of 6 trees would be removed or encroached upon that fall under Los Angeles' jurisdiction, as summarized in Table 3.3-12, Tree Proposed for Removal Protected by the Los Angeles Tree Ordinance.

TABLE 3.3-12
TREES PROPOSED FOR REMOVAL PROTECTED
BY THE LOS ANGELES TREE ORDINANCE

Tree No.	Tree Species	Quantity	DBH Range (in)	Height Range (ft)	Canopy Diameter Range (ft)
335, 343	coast live oak *Quercus agrifolia*	2	9.0–16.2	18–35	12–18
327, 328, 340, 341	blue elderberry *Sambucus nigra* ssp. *caerulea*	4	6.6–15.8	12–15	10–15
	Total	**6**			

DBH: diameter at breast height; in: inches; ft: feet.
Source: Psomas 2025 (Appendix C, Attachment C)

Construction at the San Pascual site would require removal of five Mexican fan palms that occur within the City of Los Angeles limits. However, these tree species are not considered protected by the Los Angeles Tree Ordinance. The Project would implement MM BIO-2, which defines the process to protect trees to be preserved on-site during construction. With implementation of MM BIO-2 and compliance with Los Angeles Tree Ordinance requirements, potential impacts to Los Angeles trees would be reduced to a less than significant level.

Threshold 3.3f: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Project does not conflict with any Significant Ecological Areas, Wildflower Reserve Area, or Sensitive Environmental Resource Areas, as none exists within the Project site. The Project site is located within the planning boundaries of the Arroyo Seco Watershed Restoration. These plans are regional resource planning and restoration guidance documents and do not function as Habitat Conservation Plans or Natural Community

Conservation Plans. Neither plan imposes binding regulatory measures on private development or public infrastructure projects, nor do they establish mandatory habitat mitigation standards, species-specific conservation requirements, or development restrictions. Instead, both documents provide non-regulatory recommendations intended to guide long-term ecological restoration, habitat connectivity improvements, water quality enhancement, and watershed stewardship throughout the Arroyo Seco and Los Angeles River systems. The Arroyo Seco Water Reuse Project is generally consistent with the ecological and watershed-improvement goals outlined in these plans, including objectives related to habitat enhancement, increased native vegetation, improved hydrologic function, and multi-benefit watershed management. Because the Project does not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any approved local, regional, or State habitat conservation plan, and is compatible with the guiding principles of the ASWRP and LARMP, there would be no impact under this Threshold, and no mitigation is required.

3.3.7 CUMULATIVE IMPACTS

This cumulative impact analysis considers potential impacts to sensitive biological resources that would result from combined, incremental impacts of the Project when added to other past, present, and reasonably foreseeable future projects having closely related impacts. The following cumulative impact analysis is based on a review of related projects in the vicinity of the Project site, the Project's direct and indirect impacts with implementation of mitigation measures existing conditions in the Project vicinity, and an analysis of aerial photographs.

Cumulative biological impacts focus on the potential for loss, fragmentation, or enhancement of riparian and oak woodland habitat along the Lower Arroyo Seco corridor. Multiple regional initiatives, such as the Lower Arroyo Habitat Enhancement Program, and Hahamongna Watershed Park Master Plan, are actively restoring native plant communities and improving wildlife connectivity throughout the watershed.

In addition to ecological restoration, several water infrastructure and reuse projects contribute to cumulative effects within the Project's biological context. The City of Pasadena's Non-Potable Water Pipeline Expansion Program and Arroyo Seco Canyon Project, Phase 2, as well as Los Angeles Department of Water and Power's Los Angeles Groundwater Replenishment Project, are introducing new conveyance and recharge facilities within or downstream of the Arroyo corridor. These projects involve trenching, vegetation removal, and installation of new distribution lines that may temporarily disturb adjacent riparian or landscaped areas but are designed to improve long-term hydrologic conditions and reduce imported water dependence.

Regionally, Los Angeles County's Enhanced Watershed Management Program for the Los Angeles River watershed and the One Water LA 2040 Plan promote stormwater capture and infiltration projects, such as the Garvanza Park Stormwater Capture Project and Mission Road Green Infrastructure Corridor, that cumulatively influence the hydrologic and habitat dynamics of the Arroyo Seco system.

Cumulative urban development projects, including mixed-use infill along the South Fair Oaks Specific Plan area, Orange Grove corridor, and York Boulevard/Monterey Road edges, have resulted in incremental vegetation loss, canopy fragmentation, and increased human activity along the Arroyo's urban interface. However, these projects are subject to Pasadena's Urban Forestry Ordinance (PMC §8.52) and Tree Protection Guidelines, which require replacement of protected trees and the use of native or climate-appropriate landscaping, partially offsetting localized habitat impacts.

Within this cumulative setting, the Project would remove only relatively limited vegetation during construction and would replace these areas with native riparian, oak woodland, and upland species sourced from locally adapted seed and container stock. Post-construction restoration would expand native cover and improve wildlife foraging and movement opportunities, especially for migratory birds, pollinators, and small mammals utilizing the Lower Arroyo corridor.

With implementation of biological mitigation measures including pre-construction nesting bird surveys, tree replacement consistent with City policy, bat protection, and biological monitoring the Project would complement regional water-management and restoration projects by enhancing habitat continuity and ecological function along the Arroyo Seco. Therefore, cumulative impacts to biological resources would be less than significant.

3.3.8 MITIGATION MEASURES

MM BIO-1 **Biological Monitoring.** Prior to initiation of Project construction activities, a qualified Biologist shall ensure the limits of construction are clearly marked in the field in the vicinity of natural resources to avoid impacts to special status natural resources being protected in place during construction. Field marking shall include 4-foot high, orange, construction safety fencing (snow fencing) staked at sufficient intervals to prevent failure. Safety fencing shall be maintained throughout the construction phase by the Contractor and replaced or moved as needed. The biologist shall monitor work activities on the first day of construction, during all vegetation removal, and on an as-needed basis thereafter.

MM BIO-2 **Trees.** All trees to be preserved on-site during the construction process shall have the following measures implemented:

- Prior to initiation of construction activities, protective fencing shall be placed around the critical root zone (five feet outside the outer canopy) of all trees that are in the Project construction area and are intended to remain in place. No ground disturbance or storage of construction materials should occur within the critical root zone during construction.
- A Certified Arborist shall be retained to monitor construction activities of any ground disturbance planned within or adjacent to the critical root zone for any tree to be preserved during construction.

MM BIO-3 **Nesting Birds/Raptors.** The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and *California Fish and Game Code*. To avoid impacts on active nests for common and special status birds and raptors, no vegetation removal or ground-disturbing activities shall occur during avian breeding season which generally runs from February 1 through September 15 (as early as January 1 for some raptors). The applicant shall schedule vegetation clearing during the non-breeding season (i.e., September 16 to December 31) to the extent feasible. If Project timing requires that vegetation clearing occur between February 1 and September 15, the applicant or its designee shall retain a qualified Biologist to conduct a pre-construction survey for nesting birds and raptors. The pre-construction survey shall be conducted by a qualified Biologist within three days prior to vegetation clearing. The pre-construction nesting bird survey area shall include the Project impact area (i.e., disturbance footprint) plus a 250-foot buffer to search for nesting birds and a 500-foot buffer to search for nesting raptors. If no active nests are found, no further mitigation would be required.

If an active nest is located in the pre-construction nesting bird survey area, the Biologist shall delineate an appropriate buffer to protect the nest based on the sensitivity of the species. A 300-foot no disturbance buffer shall be used around each active bird nest. A protective buffer of 500 feet shall be used to protect nesting raptors. A Biologist may make adjustments to the buffer size based on site topography, existing disturbance, sensitivity of the individuals (established by observing the individuals at the nest), and the type of construction activity. Personnel working on the Project, including all contractors working on site, shall be instructed on the presence of nesting birds, area sensitivity, and adherence to no-disturbance buffers. No construction activities shall be allowed in the designated buffer until the Biologist determines that nesting activity has ended. Construction may proceed within the buffer once the Biologist determines that nesting activity has ceased (i.e., fledglings have left the nest or the nest has failed). The designated buffer will be clearly marked in the field and will be mapped as Environmentally Sensitive Areas (ESAs) on construction plans.

Prior to the initiation of construction activities, an email summary of the results shall be submitted to the City of Pasadena with a map of any active nests found and their designated buffers. Construction shall be allowed to proceed if appropriate buffer distances are employed for all active nests. The Biologist shall then prepare a formal Letter Report describing methods used, results of the survey, recommended buffers, and/or justification for buffer reductions. The Letter Report shall be submitted to the City of Pasadena within one week of completion of the survey. If an active nest is observed during the survey, the Letter Report shall include a map showing the designated protective buffer.

MM BIO-4 **Bats.** A two-step tree removal process shall be implemented to prevent bat mortality. Prior to tree removal, a qualified biologist shall conduct a pre-construction bat habitat assessment. If the tree potentially supports roosting bats, at the direction of the biologist, some level of disturbance (e.g., trimming of lower branches of trees) shall be applied three days prior to removal to allow bats to escape. The trees shall be removed on day three (i.e., there shall be no less or more than two nights between initial disturbance and the tree removal). On each of the three days of the tree removal process, the tree to be removed will be visually inspected by a qualified biologist to confirm no bats are roosting immediately prior to removal.

3.3.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The direct and indirect impacts on Biological Resources that may result from implementation of the Project would be mitigated to a less than significant level with implementation of the mitigation measures described above. Specific strategies to mitigate each impact to a level that is less than significant are included. Therefore, Project impacts are considered less than significant after mitigation.

3.3.10 REFERENCES

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3.4 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.4.1 METHODOLOGY

The information and analysis provided in this section are based upon the cultural and archaeological resources records search and literature review conducted by the South-Central Coastal Information Center (SCCIC), dated January 18, 2022; a paleontological resources records search conducted by the Natural History Museum of Los Angeles County (LACNHM), dated November 24, 2021; and the Sacred Lands File (SLF) search conducted by the Native American Heritage Commission (NAHC), dated January 12, 2022. The results of the records searches and literature reviews are presented below, and the supporting documentation is provided as Appendix D, of this Draft Environmental Impact Report (EIR). Section 3.10, Tribal Cultural Resources, provides further information regarding the Native American consultation conducted pursuant to Assembly Bill (AB) 52.

3.4.2 EXISTING CONDITIONS

Archaeological and Historical Resources

South-Central Coastal Information Center Records Search

A literature review of documents on file at the SCCIC at California State University, Fullerton was completed on January 18, 2022. The results of the records search identified 22 previous studies that have been conducted within a half-mile of the Project Site, which includes 7 previous studies (LA-06334, LA-06385, LA-08252, LA-08928, LA-10541, LA-11231, LA-11529) covering the Project Site. These studies are described in more detail in Table 3.4-1, Cultural Resource Studies Including the Project sites. In general, prior studies within a half-mile of the Project sites consist of archaeological field studies and literature reviews, management/planning, architectural and historical evaluation, cultural resources mitigation monitoring and other research conducted between 1986 and 2009.

TABLE 3.4-1
CULTURAL RESOURCE STUDIES INCLUDING THE PROJECT SITES

Report No.	Affiliation	Year	Author	Title
LA-06334	Greenwood and Associates	2002	Kinkella, Andrew	Below the Basketball Court: Burial Recovery at Arroyo Seco Park
LA-06385	Historic Resources Group	2001	McAvoy, Christy J.	Section 106 Review for 5568 Via Marison Avenue Arroyo Seco Park Historic District Los Angeles, California
LA-08252	Caltrans	1986	Snyder, John W., Mikesell, Stephen, and Pierzinski	Request for Determination of Eligibility for Inclusion in the National Register of Historic Places/Historic Bridges in California: Concrete Arch, Suspension, Steel Girder and Steel Arch
LA-08928	McKenna et al.	2007	McKenna, Jeanette A.	A Phase I (CEQA) and Class III (NEPA) Cultural Resources Investigation for the Lower Arroyo Seco Trail and Trailhead Improvements Project site in the City of Pasadena, Los Angeles County, California
LA-10541	Dolan, Christy and Monica Strauss	2005	EDAW, Inc.	Finding of Effect for the Proposed Arroyo Seco Bike Path, Los Angeles County, California
LA-11231	Meiser, M.K.	2009	EDAW, Inc.	Historic American Engineering Record Arroyo Seco Flood Control Channel, Los Angeles County, California
LA-11529	Castanon, David	2008	Department of the Army	Arroyo Seco Channel Project in the cities of Los Angeles and Pasadena, Los Angeles County, California
Source: SCCIC 2022				

The SCCIC records searches also identified one previously recorded archaeological resource (as opposed to study) within a half-mile of the Project sites (see Table 3.4-2, Previously Recorded Cultural Resources Within a Half-Mile of the Project sites, below). The archaeological resource, CA-LAN-003057, is a precontact site (i.e., prior to the arrival of Europeans) and documented as a lithic scatter (remnants of stone tool production) site with an ancestral Gabrielino/Tongva cemetery. No archaeological resources were identified within the Project sites.

Additionally, three non-archaeological resources (P-19-186859, P-19-189325, P-19-190509) were identified within and near the Project sites. The non-archaeological resources include one historic-era built environment site and two historic-era districts. The historic-era built environment resource is the Arroyo Seco Flood Control Channel. The historic-era districts are: 1) the Arroyo Seco Park District and 2) the Pasadena Arroyo Parks and Recreation District. The three non-archaeological cultural resources identified within and near the Project sites are briefly discussed further below in the impacts analysis.

TABLE 3.4-2
PREVIOUSLY RECORDED CULTURAL RESOURCES
WITHIN A HALF-MILE OF THE PROJECT SITES

Primary Number	Trinomial	Resource Description	Recording of Events	Proximity to Project Sites
P-19-003057	CA-LAN-003057	Prehistoric: Arroyo Seco/San Pascual Site	John M. Foster, Greenwood & Associates (2002)	Outside
P-19-186859	-	Historic: Arroyo Seco Flood Control Channel	EDAW (2003)	Outside (Adjacent)
P-19-189325	-	Historic: Arroyo Seco Park District	McEvoy (2000)	Within (San Rafael site only)
P-19-190509	-	Historic: Pasadena Arroyo Parks and Recreation District	Pasadena Heritage (2007)	Within (San Rafael site only)
Source: SCCIC 2022				

Native American Heritage Commission

A Sacred Lands File (SLF) search was requested from the Native American Heritage Commission (NAHC) on November 23, 2021. On January 12, 2022, the NAHC replied that the results of the SLF check conducted through the NAHC are positive for sacred land within the vicinity of the Project sites, and to contact the Gabrieleno Band of Mission Indians – Kizh Nation. Additionally, the NAHC provided a list of nine Native American tribes or individuals to contact for further information.

Paleontological Resources

Natural History Museum of Los Angeles County

A paleontological records search was requested from the Natural History Museum of Los Angeles County (LACNHM), Vertebrate Paleontology Department and results were received on November 24, 2021. The results indicate that there are no fossil localities that lie directly within the proposed Project sites; however, there are fossil localities nearby from the same sedimentary deposits that occur in the proposed Project sites, either at the surface or at depth. The following provides the closest known localities in the collection of the LACNHM. Fossil fish were recovered from the Topanga Formation, including herrings (*Ganolytes*), perch-like fish (*Thyrsocles*), ray-finned fish (*Etringus*), mantis shrimp (*Squillidae*), and other unspecified fish. Unknown or unrecorded (Pleistocene) fossils in the region have produced specimens of mammoth (*Mammuthus*), Bison (*Bison*), sabertooth cat (*Smilodon*), deer (*Odocoileus*), turkey (*Meleagris*), mastodon (*Mammut*), and horse (*Equus*). Fossils from these deposits were collected between 8 and 14 feet below ground surface (bgs).

3.4.3 RELEVANT PROGRAMS AND REGULATIONS

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, as amended, promotes the preservation, enhancement, and productive use of historic resources. The NHPA established the Advisory Council on Historic Preservation (ACHP) and provided procedures for the ACHP and federal agencies in promoting historic preservation. Properties of traditional religious and cultural importance to Native Americans are protected under Section 101(d)(6)(A) of the NHPA.

Section 106 of the NHPA requires that federal actions and the use of federal funds take into account their potential effects on historic properties or those listed in or eligible for listing in the National Register of Historic Places (NRHP, National Register). Under Section 106, the significance of any adversely affected cultural resource is assessed, and mitigation measures are proposed to reduce the impacts to an acceptable level.

National Register of Historic Places

The NHPA of 1966 established the National Register as "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (NPS 1990). The National Register recognizes a broad range of historical and cultural resources that are significant at the national, state, and local levels and can include districts, buildings, structures, objects, precontact archaeological sites, historic-period archaeological sites, traditional cultural properties, and cultural landscapes. Within the National Register, approximately 2,500 (3 percent) of the more than 90,000 districts, buildings, structures, objects, and sites are recognized as National Historic Landmarks or National Historic Landmark Districts as possessing exceptional national significance in American history and culture. (NPS 1990)

Whereas individual historic properties derive their significance from one or more of the criteria discussed in the subsequent section, a historic district derives its importance from being a unified entity, even though it is often composed of a variety of resources. With a historic district, the historic resource is the district itself. The identity of a district results from the interrelationship of its resources, which can be an arrangement of historically or functionally related properties. A district is defined as a geographic area of land containing a significant concentration of buildings, sites, structures, or objects united by historic events, architecture, aesthetic, character, and/or physical development. A district's significance and historic integrity determine its boundaries. (NPS 1990)

A resource that is listed in or eligible for listing in the National Register is considered "historic property" under Section 106 of the NHPA. (NPS 1990)

Criteria

To be eligible for listing in the National Register, a resource must be at least 50 years of age (NPS 1990), unless it is of exceptional importance as defined in Title 36 CFR, Part 60, Section 60.4(g). In addition, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Four criteria for evaluation have been established to determine the significance of a resource:

A. Are associated with events that have made a significant contribution to the broad patterns of our history;

B. Are associated with the lives of persons significant in our past;

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in prehistory or history. (NPS 1990)

Historic Districts

The National Park Service defines a historic district as "a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development". A district must be "a definable geographic area that can be distinguished from surrounding properties by changes such as density, scale, type, age, style of sites, buildings, structures, and objects, or by documented differences in patterns of historic development or associations". Boundaries must be based upon a shared relationship among the properties constituting the district. (NPS 1990)

Within a historic district, a building, structure, or feature is considered a contributor if it was constructed during the period of significance, contributes to the property's historic significance and character, and retains sufficient integrity to convey that significance. Non-contributors are those buildings that were constructed outside of the period of significance, do not contribute to the property's historic significance and character, and/or do not retain sufficient integrity. (NPS 1990)

Period of Significance

According to the National Park Service, in addition to the above criteria, significance is defined by the area of history in which the property made important contributions and by the period of time when these contributions were made. This is referred to as the period of significance (NPS 1990). The period of significance is the length of time when a property was associated with important events, activities or persons, or attained the characteristics which qualify it for listing. The period of significance usually begins with the date when significant activities or events began giving the property its historic significance; this is often a date of construction. The period of significance can be as brief as a single year; many, however, span many years and consist of beginning and closing dates. Identification and definition of the

period of significance is based on "specific events directly related to the significance of the property," for example, the date of construction, years of ownership, or length of operation as a particular entity. (NPS 1990)

Integrity

In addition to meeting one or more of the criteria of significance, a property must have integrity, which is defined as "the ability of a property to convey its significance" (NPS 1990). The National Register recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. In general, the National Register has a higher integrity threshold than State or local registers. (NPS 1990) The National Register recognizes seven aspects or qualities that comprise integrity: location, design, setting, materials, workmanship, feeling, and association. These qualities are defined as follows:

- *Location* is the place where the historic property was constructed or the place where the historic event took place.
- *Design* is the combination of elements that create the form, plan, space, structure, and style of a property.
- *Setting* is the physical environment of a historic property.
- *Materials* are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- *Workmanship* is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- *Feeling* is a property's expression of the aesthetic or historic sense of a particular period of time.
- *Association* is the direct link between an important historic event or person and a historic property. (NPS 1990)

Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Weeks and Grimmer 1995) (both referred to as the SOI Standards) were codified in 1995 (36 Code of Federal Regulations [CFR] Part 68) to establish professional standards that apply to all proposed development grant-in-aid projects assisted through the National Historic Preservation Fund and to serve as general guidance for work on any other

historic building. The SOI Standards apply to historic properties of all periods, styles, types, materials, and sizes. The ten Standards for Rehabilitation are:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

State

California Environmental Quality Act

The Project is subject to compliance with CEQA, as amended. Specifically, under Public Resources Code Section 201084.1, a "project that may cause a substantial adverse change in the significance of an historical resources is a project that may have a significant effect on the environment." The first step in the CEQA compliance evaluation process in terms of historical resources is to identify any that may be impacted by the project.

"Historical resource" is a term with a defined statutory meaning (Public Resources Code Section 21084.1). The determination of significant impacts on historical and archaeological resources is described in Sections 15064.5(a) and 15064.5(b) of the State CEQA Guidelines. Section 15064.5(a) states that historical resources include the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the [CRHR] (Public Resources Code Section 5024.1).
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the [CRHR] (Public Resources Code Section 5024.1).
4. The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1[k] of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1[g] of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Section 5020.1(j) or 5024.1.

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance based on established criteria. CEQA states that if a project will have a significant impact on important cultural resources, deemed "historically significant," then project alternatives and mitigation measures must be considered.

California Register of Historical Resources

The CRHR established a list of properties that are to be protected from substantial adverse change (Public Resources Code Section 5024.1). A historical resource may be listed in the CRHR if it exhibits significance under one or more of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in California's past.

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
4. It has yielded or is likely to yield information important in prehistory or history.

In addition to exhibiting significance under one or more of the above criteria, a resource must also retain sufficient historical integrity to convey its significance. Historical integrity is the physical aspects of a resource related to its historic character. Integrity is evaluated through seven aspects: location, design, setting, materials, workmanship, feeling, and association.

The CRHR includes properties that are listed or have been formally determined to be eligible for listing in the NRHP, State Historical Landmarks, and eligible Points of Historical Interest. Other resources require nomination for inclusion in the CRHR. These may include:

- Resources contributing to the significance of a local historic district;
- Individual historical resources;
- Historical resources identified in historic resource surveys conducted in accordance with State Historic Preservation Office procedures;
- Historic resources or districts designated under a local ordinance consistent with Commission procedures; and
- Local landmarks or historic properties designated under local ordinance.

California Historical Building Code

The *California Historical Building Code* (CHBC) (*California Code of Regulations* (CCR), Title 24, Part 8) is intended to save California's architectural heritage by recognizing the unique construction issues inherent in maintaining and adaptively reusing historic buildings. The CHBC's standards and regulations facilitate the rehabilitation or change of occupancy so as to preserve their original or restored elements and features; to encourage energy conservation and a cost-effective approach to preservation; and to provide for reasonable safety from fire, seismic forces, or other hazards for occupants and users of such buildings, structures, and properties and to provide reasonable availability and usability by the physically disabled.

The 2025 triennial edition of the CHBC, effective January 1, 2026, is the currently adopted code. The 2025 CHBC has been adopted by reference by the cities of Pasadena (Section 14.04.010 of the *Pasadena Municipal Code* [PMC]), South Pasadena (Section 9.1 of the *South Pasadena Municipal Code* [SPMC]), and Los Angeles (Chapter IX, Article 1.2 of the Los Angeles Municipal Code [LAMC]).

California Health and Safety Code (Sections 7050.5, 7051, and 7054)

Sections 7050.5, 7051, and 7054 of the *California Health and Safety Code* (HSC) collectively address the illegality of interference with human burial remains (except as allowed under applicable sections of the *California Public Resources Code*). These sections also address the

disposition of Native American burials in archaeological sites and protect such remains from disturbance, vandalism, or inadvertent destruction. Procedures to be implemented are established for (1) the discovery of Native American skeletal remains during construction of a project; (2) the treatment of the remains prior to, during, and after evaluation; and (3) reburial.

Section 7050.5 of the California Health and Safety Code specifically provides for the disposition of accidentally discovered human remains. Section 7050.5 states that if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

California Public Resources Code (Section 5097.98)

Section 5097.98 of the *California Public Resources Code* (PRC) states that, if human remains are determined by the Coroner to be of Native American origin, the Coroner must notify the NAHC within 24 hours. When the NAHC receives this notification from a County Coroner, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land or his or her authorized representative, inspect the site of the remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. This regulation also requires that, upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations and all reasonable options regarding their preferences for treatment. This section of the PRC has been incorporated into Section 15064.5(e) of the State CEQA Guidelines).

Mills Act

The Mills Act (Sections 50280 et. seq. of the California Government Code [CGC]) grants participating local agencies (cities and counties) the authority to contract with the owners of qualified historical properties, pursuant to the CHBC who actively participate in the rehabilitation, restoration, and/or maintenance of their historic property while receiving property tax relief. While State law enacted the Mills Act, the program is administered by local governments, which establish their own criteria and determine how many contracts to allow in their jurisdiction.

Local

City of Pasadena

City of Pasadena Historic Preservation Ordinance

The City of Pasadena (Pasadena) has established an historic preservation program to promote "the identification, evaluation, rehabilitation, adaptive use, and restoration of historic structures." The criteria for the designation of historic monuments, landmarks, historic signs, landmark trees, or landmark districts are applied "according to applicable National Register of Historic Places Bulletins for evaluating historic properties". These criteria are excerpted, below, from Section 17.62.040 of the PMC.

Historic Monuments

A historic monument includes:

- all historic resources previously designated as *historic treasures* before the adoption of Zoning Code Chapter 17.62 in 2002,
- historic resources listed in the National Register at the statewide or federal level of significance (including National Historic Landmarks), and
- any historic resource that is significant at a regional, state, or federal level and is an exemplary representation of a particular type of historic resource, and that meets one or more of the following criteria:
    A. It is associated with events that have made a significant contribution to the broad patterns of the history of the region, State, or nation.
    B. It is associated with the lives of persons who are significant in the history of the region, State, or nation.
    C. It is exceptional in the embodiment of the distinctive characteristics of a historic resource property type, period, architectural style, or method of construction, or that is an exceptional representation of the work of an architect, designer, engineer, or builder whose work is significant to the region, State, or nation, or that possesses high artistic values that are of regional, State-wide, or national significance.
    D. It has yielded, or may be likely to yield, information important in prehistory or history of the region, State, or nation.

A historic monument designation may include significant public or semi-public interior spaces and features.

Landmarks

A landmark shall include all properties previously designated a landmarks before the adoption of Zoning Code Chapter 17.62 in 2002, as well as any historic resource that is significant at the local level and meets one or more of the criteria listed below. A landmark

may be the best example in Pasadena of a particular type of historic resource, or it may be one of several resources in Pasadena that share architectural characteristics representing a specific resource type. A landmark shall meet one or more of the following criteria:

A. It is associated with events that have made a significant contribution to the broad patterns of the history of Pasadena.

B. It is associated with the lives of persons who are significant in the history of Pasadena.

C. It embodies the distinctive characteristics of a type, architectural style, period, or method of construction, or represents the work of an architect, designer, engineer, or builder whose work is of significance to Pasadena or possesses artistic values of significance to Pasadena.

D. It has yielded, or may be likely to yield, information important locally in prehistory or history.

Historic Signs

A historic sign shall include all signs in the sign inventory as of the date of adoption of the Zoning Code and any sign subsequently designated historically significant by the Historic Preservation Commission that possesses high artistic values. A historic sign shall meet one or more or the following criteria:

A. The sign is exemplary of technology, craftsmanship or design of the period when it was constructed, uses historic sign materials and means of illumination, and is not significantly altered from its historic period. Historic sign materials shall include metal or wood facings, or paint directly on the façade of a building. Historic means of illumination shall include incandescent light fixtures or neon tubing on the exterior of the sign. If the sign has been altered, it must be restorable to its historic function and appearance.

B. The sign is integrated with the architecture of the building.

C. A sign not meeting criteria a or b above may be considered for inclusion in the inventory if it demonstrates extraordinary aesthetic quality, creativity, or innovation.

All other regulations relating to signs shall comply with Chapter 17.48 (Signs).

Landmark Trees

A tree shall qualify to be of historic or cultural significance and of importance to the community if it meets any one of the following criteria:

A. It is one of the largest or oldest trees of the species located in Pasadena;

B. It has historical significance due to an association with a historic event, person, site, street, or structure; or

C. It is a defining landmark or significant outstanding feature of a neighborhood.

Landmark Districts

A landmark district shall include all landmark districts previously designated before adoption of this Chapter and any grouping of contiguous properties that also meet the following criteria:

A. Within its boundaries, a minimum of 60 percent of the properties qualify as contributing; and

B. The grouping represents a significant and distinguishable entity of Citywide importance and one or more of a defined historic, cultural, development and/or architectural context(s) (e.g., 1991 Citywide historic context, as amended, historic context prepared in an intensive level survey or historic context prepared specifically for the nominated landmark district).

When considering applications to designate a landmark district, the Historic Preservation Commission shall use the National Register of Historic Places Bulletin #21: "Defining Boundaries for National Register Properties."

City of South Pasadena

City of South Pasadena General Plan

Our Creative Community Element

The South Pasadena General Plan includes an Our Creative Community Element, which aims to nurture and promote South Pasadena arts and cultural activities, organizations and events, and to give them greater visibility and prominence within the region. This element also includes policies and actions related to the preservation of historic and cultural resources in South Pasadena. (City of South Pasadena 2023)

City of South Pasadena Cultural Heritage Ordinance

The City of South Pasadena's (South Pasadena) Cultural Heritage Ordinance establishes the framework for identifying, designating, and preserving historic resources within South Pasadena. Adopted on July 19, 2017 by Ordinance No. 2315, the ordinance aims to protect South Pasadena's architectural and cultural heritage. Per Section, 2.63(b) of the SPMC, the criteria and standards for the designation of landmarks and historic districts shall include any or all of the following:

1. Its character, interest or value as a part of the heritage of the community;
2. Its location as a site of a significant historic event;
3. Its identification (such as the residence, ownership, or place of occupation, etc.) with a person, persons or groups who significantly contributed to the culture and development of South Pasadena, state or United States;
4. Its exemplification of a particular architectural style of an era of history of South Pasadena;

5. Its exemplification of the best remaining architectural type in a neighborhood;
6. Its identification as the work of a person or persons whose work has influenced the heritage of South Pasadena, the state or the United States;
7. Its embodiment of elements demonstrating outstanding attention to architectural design, engineering, detail, design, materials, or craftsmanship;
8. It is either a part of or related to a square, park or other distinctive area which should be developed or preserved according to a plan based on a historic cultural or architectural motif;
9. Its unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood;
10. Its potential for yielding information of archaeological interest; or
11. In designating a historic district, its significance as a distinguishable neighborhood or area whose components may lack individual distinction.

City of Los Angeles

City of Los Angeles General Plan

Conservation Element

The Conservation Element of the City of Los Angeles General Plan aims to protect, preserve, and enhance natural resources in Los Angeles, including archaeological and paleontological resources, and cultural and historical resources. The element contains objectives, policies, and programs related to cultural and paleontological resources. (City of Los Angeles 2001)

City of Los Angeles Cultural Heritage Ordinance

The City of Los Angeles' (Los Angeles) Cultural Heritage Ordinance (Ordinance No. 185472, first adopted in 1962 and amended most recently in 2018, establishes the legal framework for identifying, designating, and protecting Historic-Cultural Monuments (HCMs). HCMs are defined as "any site (including specific trees or other plant life located on the site, building or structure of particular historic or cultural significance to the City of Los Angeles" (LAMC Section 22.171.7). The ordinance is administered by the City of Los Angeles' Cultural Heritage Commission and outlines procedures for designation and preservation. Per Section 22.171.7 of the LACNHM, a proposed HCM may be designated if it meets at least one of the following criteria:

1. It is identified with important events of national, state, or local history, or exemplifies significant contributions to the broad cultural, economic or social history of the nation, state, city or community;
2. Is associated with the lives of historic personages important to national, state, city, or local history; or

3. Embodies the distinctive characteristics of a style, type, period, or method of construction; or represents a notable work of a master designer, builder, or architect whose individual genius influenced the designer's, builder's, or architect's age.

3.4.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. The project would result in a significant adverse cultural resource impact if it would:

Threshold 3.4a: Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5;

Threshold 3.4b: Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5; and/or

Threshold 3.4c: Disturb any human remains, including those interred outside of dedicated cemeteries.

Threshold 3.4d: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

3.4.5 REGULATORY REQUIREMENTS

RR CR-1 If human remains are found during ground-disturbing activities, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains will occur, in accordance with Section 7050.5 of the California Health and Safety Code. The County Coroner will be notified of the discovery immediately. If the County Coroner determines that the remains are or believed to be Native American, s/he will notify the NAHC within 24 hours of the discovery. In accordance with Section 5097.98 of the California Public Resources Code, the NAHC must immediately notify those persons it believes to be the most likely descended from the deceased Native American (i.e., the most likely descendant). The descendants will complete their inspection within 48 hours of being granted access to the site by the City of Pasadena. Pasadena will discuss and confer with the most likely descendants regarding all reasonable options regarding the descendants' preferences for treatment of the human remains prior to disturbing the site by further construction activity.

3.4.6 ENVIRONMENTAL IMPACTS

Threshold 3.4a: Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

Less Than Significant Impact. Section 15064.5 of the CEQA Guidelines defines a historic resource as a resource that is (1) listed in or determined to be eligible for listing in the California Register of Historical Resources (California Register); (2) included in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code; or (3) identified as significant in an historical resources survey meeting the criteria of Section 5024.1(g) of the Public Resources Code. In addition, any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant may be considered a historic resource, if determination is supported by substantial evidence considering the whole record. Properties listed in or formally determined eligible for listing in the NRHP are automatically included in the California Register.

As discussed below, historic resources, including historic districts, are present within and near the Project site. However, the Project has been designed to avoid demolition, relocation, or material alteration of contributing resources and to preserve the integrity of character-defining features. Accordingly, implementation of the Project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5, and impacts would be less than significant.

P-19-186859

Cultural resource P-19-186859 is the Arroyo Seco Flood Control Channel. The Channel is a 10-mile-long masonry-lined open channel with two soft-bottom natural segments. This Channel extends from the base of the Devil's Gate Dam to its confluence at the Los Angeles River. The channelization of the Arroyo Seco was completed in 1947. This Channel was recommended eligible for the NRHP by M. Strauss in 2003 under Criterion A. The Project would not directly or indirectly impact the Arroyo Seco Flood Control Channel. The Arroyo Seco Flood Control Channel flows adjacent to both the San Rafael and San Pascual sites.

P-19-189325

Cultural resource P-19-189325 (Arroyo Seco Park Historic District) has been determined eligible for listing in the NRHP under Criteria A and C at the local level of significance. The District's period of significance (1927–1940) reflects its association with Los Angeles' efforts to develop a municipal park and parkway system along the Arroyo Seco, as well as its embodiment of Work Projects Administration (WPA)–era landscape architecture and public works design. The District is historically significant for its role in Progressive-Era civic planning, New Deal–funded public improvements, and the evolution of recreational and landscape planning in Los Angeles. Although the District is not formally listed in the NRHP, its recognized eligibility qualifies it as a historical resource under CEQA Guidelines Section 15064.5(a)(1). While the original 1931 park plan and District boundaries have been altered over time due to subsequent infrastructure development and landscape modifications, the

District remains significant as a testament to early twentieth-century municipal park planning and WPA-era public works.

The Pasadena Freeway is not a contributing element of the Arroyo Seco Park Historic District. It was previously determined to be eligible for listing in the NRHP and is explicitly excluded from the District boundaries, as it lies outside the District's period of significance. References to the freeway in historical documentation provide context regarding the evolution of the Arroyo Seco landscape but do not identify it as a contributing resource within the District.

Contributing elements to the District include WPA-era buildings, recreational facilities, circulation features, and mature landscape components that convey its historical significance. These include the Bowling Clubhouse (1938), Comfort Station (1932), Watchman's House (1932), Service Buildings, Sheds, and Yard (1932), five tennis courts (1932), paved walks and drives, and mature Firehorn, California pepper, California native sycamore, and eucalyptus trees. These features reflect the architectural, recreational, and landscape character of the District's period of significance and represent key physical expressions of its historic identity.

Only the San Rafael site lies within the boundaries of the Arroyo Seco Park Historic District; the San Pascual site is located outside the District and would not affect District resources. The Project does not propose demolition, alteration, relocation, or physical modification of any identified contributing buildings, structures, or WPA-era features within the District.

Under CEQA Guidelines Section 15064.5(b), a substantial adverse change in the significance of a historical resource would occur if a project demolished, materially altered, relocated, or otherwise impaired the integrity of a resource in a manner that diminishes its historical value. The proposed Project would not result in such a change. No contributing buildings, structures, or WPA-era features would be removed or modified. In addition, none of the mature tree species identified as contributing landscape elements (Firehorn, California pepper, California native sycamore, eucalyptus) would be removed. The limited tree removals proposed at the San Rafael site consist of blue elderberry, which are not identified as character-defining elements of the District.

The portion of Arroyo Park within the Project area does not contain intact WPA-era formal landscape design features, and Project improvements would occur in previously modified or informal park areas. Proposed circulation upgrades would retain and enhance existing equestrian and pedestrian trails, thereby preserving historic patterns of movement and recreational use. All improvements would be implemented in conformance with Arroyo Seco Design Guidelines, and new landscaping would establish a naturalized, park-appropriate visual condition consistent with the District's historic character as a civic open-space resource.

The Project would not diminish the District's historic character and would instead reinforce long-standing themes of public recreation, landscape stewardship, and environmental enhancement that underlie its significance. The proposed constructed wetlands and green infrastructure elements are consistent with the Arroyo Seco's historic role as a civic landscape shaped by public works investment, echoing WPA-era objectives to improve

environmental quality, expand public amenities, and enhance parklands. The Project would increase native vegetation, expand educational and interpretive opportunities, and support continued public enjoyment of the park, consistent with the District's historical social and recreational values.

Accordingly, because the Project avoids contributing historical resources; does not materially alter character-defining feature; maintains historic circulation patterns; and preserves the integrity of the Arroyo Seco Park Historic District, it would not cause a substantial adverse change in the significance of a historical resource under CEQA Guidelines Section 15064.5. Impacts would be less than significant, and no mitigation is required.

P-19-186859

Cultural resource P-19-190509, the Pasadena Arroyo Parks and Recreation District (District), is listed on the NRHP and is recognized as a historic landscape district significant under NRHP Criteria A and C for its association with early park and recreation planning and for its embodiment of early twentieth-century landscape design and planning principles. The District's period of significance is 1909–1939, and it derives its importance from its collection of contributing buildings, structures, circulation systems, and designed landscape features that together illustrate the historical development of recreational, and park uses in the Arroyo Seco corridor. Of the 81 recorded resources within the District, 24 are classified as contributing, including major civic and recreational features such as bridges, park structures, and elements of the historic circulation system.

The San Rafael Project site lies within the geographic boundary of the District, whereas the San Pascual site lies outside the District boundary and is not associated with any listed historic district or individually eligible historic resource. No contributing buildings or structures occur within either site. The closest contributing resource to the Project area is the San Rafael Bridge, located approximately 70 feet north of the San Rafael site. This bridge would not be physically modified, visually impaired, or used for construction access or staging, and therefore the Project would not affect its integrity or significance.

Within the San Rafael site, the only character-defining feature associated with the District is a segment of the Arroyo Seco Trail, which functions as part of the District's historic circulation network. This trail segment has not been identified as an individually eligible historic resource under NRHP or CRHR criteria, and its significance is derived solely from its role as a contributing element within the broader historic district rather than from independent architectural, associative, or design value. The trail's historical importance lies in its alignment, continuity, and circulation function, which contributes to the District's overall integrity of design, setting, and feeling.

The Project proposes improvements to this trail segment that include retention of the existing alignment, continued public access, widening to enhance safety and accessibility, and surface improvements using stabilized decomposed granite, a material compatible with historic trail character and equestrian use. These modifications would not alter the trail's historic routing, interrupt circulation, introduce incompatible materials, or remove historic fabric. Improvements would be implemented in conformance with the Arroyo Seco Design

Guidelines, which are intended to maintain the visual and functional continuity of historic landscape features. As a result, the Project would preserve the trail's historic function and contribution to the District's circulation system, and would not impair the integrity of location, design, setting, materials, workmanship, feeling, or association that convey the District's significance.

Because the trail segment contributes to significance only as a component of the larger historic district, the appropriate CEQA inquiry is whether Project activities would result in a substantial adverse change in the significance of the District as a whole. The Project would not remove or alter any contributing structures, would not fragment or sever the historic circulation network, and would not diminish the District's overall visual character or spatial organization. Accordingly, the Project would not materially impair the historical qualities that support the District's eligibility or listing and would not cause a substantial adverse change in the significance of the Pasadena Arroyo Parks and Recreation District.

Three non-archaeological resources are located within or near the Project sites: P-19-186859 (Arroyo Seco Flood Control Channel), P-19-189325 (Arroyo Seco Park District), and P-19-190509 (Pasadena Arroyo Parks and Recreation District). The San Rafael site is located within both historic districts, while the San Pascual site is not located within any listed historic resource boundary. The Arroyo Seco Flood Control Channel, although historically notable, is not a contributing resource to the Pasadena Arroyo Parks and Recreation District in the context of parks and recreation history, and Project activities would not modify or impair this feature.

A stone hitching post located in the northern portion of the San Pascual site was reviewed due to community interest. Based on historical aerial imagery and archival research, the hitching post does not meet NRHP or CRHR eligibility criteria, appears to date to the early twenty-first century, and lacks documented historical associations. As such, it is not considered a significant historical resource under CEQA Section 15064.5. Nonetheless, in recognition of its perceived local importance, the Project has been designed to avoid physical disturbance of the hitching post, and Mitigation Measure CUL-1 requires construction limits to be clearly marked, and protective fencing installed to prevent inadvertent damage. This measure is included as a voluntary protection, not because a significant impact has been identified.

Claims that the Project sites lie within a historically protected equestrian corridor were evaluated through review of regional and municipal planning documents, including the Los Angeles County General Plan, West and East San Gabriel Valley Area Plans, and the General Plans of Pasadena and South Pasadena. These documents do not identify the Project sites as part of a designated historic equestrian corridor or as containing protected historic equestrian infrastructure. While the Arroyo Seco corridor has long supported recreational and equestrian use, the trails within the Project sites were not determined to be individually eligible historic resources, and the Project would retain shared pedestrian and equestrian use on trail segments using surface treatments compatible with horse traffic.

In summary, the Project would not result in demolition, relocation, material alteration, or impairment of any historic resource; would not adversely affect the integrity or significance

of the Pasadena Arroyo Parks and Recreation District; and would not cause a substantial adverse change in the significance of any historical resource pursuant to CEQA Guidelines Section 15064.5. Therefore, impacts to historical resources would be less than significant, and no mitigation is required beyond voluntary protective measures already incorporated into Project design.

Threshold 3.4b: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Less than Significant with Mitigation. As discussed above, no known archaeological resources were identified within the Project sites. A records search conducted at the SCCIC and a review of available literature identified one previously recorded archaeological resource within one-half mile of the Project sites, but outside the Project boundaries. Cultural resource P-19-003057, known as the Arroyo Seco/San Pascual site, is a multicomponent archaeological site containing both precontact and historic-era elements.

The precontact component of P-19-003057 consists primarily of lithic scatters associated with stone tool manufacture. Ethnographic information provided by members of the local Native American community identifies this portion of the Arroyo Seco as "MKat," meaning "rocky," and indicates that the area was historically used by Indigenous Californians as a lithic quarrying location (McKenna et al. 2007:28). Human burials dating to the precontact period have also been documented at this site. The historic-ea component is associated with Rancho San Pascual and Mission San Gabriel. Because this archaeological resource lies outside the Project boundaries, implementation of the Project would not directly or indirectly impact this known archaeological site.

Although no known archaeological resources are present within the Project sites, ground-disturbing activities associated with the Project could encounter previously unknown or buried archaeological resources, particularly during excavation in native (i.e., previously undisturbed) soils. The inadvertent discovery of intact archaeological resources during construction could result in a significant impact under CEQA Guidelines Section 15064.5.

To address this potential impact, MM CUL-2 would be implemented. MM CUL-2 requires archaeological monitoring during ground-disturbing activities in native soils and establishes procedures for the evaluation, treatment, and documentation of any archaeological resources encountered during construction, including consultation with appropriate Native American representatives where applicable. With implementation of MM CUL-2, potential impacts to previously unknown archaeological resources would be reduced to a less-than-significant level.

Threshold 3.4c: Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant Impact. There are no known human remains on the sites. The Project sites are not part of a formal cemetery and are not known to have been used for burial of historic or prehistoric human remains. Thus, the Project would not impact known human

remains or cemeteries; however, unknown human remains could potentially be buried within the Project sites below the surface. As described in RR CUL-1, if human remains are encountered during Project construction, those remains would require proper treatment, in accordance with applicable laws. Sections 7050.5 through 7055 of the *California Health and Safety Code* describe the general provisions for human remains. Specifically, Section 7050.5 of the *California Health and Safety Code* describes the protocols to be followed if human remains are accidentally discovered during excavation of a site. In addition, the requirements and procedures set forth in Section 5097.98 of the *California Public Resources Code* would be implemented. If human remains are found during excavation, construction activities must stop in the vicinity of the find and in any area that is reasonably suspected to overlie adjacent remains until the County Coroner has been notified; the remains have been investigated; and appropriate recommendations have been made for the treatment and disposition of the remains. With implementation of RR CUL-1, which details the appropriate actions necessary in the event human remains are encountered in compliance with the *California Health and Safety Code and Public Resources Code*, potential impacts would be less than significant, and no mitigation is required.

Threshold 3.4d: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant with Mitigation. Information on known fossil localities was obtained from the Natural History Museum of Los Angeles County (LACNHM). On November 24, 2021, the LACNHM responded that they do not have any fossil localities that lie directly within the proposed Project sites, either at the surface or at depth (LACNHM 2021, Appendix D).

A paleontological records search was requested from the Natural History Museum of Los Angeles County, Vertebrate Paleontology Department and results were received on November 24, 2021(LACNHM 2021, Appendix D). The results indicate that there are no fossil localities that lie directly within the proposed Project sites; however, there are fossil localities nearby from the same sedimentary deposits that occur in the proposed Project sites, either at the surface or at depth. The following provides the closest known localities in the collections of the LACNHM. Fossil fish were recovered from the Topanga Formation, including herrings (*Ganolytes*), perch-like fish (*Thyrsocles*), ray-finned fish (*Etringus*), mantis shrimp (*Squillidae*), and other unspecified fish. Unknown or unrecorded (Pleistocene) fossils in the region have produced specimens of mammoth (*Mammuthus*), Bison (*Bison*), sabertooth cat (*Smilodon*), deer (*Odocoileus*), turkey (*Meleagris*), mastodon (*Mammut*), and horse (*Equus*). Fossils from these deposits were collected between 8 and 14 feet below ground surface (bgs). Therefore, the Project would not impact known paleontological resources; however, surface sediments at and surrounding the Project sites consist of unrecorded (Pleistocene) to unknown formations (Pleistocene; sand and silty).

Deep excavation that involves disturbance of native soils could result in the disturbance and/or destruction of paleontological resources that may be present in deeper Pleistocene alluvial deposits that underlie the Project sites. Therefore, the Project would implement MM CUL-3 related to paleontological resources at the San Rafael and Pascual sites, which would reduce this impact to a less than significant level. Excavation associated with installation of the water harvester and aboveground storage tank (AST) would be on the

order of one to three feet deep. Therefore, this off-site component would not have a potential to encounter unknown paleontological resources.

3.4.7 CUMULATIVE IMPACTS

Archaeological, historic, and paleontological resources impacts are site-specific with regard to any given resource. Impacts that may be considered cumulative relate to the general loss of cultural resources over time throughout the region. The Project would not cause an adverse change to the significance of a historical resource pursuant to Section 15064.5. MM CUL-1 would be required to ensure protection of the arroyo stone hitching post in the northernmost portion of the San Pascual site, although a significant impact to historic resources associated with this feature has not been identified. The Project, in conjunction with cumulative development, could lead to the accelerated degradation of previously unknown archaeological and/or paleontological resources. However, the Project would comply with MM CUL-2, which requires archaeological monitoring during grading activities, and identifies the required treatment of unanticipated discoveries. Additionally, the Project would comply with MM CUL-3, which requires the City to obtain a qualified paleontologist in the event that paleontological resources are inadvertently unearthed during excavation activities.

The discovery of human remains is also site-specific. Although unlikely to occur, potential impacts associated with human remains would be reduced to a less than significant level with adherence to existing State law (RR CR-1). Therefore, implementation of the Project would not result in significant cumulative impacts associated with historic resources, archaeological resources, paleontological resources, and human remains.

3.4.8 MITIGATION MEASURES

MM CUL-1 Prior to initiation of Project construction activities at the San Pascual site, the Contractor shall ensure the limits of construction around the arroyo stone hitching post are clearly marked in the field, to avoid inadvertent damage to this feature being protected in place during construction. Field marking shall include 4-foot high, orange, construction safety fencing (snow fencing) staked at sufficient intervals to prevent failure. Safety fencing shall be maintained throughout the construction phase by the Contractor and replaced or moved as needed.

MM CUL-2 Prior to the initiation of any earthmoving activity in which native soil is disturbed, the City of Pasadena shall be responsible for retaining a qualified Archaeologist to observe grading activities and to salvage and catalogue archaeological resources, as necessary. The Archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the City of Pasadena or its designee, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of any discovered artifacts as appropriate. If archaeological resources are found to be significant

pursuant to Section 15064.5 of the State CEQA Guidelines, the Archaeologist shall determine appropriate actions, in cooperation with the City of Pasadena or its designee, for exploration and/or recovery. The Archaeologist shall also prepare a report of findings. The report shall include the period of inspection, an analysis of any artifacts found, and the present repository of the artifacts. The Archaeologist shall prepare excavated material to the point of identification and curation. The City of Pasadena or its designee shall pay curatorial fees associated with the cost of curation.

MM CUL-3 Prior to the start of ground-disturbing activities at the San Rafael and San Pascual sites, all construction personnel shall receive a pre-construction worker awareness training conducted by a qualified professional paleontologist. The training shall include information on the types of paleontological resources that may be encountered, the importance of such resources, and the procedures to follow in the event of an inadvertent discovery.

In the event that paleontological resources are inadvertently unearthed during excavation activities at the San Rafael and San Pascual sites, the Contractor shall immediately cease all earth-disturbing activities within a 100-foot radius of the area of discovery and shall notify the City of Pasadena immediately. The Contractor shall retain a qualified professional paleontologist to evaluate the significance of the find and, in consultation with the City of Pasadena, determine an appropriate course of action. If the paleontological resources are determined to be significant, the paleontologist, in consultation with the City of Pasadena, shall identify and implement appropriate measures for evaluation, exploration, and/or salvage. Once the find has been appropriately avoided or mitigated, and clearance is provided by the paleontologist in consultation with the City of Pasadena, construction activities may resume in the area.

3.4.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would not result in potentially significant impacts to known historic resources pursuant to Section 15064.5 of the CEQA Guidelines; thus, no mitigation is required. MM CUL-1, which the City of Pasadena has voluntarily required, would ensure protection of the arroyo stone hitching post in the northernmost portion of the San Pascual site, although a significant impact to historic resources has not been identified. With implementation of MM CUL-2 and MM CUL-3, as described above, the Project would result in less than significant impacts related to archaeological and paleontological resources, respectively. The Project would result in less than significant impacts related to human remains with adherence to RR CUL-1; thus, no mitigation is required. Therefore, no significant and unavoidable impacts related to cultural and paleontological resources have been identified.

3.4.10 REFERENCES

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3.5 GREENHOUSE GAS EMISSIONS

3.5.1 EXISTING CONDITIONS

Greenhouse Gases

Climate change is a recorded change in the average weather of the earth measured by variables such as wind patterns, storms, precipitation, and temperature. Increasing GHG emissions have led to an anthropogenic[1] warming trend of the Earth's average temperature, which is causing changes in the earth's climate. GHG emissions are primarily associated with (1) the burning of fossil fuels during motorized transport, electricity generation, consumption of natural gas, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition. This increasing temperature phenomenon is known as "global warming", and the climatic effect is known as "climate change" or "global climate change".

GHGs are atmospheric gases and clouds within the atmosphere that influence the Earth's temperature by absorbing most of the infrared radiation that rises from the sun-warmed surface and that would otherwise escape into space. This process is commonly known as the "Greenhouse Effect". GHGs are emitted by natural processes and human activities. The Earth's surface temperature averages about 58 degrees Fahrenheit (°F) because of the Greenhouse Effect. Without it, the Earth's average surface temperature would be somewhere around an uninhabitable 0°F. Anthropogenic GHG emissions enhance the Greenhouse Effect by absorbing radiation from other atmospheric GHGs that would otherwise escape into space, thereby trapping more radiation in the atmosphere and causing temperatures to increase.

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). CO_2 is the most important anthropogenic GHG.[2] The global atmospheric concentration of CO_2 has increased from a pre-industrial (roughly 1750) value of about 280 parts per million (ppm) primarily due to fossil fuel use. The annual growth rate in CO_2 concentrations continues to increase, with a larger annual CO_2 concentration growth.

GHGs are global pollutants and are therefore unlike air pollutants such as ozone, particulate matter, and toxic air contaminants (TACs), which are pollutants of regional and local concern. While pollutants with localized air quality effects have relatively short atmospheric lifetimes (generally on the order of a few days), GHGs have relatively long atmospheric

1 Caused or produced by humans.

2 General discussions on climate change often include water vapor, ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases that are formed directly in the construction or operation of development projects, nor can they be controlled in these projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by either regulatory bodies (such as the California Air Resources Board [CARB]) or climate change groups (such as the California Climate Action Registry [CCAR]) as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, atmospheric ozone, or aerosols is provided in this EIR section.

lifetimes, ranging from one year to several thousand years. Long atmospheric lifetimes allow for GHGs to disperse around the globe.

GHGs vary widely in the power of their climatic effects; therefore, climate scientists have established a unit called a global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, since CH_4 and N_2O are approximately 21 and 310 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 21 and 310, respectively (CO_2 has a GWP of 1). Carbon dioxide equivalent (CO_2e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e.

Climate change effects in California are anticipated to impact the following: public health, wildfires, energy, droughts, sea level and flooding, agriculture, forestry, and ecosystems.

Existing GHG Emissions

Table 3.5-1, Comparison of Worldwide Greenhouse Gas Emissions, compares the magnitude of GHG emissions on the global, national, and State levels. CO_2e emissions are commonly expressed as metric tons of carbon dioxide equivalent ($MTCO_2e$); larger quantities of emissions, such as on the State or world scale, are expressed as million metric tons of carbon dioxide equivalent ($MMTCO_2e$). Metric tons may also be stated as "tonnes". The CO_2e for a gas is derived by multiplying the tons of the gas by the associated GWP, such that $MMTCO_2e$ = (million metric tons of a GHG) x (GWP of the GHG). For example, the GWP for CH_4 is 21. This means that emission of 1 million metric ton of CH_4 is equivalent to the emissions of 21 million metric tons of CO_2.

TABLE 3.5-1
COMPARISON OF WORLDWIDE GREENHOUSE GAS EMISSIONS

Area and Data Year	Annual GHG Emissions (MMTCO2e)
World (2020)	47,500
United States (2021)	6,340
California (2021)	381

GHG: greenhouse gas; $MMTCO_2e$: million metric tons of carbon dioxide equivalent.

[1] AB32 Reporting requirements for direct emissions.

Source: WRI 2023; USEPA 2023; CARB 2022; AB32 Reporting

The most common GHG is CO_2, which constitutes approximately 79 percent of all GHG emissions in the United States and California. The primary contributors to California GHG emissions are transportation (38 percent), industrial uses (22 percent), and electric power production from both in-state and out-of-state sources (11 percent).

GHG emissions are generated on an annual basis from a Project Site by area sources, energy sources, mobile sources, solid waste disposal, and water and wastewater transportation and treatment. Area source emissions are generated by the operation of landscape maintenance

equipment and the use of consumer products. Energy sources are generated by the consumption of natural gas for heating, hot water, and cooking, and the generation of electricity. Mobile source emissions are generated by the vehicles traveling to and from a Project Site. Solid waste disposal generates GHG emissions through transportation and processing of solid waste and release of CH_4 at landfills. GHGs for water supply, distribution, and treatment and wastewater treatment result from the electricity required for those processes.

3.5.2 REGULATORY FRAMEWORK

Federal

U.S. Environmental Protection Agency Findings

In *Massachusetts et al. v. EPA* (Supreme Court Case 05-1120, 2006) the U.S. Supreme Court held that United States Environmental Protection Agency (EPA) has authority to regulate GHG emissions from motor vehicles as air pollutants under the Clean Air Act (CAA). The Court concluded that the EPA must decide whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare—or provide a reasonable explanation why it cannot or will not make that decision (i.e., the science being too uncertain to make a reasoned decision).

On December 7, 2009, the U.S. Environmental Protection Agency (USEPA) Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act.

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

The findings do not impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emissions standards for vehicles (USEPA 2021a) by triggering USEPA's duty under CAA Section 202(a) to promulgate emission standards for new motor vehicles, which are discussed below.

Under the current federal administration, EPA has taken significant actions affecting the federal greenhouse gas regulatory framework. In February 2026, EPA finalized a rule rescinding the 2009 Endangerment Finding and related federal motor-vehicle greenhouse gas emission standards, concluding that the Clean Air Act does not provide authority for EPA to regulate greenhouse gas emissions for the purpose of addressing global climate change absent the Endangerment Finding. As a result, EPA eliminated existing and future federal GHG emission standards for light-, medium-, and heavy-duty vehicles and engines. EPA's action represents a major shift in federal climate policy and has the effect of removing the

federal regulatory basis for GHG standards promulgated under CAA Section 202(a). However, the Supreme Court's holding in *Massachusetts v. EPA* remains binding law unless overturned by subsequent judicial action, and EPA's rescission of the Endangerment Finding is subject to ongoing legal challenges.

State

Assembly Bill 1493 (Mobile Source Reductions)

AB 1493, adopted September 2002, also known as Pavley I, requires the development and adoption of regulations to achieve the maximum feasible reduction of GHGs emitted by non-commercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. The emission standards became increasingly more stringent through the 2016 model year. California committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from 2020 model year vehicles (CARB 2021b). Regulations to make California emissions standards for model year 2017 and beyond consistent with federal standards were adopted in 2012 and are discussed further below.

California Air Resources Board's Advanced Clean Cars I

In January 2012, CARB approved the Advanced Clean Cars (ACC) program, an emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles (CARB 2026).

Advanced Clean Cars II

In 2022, CARB adopted the Advanced Clean Cars II regulations to establish the next phase of regulations beginning with the 2026 model year[3]. Advanced Clean Cars II (CARB 2026):

- Increased the stringency of the smog-causing criteria pollutant standards, known as LEV IV;
- Updated the zero-emission vehicle regulation to require that 100 percent of new passenger vehicles meet zero-emission standards (including plug-in hybrids) by the 2035 model year; and,
- Established a suite of assurance measures to ensure zero-emission vehicles can provide enduring emission reductions.

[3] EPA granted California a waiver of federal preemption for ACC II in early 2025; subsequent federal actions and Congressional activity have introduced uncertainty regarding the durability of certain waiver authorizations, and related litigation is ongoing. Accordingly, ACC II remains adopted under California law, but certain elements that depend on federal waiver authority may be subject to legal outcomes and federal administrative actions.

It is important to note that CARB did not amend the LEV III greenhouse gas emission standards during the 2022 Advanced Clean Cars II regulatory process. In addition, programs and initiatives created under Advanced Clean Cars II Resolution 22-12 include (CARB 2026):

- A Zero-emission Vehicle Equity Task Force: The Zero-emission Vehicle (ZEV) Equity Task Force (Task Force) brings together leaders in zero-emission transportation such as environmental justice advocates, automakers, state government, and other key organizations to develop strategies to expand communities' access to zero-emission vehicles and zero-emission mobility;
- A Community Mobility Program Connections Directory: The Community Mobility Directory is a tool to help organizations and automakers find partners interested in collaborating to access these vehicle discounts; and,
- Executive Orders for Advanced Clean Cars II Environmental Justice Values: Executive Orders for Approved Community-based Clean Mobility Programs for Advanced Clean Cars II Environmental Justice Values.

Executive Order S-3-05 (Statewide GHG Targets)

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05, which proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce snowpack in the Sierra Nevada Mountains; could further exacerbate California's air quality problems; and could potentially cause a rise in sea levels. In an effort to avoid or reduce the impacts of climate change, Executive Order S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

However, executive orders do not have the same status as a law because under California's constitution, it is the Legislature, not the Governor, who is entrusted with the role of making statewide laws. The Legislature declined to include the EO's 2050 goal in AB 32 (discussed below), and again declined to use the EO's 2050 goal in adopting Senate Bill (SB) 375 (discussed below), nor has it incorporated it in any implementing legislation or applicable plans. Additionally, although CARB has the requisite authority to adopt whatever regulations are necessary beyond the AB 32 horizon year 2020 to meet the target set forth in S-3-05, the agency has not done so. Since the Legislature has never enacted EO S-3-05's 2050 target, and no expert agency has interpreted the California Environmental Quality Act (CEQA) to require it, the 2050 target has only the force and effect of an executive order issued by a former Governor. If the Legislature has delegated any of its authority to define CEQA's requirements, it delegated that authority to the Governor's Office of Planning and Research (OPR).

Executive Order B-55-18

On September 10, 2018, Governor Brown also signed California EO B-55-18, which set a statewide goal of carbon neutrality as soon as possible, and no later than 2045, and achieve net negative emissions thereafter. EO B-55-18 was added to the existing Statewide targets of reducing GHG emissions, including the targets previously established by Governor Brown of reducing emissions to 40 percent below 1990 levels by 2030 (EO B-30-15 and SB 32), and

by Governor Schwarzenegger of reducing emissions to 80 percent below 1990 levels by 2040 (EO S-3-05). (State of California 2018).

Senate Bill 97 and the CEQA Guidelines

Pursuant to SB 97, OPR developed and California Natural Resources Agency (CNRA) adopted proposed amendments to the CEQA Guidelines (CEQA Amendments) for the feasible mitigation of GHG emissions and their effects. The CEQA Amendments became effective on March 18, 2010.

Among other things, the CNRA noted in its Public Notice for these changes that impacts of GHG emissions should focus on the cumulative impact on climate change. The Public Notice states (CNRA 2009):

> While the Proposed Amendments do not foreclose the possibility that a single project may result in greenhouse gas emissions with a direct impact on the environment, the evidence before [CNRA] indicates that in most cases, the impact will be cumulative. Therefore, the Proposed Amendments emphasize that the analysis of greenhouse gas emissions should center on whether a project's incremental contribution of greenhouse gas emissions is cumulatively considerable.

Thus, the CEQA Amendments continue to make clear that the significance of greenhouse gas emissions is most appropriately considered on a cumulative level.

Assembly Bill 32 (Statewide GHG Reductions)

In furtherance of the goals established in EO S-3-05, the California Legislature adopted the public policy position that global warming is "a serious threat to the economic well-being, public health, natural resources, and the environment of California" (California Health and Safety Code, Section 38501). The public policy statements became law with the enactment of the California Global Warming Solutions Act of 2006 (AB 32) in September 2006, after considerable study and expert testimony before the Legislature. The law instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. AB 32 directed CARB to set a GHG emission limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The scoping plan is described further below. (State of California 2006)

Executive Order B-30-15 (Statewide Interim GHG Targets)

California EO B-30-15 (2015) set an "interim" statewide emission target to reduce GHG emissions to 40 percent below 1990 levels by 2030 and directed State agencies with jurisdiction over GHG emissions to implement measures pursuant to statutory authority to achieve this 2030 target and the 2050 target of 80 percent below 1990 levels. Specifically, the Executive Order directed CARB to update the Scoping Plan to express this 2030 target in metric tons. (State of California 2015)

Senate Bill 32/Assembly Bill 197

SB 32, signed September 8, 2016, implements a goal of EO B-30-15. Under SB 32, in "adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions," CARB must ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. SB 32's findings state that CARB will "achieve the state's more stringent greenhouse gas emission reductions in a manner that benefits the state's most disadvantaged communities and is transparent and accountable to the public and the Legislature." AB 197, a companion to SB 32, adds two members to the CARB and requires measures to increase transparency about GHG emissions, climate policies, and GHG reduction actions. (State of California 2016a, 2016b)

California Air Resources Board Scoping Plan

On December 11, 2008, CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emission level would require a reduction of GHG emissions of approximately 28.5 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business as usual"). The Scoping Plan evaluates opportunities for sector-specific reductions; integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities; identifies additional measures to be pursued as regulations; and outlines the role of a cap-and-trade program.

<u>First Update to the Climate Change Scoping Plan</u>

CARB approved the final "First Update to the Climate Change Scoping Plan" on May 22, 2014. The first update describes California's progress towards AB 32 goals, stating that "California is on track to meet the near-term 2020 greenhouse gas limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32". Specifically, "if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts [MW] of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80 percent below 1990 levels by 2050" (CARB 2014). Reducing the "business as usual" condition of 509 metric tons carbon dioxide equivalent (MMTCO2e) to the 1990 emissions level of 431 $MMTCO_2e$ will require a reduction of 78 $MMTCO_2e$, or approximately a 15.3 percent reduction (compared to a 28.5 percent reduction as set forth in the original Scoping Plan but not directly comparable because of the change in methodology). (CARB 2014)

<u>Second Update to the Climate Change Scoping Plan</u>

CARB prepared a second update to the Scoping Plan to reflect the 2030 target established in Executive Order B-30-15 and in Senate Bill 32 (discussed above). The Final Proposed 2017 Scoping Plan was published in November 2017, and the third public Board Meeting for the Proposed Scoping Plan was held on December 14, 2017, where the Final Proposed 2017

Climate Change Scoping Plan (Second Update to the Climate Change Scoping Plan, or 2017 Scoping Plan Update) was adopted.

The 2017 Scoping Plan Update included new statutory GHG reduction requirements that were not included in the prior Scoping Plan, including Senate Bill 32 (discussed above) which set a 40 percent GHG reduction target below 1990 GHG levels to be achieved by 2030, SB 350 (which set a 50 percent reduction in GHG emissions from electricity generation and other energy uses in existing structures, and a 50 percent renewable energy portfolio requirement), and SB 650 (which established priority GHG reduction targets for designated types of greenhouse gases such as methane). The key elements of the 2017 Scoping Plan Update proposal call for further GHG reductions from the refinery sector specifically, further reductions from other stationary sources through either a renewed and expanded cap and trade or carbon tax program, further reductions from other sectors such as transportation technologies and services, water and solid waste conservation and management, and land uses in both open space and urban areas. (CARB 2017)

2022 Scoping Plan Update

The 2022 Scoping Plan assesses progress towards achieving carbon neutrality by 2045 or earlier through the reduction of emissions by 85 percent below 1990 levels. The Scoping Plan takes an aggressive approach to decreasing fossil fuel use and decarbonization of every sector of emissions. Measures include moving to zero-emission transportation, phasing out the use of fossil fuel gas used for heating, reduction in the use of chemicals and refrigerants with high global warming potential, development of sustainable infrastructure that provides opportunities for walking, biking and public transit to reduce reliance on automobiles, and development of renewable energy. (CARB 2022)

Senate Bill 375 (Land Use Planning)

Signed September 30, 2008, SB 375 provides for a new planning process to coordinate land use planning and regional transportation plans (RTPs) and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 requires Metropolitan Planning Organizations, including the Southern California Association of Governments (SCAG), to incorporate a Sustainable Communities Strategy (SCS) in their regional transportation plans that will achieve GHG emission reduction targets set by CARB. There are two mutually important facets to SB 375: reducing vehicle miles traveled and encouraging more compact, complete, and efficient communities for the future. SB 375 also includes provisions for exemptions from or streamlined CEQA review for projects classified as transit priority projects (SCAG 2020). See additional discussion of the SCAG plan under "Regional" regulations below.

Senate Bills 1078, 107, and SBX1-2 (Renewable Portfolio Standards)

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, and again in 2011 under SBX1-2, California's Renewable Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. Initially, the Renewable Portfolio Standard

provisions applied to investor-owned utilities, community choice aggregators, and electric service providers. SBX1-2 added, for the first time, publicly owned utilities to the entities subject to RPS. (State of California 2002, 2006, 2011).

Senate Bill 350

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of EO B-30-15. The objectives of SB 350 are as follows:

(1) To increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources; and

(2) To double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation (CEC 2021a).

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, the 100 Percent Clean Energy Act of 2018. SB 100 requires renewable energy and zero-carbon resources to supply 100 percent of electric retail sales to end-use customers and 100 percent of electricity procured to serve state agencies by December 31, 2045. This policy requires the transition to zero-carbon electric systems that do not cause GHG emissions elsewhere in the western electricity grid (CEC 2021b). SB 100 also creates new standards for the RPS goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly owned utilities from 50 percent to 60 percent by 2030.

Assembly Bill 1279

On September 16, 2022, Governor Newsom signed Assembly Bill 1279 (AB 1279), also known as the *California Climate Crisis Act*, which codified California's statewide goal of achieving carbon neutrality as soon as possible, but no later than 2045, and achieving and maintaining net negative greenhouse gas (GHG) emissions thereafter. AB 1279 further established a statutory requirement that statewide anthropogenic GHG emissions be reduced by at least 85 percent below 1990 levels by 2045, with the remaining emissions addressed through carbon dioxide removal. The bill requires the California Air Resources Board (CARB) to ensure that updates to the Scoping Plan identify and recommend measures to achieve these targets, including strategies to support carbon capture, utilization and storage, and carbon dioxide removal technologies. AB 1279 builds upon and codifies prior executive and legislative climate targets, including those established under EO B-55-18 and SB 32, by embedding California's long-term carbon neutrality goals into statute.

Title 24 Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Non-residential Buildings (24 CCR, Part 6) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The current applicable standards are the 2025 Building Energy

Efficiency Standards (Energy Code), effective January 1, 2026 (CBSC 2026a). The 2025 Energy Code expands the use of heat pumps in newly constructed residential buildings, encourages electric-readiness, strengthens ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2026, must comply with the 2025 Energy Code (CEC 2026a). For 2026, the State's two primary goals are to continue reducing GHG emissions and to increase building energy efficiency in a cost-effective manner (CALBO 2025). Meanwhile, the goals of the 2025 Energy Code update include increasing heat pump baselines; promoting demand flexibility, the use of solar PV, and the use of battery energy storage systems; improve covered process load efficiencies; and an increased focus on existing buildings and accessory dwelling units (ADUs). The 2025 updates to the Energy Code are estimated to result in approximately 4.8 billion dollars in energy cost savings. In addition, the 2025 Energy Code is expected to result in an estimated 392 gigawatt-hours per year (GWh/yr) in electricity savings, an estimated 23 million therms per year in natural gas savings, and the conservation of over 68 million gallons of water per year. In total, the 2025 updates would result in the avoidance of an estimated 4.1 million MT $CO2_e$. Furthermore, the 2025 updates are expected to result in the installation of over 500,000 heat pumps over three years; to result in the conservation of an average of 300 GWh/yr of electricity through solar PV and battery storage systems installations; and to facilitate the conversion of newly constructed commercial kitchens from natural gas equipment to electrical equipment at a future, unspecified date (CALBO 2025).

California Green Building Standards Code

The 2025 California Green Building Standards Code (24 CCR, Part 11), also known as the CALGreen code, contains mandatory requirements and voluntary measures for new residential and nonresidential buildings (including buildings for retail, office, public schools and hospitals) throughout California (CEC 2026b). The development of the CALGreen Code is intended to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the following construction practices: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental quality. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction (CBSC 2026b).

The CALGreen Code provides standards for bicycle parking, carpool/vanpool/electric vehicle spaces, light and glare reduction, grading and paving, energy-efficient appliances, renewable energy, graywater systems, water efficient plumbing fixtures, recycling and recycled materials, pollutant controls (including moisture control and indoor air quality), acoustical controls, stormwater management, building design, insulation, flooring, and framing, among others. Implementation of the CALGreen Code measures reduces energy consumption and vehicle trips and encourages the use of alternative-fuel vehicles which, in turn, reduces pollutant emissions.

The 2025 CalGreen Code updates include new updates, such as the provision of Level 2 electric vehicle (EV) charging receptacles for a variety of land uses including multi-family and hotels, updated bicycle parking requirements for nonresidential development, the

expansion of the carbon dioxide monitoring installation requirements in schools, and various updates to residential and nonresidential voluntary measures, among others (CBSC 2026b).

California Air Pollution Control Officers Association

The California Air Pollution Control Officers Association (CAPCOA) is the association of Air Pollution Control Officers representing all 35 local air quality agencies throughout California. CAPCOA is not a regulatory body but has been an active organization in providing guidance in addressing the CEQA significance of GHG emissions and climate change as well as other air quality issues. The December 2021 Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity ("Handbook") provides tools for evaluating greenhouse gas reduction measures, climate vulnerabilities and promoting equity to support sustainable, resilient, and equitable land use planning and project design. The Handbook provides methods to quantify GHG emission reductions from a specified list of measures, primarily focused on project-level actions. The Handbook also includes a method to assess potential benefits of different climate vulnerability reduction measures, as well as measures that can be implemented to improve health and equity, again at the project level. The Handbook builds on CAPCOA's previous efforts to provide accurate and reliable quantification measures. In August of 2010, CAPCOA published the first iteration entitled Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures ("2010 Handbook"). Since that time, climate science has evolved and GHG reduction practices have advanced in sophistication. New priorities have also arisen, such as strengthening climate resilience and infusing health and equity into integrated planning efforts. The Handbook development process involved five key tasks: (1) measures from the 2010 Handbook; (2) evaluating and selecting climate risk reduction and health and equity measures; (3) developing methods to quantify GHG emissions reduction measures and identify associated co-benefits; (4) developing methods to assess climate change vulnerability and a framework to quantify reductions in climate vulnerabilities; and (5) developing health and equity measures. (CAPCOA 2022)

This publication's methods are used in the California Emission Estimator Model (CalEEMod) computer model that is used to calculate GHG emissions.

Regional

Southern California Association of Governments

As previously discussed, SB 375 specifically required Metropolitan Planning Organizations (MPOs), including SCAG, to incorporate an SCS in their RTPs that will achieve GHG emission reduction targets set by CARB. SCAG's current SCS is included in its 2024–2050 RTP/SCS Connect SoCal (SCAG 2024) for counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.[4] Connect SoCal is a long-range visioning plan that builds upon and

[4] The 2020-2045 RTP/SCS succeeds the 2016-2040 RTP/SCS.

expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The document was adopted by SCAG on April 4, 2024.

South Coast Air Quality Management District

As previously discussed in Section 3.2, Air Quality, of this EIR, air quality in Los Angeles is regulated by the Southern California Air Quality Management District (SCAQMD), the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin (SoCAB), which includes Los Angeles. To that end, the SCAQMD, a regional agency, works directly with SCAG, County transportation commissions, and local governments and cooperates actively with all federal and State government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

Local

As the California Environmental Quality Act (CEQA) Lead Agency, Pasadena's climate policies apply to the whole of the Project.

City of Pasadena Green City Action Plan

Pasadena's Green City Action Plan was adopted in 2006 and provides a list of environmental initiatives intended to guide Pasadena towards sustainability and accelerate its environmental commitment. The framework for and goals contained in this plan follow the United Nations Urban Environmental Accords (UNUEA), which include 21 actions that address energy, waste reduction, urban design, urban nature, transportation, environmental health, and water.

City of Pasadena Climate Action Plan (CAP)

The City has prepared and adopted a Climate Action Plan (CAP) in March 2018. The CAP includes the following components: a summary of existing state and local initiatives addressing climate change; community-wide GHG inventory and emissions forecasts; GHG reduction goals, measures, and actions; means of implementing and monitoring the plan; and adaptation strategies and climate change preparedness. This document builds upon the City's existing sustainability efforts, such as the Green City Action Plan and provides a framework to further reduce GHG emissions throughout the City. It is accepted as very unlikely that any individual development project of the size and character of the proposed Project would have GHG emissions of a magnitude to directly impact global climate change; therefore, any impact would be considered on a cumulative basis.

The CAP Consistency Checklist (Checklist) is intended to be a tool for new development projects to demonstrate consistency with the City of Pasadena CAP, which is a qualified GHG emissions reduction plan in accordance with State CEQA Guidelines Section 15183.5. Projects that meet the requirements of the Consistency Checklist would be deemed to be

consistent with the City of Pasadena CAP. The following options are provided for new development projects to establish consistency with the CAP:

- Option A requires that the new development project apply sustainable development actions, as deemed appropriate by the CAP, which would become conditions of the entitlement for approval of the project.
- Option B requires that the Project demonstrate consistency with the applicable Pasadena per service population GHG efficiency threshold.
- Option C requires that the Project achieve Net Zero GHG Emissions, which requires quantifying the project's GHG emission levels and demonstrating that the project would not result in a net increase in GHG emissions.

3.5.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. The Project would result in a significant adverse air quality impact if it would:

Threshold 3.5a ***Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment;***

Threshold 3.5b ***Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions;***

Methodology

California Emissions Estimator Model (CalEEMod)

The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released CalEEMod 2022 in May 2022, a statewide emissions-estimation computer model used in California to estimate air pollution. CalEEMod periodically releases updates, as such the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source criteria pollutants and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (CAPCOA 2022). Accordingly, the latest version of CalEEMod has been used for this Project to determine GHG emissions. Output from the model runs for construction activity for the proposed Project is provided in Appendix B-1. CalEEMod includes GHG emissions from the construction source category.

i-Tree

The i-Tree Planting Calculator, developed by the U.S. Forest Service, is used to determine the changes in GHGs, criteria pollutants, and energy associated with tree planting and removal. For the purposes of this analysis, the tool was applied to quantify the carbon sequestration reduction potential of the Project. Output from the model runs is provided in Appendix B-2.

Life-Cycle Analysis Not Required

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time. Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the Project development, infrastructure, and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time, an LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood, or documented, and would be challenging to mitigate (SCAQMD 2010). Additionally, the science to calculate life cycle emissions is not yet established or well defined; therefore, the SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

3.5.4 REGULATORY REQUIREMENTS

There are no Regulatory Requirements applicable to the analysis of GHG Emissions.

3.5.5 IMPACT ANALYSIS

Threshold 3.5a **Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Construction Emissions

Project construction activities would generate CO_2 and CH_4 emissions. Construction-related emissions are expected from the following activities.

San Rafael Site:

- Demolition
- Site Preparation
- Grading
- Construction
- Paving

San Pascual Site:

- Site Preparation
- Grading
- Construction

- Paving

For purposes of analysis, construction for the San Rafael Site will begin September 2026 and would last through May 2027. Construction for the San Pascual Site will begin January 2027 and would last through January 2028. It should be noted that construction for both sites would occur simultaneously for 5 months. The construction schedule utilized in the analysis, shown in Table 3.5-2, represents a "conservative" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[5] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per the *CEQA Guidelines.*

TABLE 3.5-2
CONSTRUCTION DURATION

Site	Construction Activity	Start Date	End Date	Days
San Rafael	Demolition	9/1/2026	9/29/2026	21
	Site Preparation	9/30/2026	10/29/2026	22
	Grading	10/30/2026	12/29/2026	43
	Construction	12/30/2026	4/29/2027	87
	Paving	4/30/2027	5/31/2027	22
San Pascual	Site Preparation	1/1/2027	3/18/2027	55
	Grading	3/19/2027	7/1/2027	75
	Construction	7/2/2027	12/29/2027	129
	Paving	12/30/2027	1/31/2028	23

Consistent with industry standards and typical construction practices, each piece of equipment listed in Tables 3.5-3 and 3.5-4 is assumed to operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the City code. It should be noted that construction equipment was based on information provided by the Project Applicant.

[5] As shown in the CalEEMod User's Guide Version 2022, Appendix G "Table G-11. Statewide Average Annual Offroad Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3.5-3
CONSTRUCTION EQUIPMENT ASSUMPTIONS SAN RAFAEL SITE

Site	Construction Activity	Equipment	Quantity	Hours
San Rafael	Demolition	Excavators	1	8
		Skid Steer Loaders	1	8
		Tractors/Loaders/Backhoes	1	8
		Crawler Tractors	1	8
		Other Construction Equipment	1	8
	Site Preparation	Excavators	1	8
		Skid Steer Loaders	1	8
		Crawler Tractors	1	8
	Grading	Excavators	1	8
		Skid Steer Loaders	1	8
		Crawler Tractors	1	8
	Construction	Cranes	1	8
		Excavators	1	8
		Skid Steer Loaders	1	8
		Pumps	1	8
	Paving	Pavers	1	8
		Rollers	1	8

TABLE 3.5-4
CONSTRUCTION EQUIPMENT ASSUMPTIONS SAN PASCUAL SITE

Site	Construction Activity	Equipment[1]	Quantity	Hours
San Pascual	Site Preparation	Excavators	1	8
		Skid Steer Loaders	1	8
		Crawler Tractors	1	8
	Grading	Excavators	2	8
		Skid Steer Loaders	2	8
		Crawler Tractors	2	8
	Construction	Cranes	1	8
		Excavators	1	8
		Skid Steer Loaders	1	8
		Pumps	1	8
	Paving	Pavers	1	8
		Rollers	1	8

Construction Emissions Summary

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year Project life, then adding that number to the annual operational phase GHG emissions (SCAQMD 2008). As such, construction emissions were amortized over a 30-year period. The amortized construction emissions are presented in Table 3.5-5.

TABLE 3.5-5
AMORTIZED ANNUAL CONSTRUCTION EMISSIONS (METRIC TONS)

Year	CO_2T	CH_4	N_2O	R	Total CO_2e
2026	61.23	0.00	0.00	0.03	62.48
2027	300.16	0.01	0.01	0.09	304.64
2028	5.22	0.00	0.00	0.00	5.25
Total	366.61	0.02	0.02	0.12	372.37
Amortized	12.22	5.14E-04	5.88E-04	3.90E-03	12.41

Operational Emissions

In terms of operational GHG emissions, the proposed Project involves the construction of treatment facilities, pipeline installation, a pump station, and associated improvements. The proposed Project does not include any substantive new stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable GHG emissions from Project operations. The Project does not propose a trip-generating land use or facilities that would generate any substantive amount of on-going GHG emissions. While it is anticipated that the Project would require intermittent maintenance, such maintenance would be minimal, requiring a negligible amount of traffic trips on an annual basis. Therefore, there is no significant operational impact expected, as shown in Table 3.5-5.

Tree-Specific Assumptions

The Project would involve the removal of a total of 136 trees and the addition of 216 new trees at the San Rafael and San Pascual sites. For the purposes of this analysis, these quantities, assumed tree species, and other related parameters were used to estimate the Project's potential carbon sequestration and air quality impacts. Information regarding tree species can be found in Section 3.3, Biological Resources, and Appendix B-2, i-Tree Output. The Project would result in a net increase in trees across all jurisdictions (Table 3.5-6).

TABLE 3.5-6
SUMMARY OF PROJECT TREES

Jurisdiction	Existing Trees within Site	Total Tree Removals	Protected Tree Removals	Required Tree Replacements	Proposed Tree Replacements
San Rafael Site					
Pasadena	28	6	6	26*	61
Los Angeles	16	0	0	0	0
San Rafael Subtotals	*44*	*6*	*6*	*26*	*61*
San Pascual Site					
South Pasadena	135	119	31**	0***	107
Los Angeles	22	11	6	24	48
San Pascual Subtotals	*157*	*130*	*37*	*24*	*155*
Project Totals	**201**	**136**	**43**	**50**	**216**

Source: Psomas 2026
Note: Removals include encroachments.*Replacement quantity based on installation of 24-inch box trees.
**Includes 17 protected trees and 14 significant trees.
***South Pasadena is exempt from the tree replacement requirements of its Tree Ordinance.

Carbon Sequestration

The Project involves both the removal of existing trees and the addition of new ones, which would affect carbon sequestration at the site. Mature trees store substantial carbon; removal therefore reduces the site's future sequestration capacity. Whether tree removal results in greenhouse gas emissions depends on the ultimate fate of the removed biomass (e.g., chipping/mulching and decomposition, combustion, landfill disposal, or conversion to durable wood products), which governs the timing and magnitude of any carbon release. Conversely, newly planted trees have relatively low carbon storage at the time of planting, and their sequestration benefits accrue over time as trees establish and grow; annual sequestration rates may increase as trees mature and remain dependent on species, site conditions, and survivorship. Sequestration associated with the Project was calculated by CalEEMod using the United States Forest Service (USFS) i-Tree Planting tool. Based on data provided by the Project Applicant, development of the Project is expected to include the removal of approximately 136 trees and the planting of approximately 216 trees, for a net increase of 81 trees. Appendix B-2 presents the detailed i-Tree outputs for the trees to be removed and added, respectively.

GHG Emissions Summary

The estimated Project-related GHG emissions are summarized in Table 3.5-7. Detailed construction model outputs for the Project are presented in Appendix B-1. As shown in Table 3.5-7, the Project would generate a net of approximately 7.92 $MTCO_2e$/yr, when taking into account carbon sequestration from the newly planted trees.

TABLE 3.5-7
PROJECT GHG EMISSIONS

Source	Total $MTCO_2e$/yr
Amortized Annual Construction Emissions	12.41
Carbon Sequestration (Average Annual)	-4.49
Net Total Project Emissions	7.92

Impact Analysis

The purpose of the City of Pasadena CAP is to provide guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects. To address the State's requirement to reduce GHG emissions, the City prepared its CAP with the goal of reducing GHG emissions within the City by 49% below "existing" 2009 levels by the year 2030. The City's target is consistent with the AB 32 target and ensures that the City will be providing GHG reductions locally that will complement state efforts to reduce GHG emissions. The City's target is also consistent with the SB 32 target that expands on AB 32 to reduce GHG emissions to 40% below the 1990 levels by 2030. Because the City's CAP addresses GHG emissions reductions and is consistent with the requirements of AB 32, SB 32, and international efforts to reduce GHG emissions, compliance with the CAP fulfills the description of mitigation found in the State CEQA Guidelines.

The CAP identifies three options for evaluating GHG emissions. The following options are provided for new development projects to establish consistency with the CAP:

- Option A) requires that the new development project apply sustainable development actions, as deemed appropriate by the CAP, which would become conditions of the entitlement for approval of the Project;
- Option B) requires that the Project demonstrate consistency with the applicable Pasadena's per service population GHG efficiency threshold; or
- Option C) requires that the Project achieve Net Zero GHG Emissions, which requires quantifying the project's GHG emission levels and demonstrating that the project would not result in a net increase in GHG emissions.

As shown in Table 3.5-7, the Project will result in net GHG emissions of approximately 7.92 $MTCO_2e$/yr. According to the City's CAP, pursuant to Option A, Projects that meet the requirements of the Consistency Checklist would be deemed consistent with the City's CAP. Table 3.5-8 demonstrates the Project's consistency with the applicable requirements within the Consistency Checklist.

Additionally, the SCAQMD has proposed, but not adopted, a threshold of 3,000 $MTCO_2e$ per year for non-industrial land use projects, such as the proposed Project. In addition to the Project being consistent with the City of Pasadena CAP, the Project's GHG emissions would be below this threshold. As such, the Project would have a less than cumulatively considerable impact with respect to GHG emissions.

Threshold 3.5b Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions?

It should be emphasized that pursuant to threshold 3.5b, a project would result in a significant impact if it would conflict with an applicable plan, policy, or regulation; as such, the following discussions assess the Project's potential to conflict with applicable plans, policies, and regulations.

2022 Scoping Plan

The Project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the Project would comply with (through vehicle manufacturer compliance) include Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, Off-Road Zero-Emission Targeted Manufacturer Rule, Clean Off-Road Fleet Recognition Program, Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. As such, the Project would be consistent with the 2022 Scoping Plan and would not conflict with the 2022 Scoping Plan.

City of Pasadena CAP

The City of Pasadena has prepared and adopted a Climate Action Plan (CAP) in March 2018. The CAP Consistency Checklist is intended to be a tool for new development projects to demonstrate consistency with City's CAP, which is a qualified GHG emissions reduction plan in accordance with State CEQA Guidelines Section 15183.5. Projects that meet the requirements of the Consistency Checklist would be deemed to be consistent with the City's CAP. The CAP identifies three options for evaluating GHG emissions. The following options are provided for new development projects to establish consistency with the CAP: Option A) requires that the new development project apply sustainable development actions, as deemed appropriate by the CAP, which would become conditions of the entitlement for approval of the project or Option B) requires that the Project demonstrate consistency with the applicable Pasadena's per service population GHG efficiency threshold, or Option C) requires that the Project achieve Net Zero GHG Emissions, which requires quantifying the project's GHG emission levels and demonstrating that the project would not result in a net increase in GHG emissions.

A consistency analysis for Option A is detailed below in Table 3.5-8. This analysis only considers the Project against Option A criteria, which is considered most applicable. Nonetheless, the Project may be consistent with the CAP via Options B and/or C regardless of whether the Project achieves consistency via Option A.

It should be noted that this Checklist was developed for land development projects and not for infrastructure projects such as the Project. Most of the Checklist requirements are not applicable to the Project. The Checklist does provide the GHG Reduction Strategies within

the CAP's water conservation and urban greening strategies that are applicable to the Project. The Project's consistency with these strategies is shown in Table 3.5-8. As shown below, the Project would be covered by the CAP and would therefore be consistent with the CAP emission projections.

TABLE 3.5-8
CITY OF PASADENA CAP CONSISTENCY

GHG Reduction Strategy	Sustainable Development Action	Project Consistency
T-1.2: Continue to improve bicycle and pedestrian safety	Bicycle Storage: Does the project provide bicycle storage lockers, racks, or other bicycle storage facilities for residents/employees? (Check "N/A" only if the project does not include residents or employees).	**Not applicable**. The Project would not generate new residents or employees. As such, this strategy is not applicable.
T-3.1: Decrease annual commuter miles traveled by single occupancy vehicles	**Transportation Demand Management (TDM):** Does the project include a TDM plan? A TDM plan is required for the following projects: multifamily residential development that are 100 or more units; mixed-use developments with 50 or more residential units or 50,000 square feet or more of non-residential development; or non-residential projects which exceed 75,000 square feet. If applicable, please submit the TDM plan for review.	**Not applicable**. The Project would not generate new residents or employees. As such, this strategy is not applicable.
T-4.1: Expand the availability and use of alternative fuel vehicles and fueling infrastructure	**Alternative Vehicle Fueling Wiring:** For projects with more than three parking spaces, does the project provide wiring for at least one 240V Type II electric car charger? Please include specifications on the project plans. Check "N/A" only if the project does not include more than three parking spaces.	**Not applicable**. The Project would not construct new parking stalls. As such, this strategy is not applicable.
E-1.2: Encourage the use of energy conservation devices and passive design concepts that make use of the natural climate to increase energy efficiency	**Passive Design Features:** Does the project utilize passive design techniques such as awnings or overhangs on the east, west, and south facing windows which block the high summer sun but allow in lower winter sun? Please include specifications on the project plans.	**Not applicable**. The Project would not involve the installation of windows. As such, this strategy is not applicable.
WC-1.1: Reduce potable water use throughout Pasadena	**Indoor Water Efficiency**: Will the project achieve at least a 35% reduction in indoor water use per the LEED V4 Indoor Water Use Reduction Calculator? Please attach the calculator output.	**Not applicable**. The Project would not affect indoor water efficiency. Nonetheless, the San Pascual BMP has been designed to provide the total estimated annual irrigation water to the Golf Course, thereby reducing demand on potable water supplies.
WR-1.1: Continue to reduce solid waste and landfill GHG emissions	**Facilitate Recycling:** Does the project include a space for separate trash and recycling bins as well as provide informational signage/handouts for residents/employees outlining materials to be recycled? Please include specifications on the project plans.	**Not applicable**. The Project would not generate new residents or employees. As such, this strategy is not applicable.

TABLE 3.5-8
CITY OF PASADENA CAP CONSISTENCY

GHG Reduction Strategy	Sustainable Development Action	Project Consistency
E-1.1: Increase energy efficiency requirements of new buildings to perform better than 2016 Title 24 Standards	**Zero-Net Energy (ZNE):** Does the project generate 100% of electricity required on site? ZNE calculations must be provided.	**Not applicable**. The Project does not involve the construction of new structures subject to Title 24 standards. As such, this strategy is not applicable.
	Energy Efficiency (Exceed 2016 Title 24): Does the project exceed the 2016 Title 24 Efficiency Standards by at least 5%? Please include Title 24 energy model.	**Not applicable**. The Project does not involve the construction of new structures subject to Title 24 standards. As such, this strategy is not applicable.
E-4.1: Increase city-wide use of carbon neutral energy by encouraging and/or supporting carbon-neutral technologies	**Renewable Energy:** Does the project generate at least 60% of the building's projected electricity needs through renewable energy? Please include specifications on the project plans.	**Not applicable**. The Project does not involve the construction of new structures. As such, this strategy is not applicable.
T-1.1: Continue to expand Pasadena's bicycle and pedestrian network	**End-of-Trip Bicycle Facilities (Commercial Development):** Does the project provide at least one shower for every 50 employees? Please include these specifications on the project plans. **Bike Share:** Does the project include a bike share station? Please include these specifications on the project plans.	**Consistent.** While the Project would not provide end-of-trip bicycle facilities, showers, or a bike share station—as it does not include commercial development, employees, or buildings—it would expand and improve the pedestrian trail network within Pasadena and the Lower Arroyo Seco. By enhancing walkability, trail connectivity, and access to open space, the Project supports non-vehicular travel and is therefore consistent with GHG reduction strategy T-1.1, which seeks to expand the City's bicycle and pedestrian network.
T-3.1: Decrease annual commuter miles traveled by single occupancy vehicles	**Car Sharing:** Does the project provide/facilitate car sharing by providing a designated car share space on or within the immediate vicinity of the project site? Examples of car share options include ZipCar, PitCarz, and Getaround. Please include these specifications on the project plans.	**Not applicable**. The Project would not generate new employees or residents. The Project would not include car sharing. As such, this strategy is not applicable.
T-3.1: Decrease annual commuter miles traveled by single occupancy vehicles	**Parking De-Coupling:** Does the project separate the cost of parking from the cost of commercial space and/or residential housing by charging for each individually? Please include these specifications on the project plans.	**Not applicable**. The Project would not involve new parking stalls, commercial, or residential uses. As such, this strategy is not applicable.
T-3.1: Decrease annual commuter miles traveled by single occupancy vehicles	**Transportation Demand Management (TDM):** Does the project include a TDM plan? Please submit the TDM plan for review (Note: this measure cannot be combined with the mandatory measure that requires a TDM plan for projects that meet certain size thresholds.).	**Not applicable**. The Project would not involve the development of new commercial, residential, office, institutional, or other land uses that generate new permanent employees, residents, or recurring commuter trips. The Project does not introduce new population, employment opportunities, or ongoing trip-generating activities that would result in regular commuter travel patterns. Transportation Demand Management (TDM) measures are specifically intended to reduce vehicle

TABLE 3.5-8
CITY OF PASADENA CAP CONSISTENCY

GHG Reduction Strategy	Sustainable Development Action	Project Consistency
		miles traveled (VMT) associated with routine commute trips, such as daily travel by employees or residents to and from a fixed project location. Because the Project does not create new commuting demand or alter existing long-term travel behavior, it would not generate single-occupancy vehicle commuter miles that could be reduced through implementation of a TDM program. As such, this strategy is not applicable.
T-4.1: Expand the availability and use of alternative fuel vehicles and fueling infrastructure	**Alternative Vehicle Fueling Infrastructure:** Does the proposed project include functioning 240V Type II electric car chargers at 3% of parking spaces (at least one charger) AND conduit to allow for future charger installation to 25% of spaces?	**Not applicable.** The Project does not include new buildings, land uses, or parking facilities, and would not create vehicle parking spaces associated with residential, commercial, or employment uses. Because no new parking is proposed and the Project consists of green stormwater infrastructure and open-space amenities within existing public areas, installation of electric vehicle charging infrastructure or future conduit is not applicable or relevant to the Project's scope or function.
T-5.1: Facilitate high density, mixed-use, transit-oriented, and infill development	**Transit Oriented Development:** Is the project located within 0.25 mile of a major transit stop as defined in the Zoning Code. Please include a map outlining the nearest transit stop.	**Not applicable.** While the Project is located within an urban area served by regional transit, it does not include new residential, commercial, mixed-use, or employment-generating development for which Transit Oriented Development (TOD) criteria would apply.
T-6.1: Reduce GHG emissions from heavy-duty construction equipment and vehicles	**Reduce GHG emissions from heavy-construction equipment:** Will the project utilize at least 30% alternative fueled construction equipment (by pieces of equipment) and implement an equipment idling limit of 3 minutes? Please provide idling limit plan including implementation strategies along with the total pieces of equipment and those utilizing alternative fuels.	**Not applicable.** The Project does not mandate the use of alternative-fueled construction equipment or impose a project-specific idling limit plan.
WC-1.1: Reduce potable water use throughout Pasadena	**Indoor Water Efficiency**: Will the project achieve at least a 35% reduction in indoor water use per the LEED V4 Indoor Water Use Reduction Calculator? Please attach the calculator output.	**Not applicable**. The Project would not affect indoor water efficiency.

TABLE 3.5-8
CITY OF PASADENA CAP CONSISTENCY

GHG Reduction Strategy	Sustainable Development Action	Project Consistency
WC-2.1: Increase access to and use of non-potable water	**Rainwater Capture and Reuse**: Does the project utilize a rainwater capture and reuse system to reduce the amount of potable water consumed on site? Please include these specifications on the project plans.	**Consistent.** Yes, the Project would be infiltrating some of the runoff captured, and it is located near the boundary of the Raymond Groundwater Basin. Therefore, infiltrated water will contribute to the water supply for this regional resource. Additionally, the Project would allow treated stormwater to be used to irrigate the Arroyo Seco Golf Course.
	Indoor & Outdoor Recycled Water: Will the project be plumbed to utilize recycled water for either indoor or outdoor water use? Please include these specifications on the project plans.	**Consistent.** The Project would result in outdoor natural water treatment as well as infiltration of water to contribute to groundwater recharge. Additionally, reuse of water stored at the San Pascual site for irrigation helps reduce potable water use.
	Greywater: Will the project be plumbed to take advantage of greywater produced on site such as a laundry to landscape system or another on-site water reuse system? Please include these specifications on the project plans.	**Not applicable.** The Project would not affect indoor water efficiency.
WC-3.1: Improve storm water to slow, sink, and treat water run-off, recharge groundwater, and improve water quality	**Permeable Surfaces:** Is at least 30% of the hardscape (e.g., surface parking lots, walkways, patios, etc.) permeable to allow infiltration? Please include these specifications on the project plans.	**Consistent.** Yes, the Project will help remove floatable, sediment, and nutrient laden water from the San Rafael Creek and Arroyo Seco Channel creating a more pleasing natural look to the built channel infrastructure in the region. The natural treatment provided in the wetland and natural stream along with the series of treatment filters would allow for infiltration and would discharge treated, cleaner water to the Arroyo Seco Channel.
	Stormwater Capture: Is the project designed to retain stormwater resulting from the 95th percentile, 24-hour rain event as defined by the Los Angeles County 95th percentile precipitation isohyetal map? Please provide the engineered stormwater retention plan with the project plans (http://dpw.lacounty.gov/wrd/hydrologygis/).	**Consistent.** Yes, the system has detention capabilities that could contribute towards enhanced flood retention capabilities of the whole storm drain system. To contribute meaningfully to flood protection, stormwater BMPs must utilize a combination of volume capture and peak flow reduction. The volume detention contributes to flood management, and because this project site is in the upland areas of the greater watershed, it offers distributed volume control that is needed across the watershed to mitigate flooding from the largest rain events. Specifically, the San Rafael site would be designed to capture the 85th percentile 24-hr event.

TABLE 3.5-8
CITY OF PASADENA CAP CONSISTENCY

GHG Reduction Strategy	Sustainable Development Action	Project Consistency
WR-1.1: Continue to reduce solid waste and landfill GHG emissions	**Recycled Materials:** Does the project utilize building materials and furnishings with at least 50% (pre- or post-consumer) recycled content or products which are designed for reuse? At a minimum, projects must show at least 10% of the material by cost meets the recycled content requirement. Please submit the plan for review.	**Not applicable.** The Project does not include buildings, interior improvements, or furnishing elements that would require a recycled-content materials plan or allow compliance to be quantified by material cost. As such, the recycled-materials requirements under WR-1.1 do not apply and no plan is required.
WR-3.1: Implement a city-wide composting program to limit the amount of organic material entering landfills	**On-Site Composting:** Does the project include an area specifically designated for on-site composting? Please include these specifications on the project plans.	**Not applicable.** The Project does not include buildings, residential or commercial uses, or ongoing on-site operations that would generate organic waste streams suitable for on-site composting. As such, the Project does not require or accommodate designated composting areas, and therefore this measure does not apply.
UG-1.1: Continue to preserve, enhance, and acquire additional green space throughout Pasadena to improve carbon sequestration, reduce the urban heat-island effect, and increase opportunities for active recreation	**Greenspace**: Does the project include at least 500 sq. ft. of public use greenspace (landscaped yards, parklets, rooftop garden, etc.)? At a minimum, 50% of the required green space must include softscape landscaping (e.g., trees, plants, grass, etc.).	**Consistent.** Yes, the use of two different BMP types allows for a diverse habitat for plants, animals, and insects. The proposed wetland areas would introduce more aquatic plant and animal species to this area of the Arroyo Seco that currently features more species that prefer dry conditions. The infiltration areas placed alongside the wetlands would act as a transition between the wet and dry. Moreover, while the Project would remove a total of 136 trees, the Project would plant a total of 216 trees, resulting in a net increase of 80 trees. Additionally, it should be noted that over 60% of the removal trees are non-native species. Overall, the Project would result in the provision of more than 500 sq. ft of public green space across a cumulative 3.6 acres.
UG-2.1: Continue to protect existing trees and plant new ones to improve and ensure viability of Pasadena's urban forest	**Trees**: Does the project result in a net gain of trees? Please include these specifications of the project plans.	**Consistent**. Yes, native trees that are part of the post-construction landscape plan would contribute to increased tree count and shade for the area. Moreover, while the Project would remove a total of 136 trees, the Project would plant a total of 216 trees, resulting in a net increase of 80 trees.

In conclusion, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions. Impacts would be less than significant, and no mitigation would be required.

3.5.6 CUMULATIVE IMPACTS

Greenhouse gas emissions are cumulative in nature and contribute incrementally to global climate change. SCAQMD guidance recognizes that individual projects must be evaluated for their incremental contribution to cumulative GHG impacts using appropriate significance thresholds or consistency with adopted climate action plans. As the Project's construction and operational GHG emissions would be below applicable SCAQMD significance thresholds, the Project would not make a cumulatively considerable contribution to climate change.

3.5.7 MITIGATION MEASURES

No significant impacts related to GHG Emissions would occur, and no mitigation is required.

3.5.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed Project would not result in potentially significant GHG Emissions impacts. Impacts associated with GHG Emissions would be less than significant, and no mitigation is required.

3.5.9 REFERENCES

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3.6 HYDROLOGY AND WATER QUALITY

3.6.1 METHODOLOGY

Information in this section is derived in part from the *Hydrology and Hydraulics Report, San Rafael Treatment Basin Stormwater Capture Project* (San Rafael Hydrology Study), dated January 2023; and the *San Pascual Stormwater Capture Facility; Stormwater Capture Study Technical Memorandum* (San Pascual Hydrology Study), dated September 2022, both prepared by Craftwater Engineering, Inc. (Craftwater 2023 and 2022, respectively). The two hydrology studies can be found in their entirety in Appendices E-1 and E-2 to this EIR.

Evaluation of the significance of potential water quality impacts is based on review of published information and reports regarding regional hydrology and surface water quality. Potential impacts on water quality were evaluated by considering the type of pollutants that the Project would generate during construction and operation. In determining the level of significance, this analysis recognizes that Project development must comply with all applicable federal, State, and regional laws and regulations designed to ensure compliance with water quality standards and waste discharge requirements.

3.6.2 EXISTING CONDITIONS

The Project site is situated within the Upper Los Angeles River Watershed (ULAR). The ULAR Watershed is a largely built-out, urbanized watershed of approximately 485 square miles, or 310,400 acres. Runoff from this watershed drains to over 50 linear miles of the Los Angeles River. One major tributary to the Upper Los Angeles River is the Arroyo Seco Channel, which makes up about 46.7 square miles of the total ULAR drainage area. The cities of Pasadena and South Pasadena make up about 20 percent of the Arroyo Seco tributary area (Craftwater 2022, Appendix E-2).

San Rafael Site

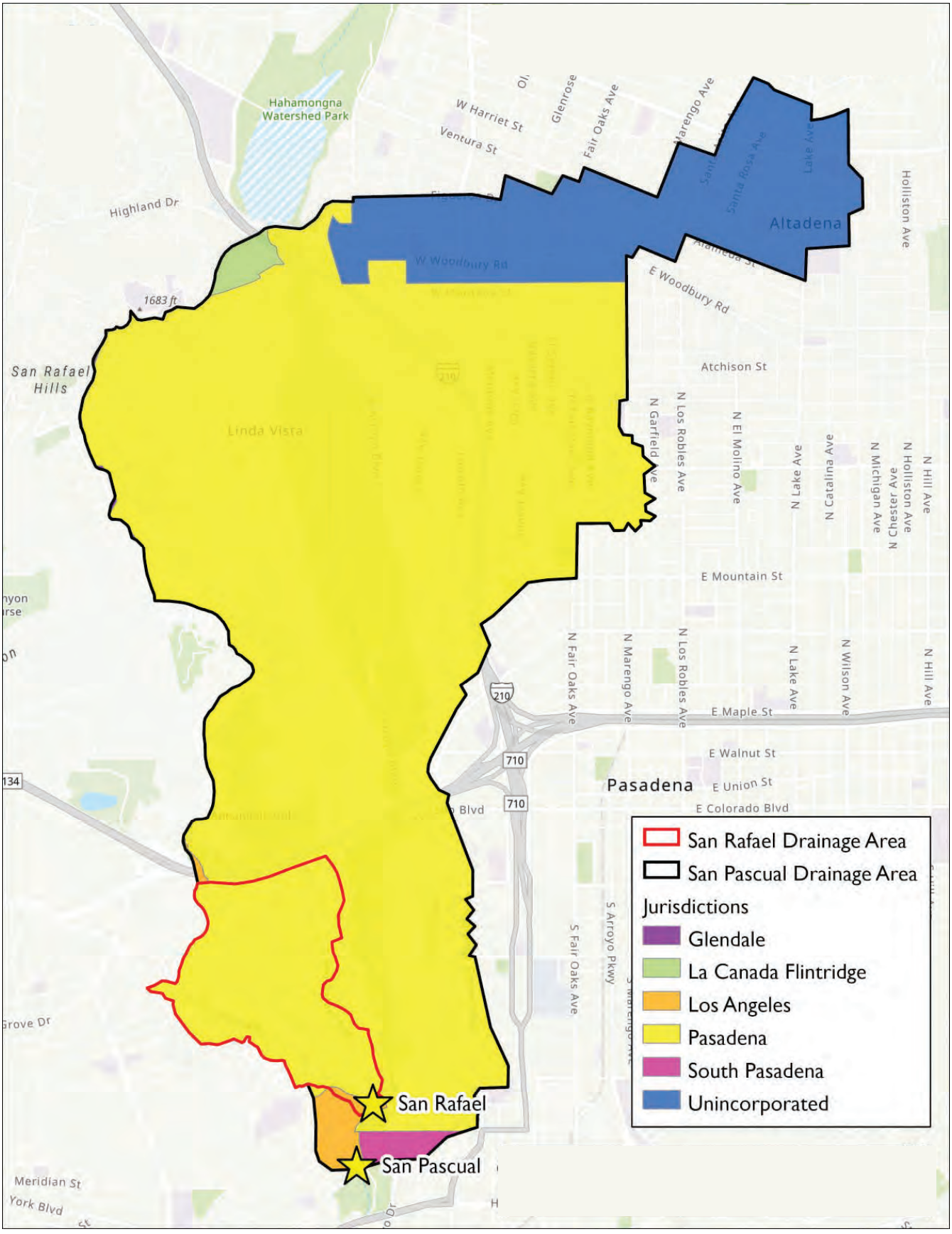
San Rafael Drainage Area

The drainage area of the San Rafael site encompasses 442 acres. This area consists of 54.9 acres of impervious surfaces, or approximately 12 percent. This area has an average annual runoff volume of 58 acre-feet of water (Craftwater 2023, Appendix E-1). The drainage area is shown on Exhibit 3.6-1. San Rafael and San Pascual Drainage Area.

Topography of San Rafael Site

The San Rafael site is located along the bottom of a steep slope. The site is located adjacent to the confluence of San Rafael Creek and Arroyo Seco Channel. The site is bounded on the east by San Rafael Creek[1], on the south by the Arroyo Seco Channel, and on the north by an approximately 40-foot-high slope that ascends to a residential property. The confluence of

[1] It is noted that although all infrastructure is on the west side of San Rafael Creek, some landscaping and site access occur on the east, creating the impression that the creek bisects the site.



Source: ULAR Watershed Management Group, City of Pasadena, City of South Pasadena 2022

San Rafael and San Pascual Drainage Areas

Exhibit 3.6-1

Arroyo Seco Water Reuse Project

N W E S

Map not to scale

PSOMAS

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the drainages occurs along the southern boundary of the site. The lower approximately 30 vertical feet of the north slope has an inclination that decreases from approximately 1.3 to 1.5:1(horizontal to vertical) in its upper reaches to approximately 3:1 (horizontal to vertical) near the base of the slope. The upper approximately 40 vertical feet of the slope ranges from 0.5:1 to 0.8:1 (horizontal to vertical) with some near vertical sections along a bedrock outcrop that extends across the slope face, approximately mid-slope height.

The Arroyo Seco Channel and San Rafael Creek are concrete-lined adjacent to the site, drain toward the south, and were approximately 10 and 5 feet in depth at the time of the survey, respectively. The site is accessed by two bridges that cross each drainage channel. According to the County of Los Angeles (2022), the site gently slopes downward toward the southwest with site elevations ranging from 620 feet above mean sea level (MSL) along the base of the slope at the north end of the site to approximately 615 feet MSL at the southwest corner of the site. The site generally consists of areas of bare soil and relatively dense vegetation of grasses, shrubs and scattered trees (Ninyo & Moore 2022a, Appendix F-1).

Groundwater

A subsurface evaluation for the Project was conducted by Ninyo & Moore, on April 27, 2022 and consisted of the drilling, logging, and sampling of five hollow-stem-auger borings (B-1, B-2, B-3, P-1 and P-2). Groundwater was encountered during drilling in boring B-3 at a depth of approximately 15 feet. The depth to groundwater was measured in boring B-3 approximately 25 minutes after completion of drilling at a depth of approximately 13.6 feet. The historic high depth to groundwater at the San Rafael Project site is approximately 20 feet. It would be anticipated that the depth to groundwater would be shallower than this published historic high depth to groundwater adjacent to the stream beds where surface flows occurs, especially during and after storm events. (Ninyo & Moore 2022a, Appendix F-1).

Fluctuations in the level of groundwater will occur due to variations in ground surface topography, subsurface stratification, rainfall, irrigation practices, groundwater pumping, and other factors that were not evident at the time of the field evaluation (Ninyo & Moore 2022b, Appendix F-2).

Flood Hazards

The San Rafael site is not located within a FEMA 100-year flood zone. This site is located within Flood Zone "X", which is described as "Areas Outside the 0.2% Annual Chance Floodplain" (FEMA 2008a).

San Pascual Site

San Pascual Drainage Area

The San Pascual site is located within the San Pascual Drainage Area, as shown on Exhibit 3.6-1, which encompasses 5,005 acres. This tributary area consists of 863 acres of

impervious surfaces, or approximately 17 percent. This area has an average annual runoff volume of 1,305 acre-feet of water (Craftwater Engineering, Inc. 2022, Appendix E-2).

Topography of San Pascual Site

The San Pascual site consists of a triangular-shaped area along the east side of the lower Arroyo Seco Channel along the southeastern end of the San Rafael Hills within the cities of Los Angeles and South Pasadena. The lot is bounded on the west and southwest by the Arroyo Seco Channel, on the northeast and east by Stoney Drive, and on the north by San Pascual Drive. Arroyo Park is located on the opposite side of Stoney Drive from the site. The area contains an existing topographic depression that functions as a drainage feature, sloping toward the central portion of the site and reaching approximately 8 to 10 feet below adjacent ground surfaces. The site is covered with dense vegetation consisting of grasses, shrubs, and various tree species including palm trees. An outlet to the Arroyo Seco Channel is located at the southern end of the site. The north and south ends of the site consist of undeveloped dirt and gravel areas. A dirt pathway lined by a wood fence traverses the northeast and southeast sides of the basin. According to the County of Los Angeles (2022), elevations of the site ground surface around the perimeter of the wetland range from approximately 602 feet above mean sea level (MSL) at the north end of the site to 596 feet above MSL at the south end. The bottom elevations of the existing wetland and south outlet are approximately 590 and 578 feet, respectively. The adjacent channel of Arroyo Seco is concrete-lined and on the order of 12 to 15 feet deep (elevation 590 to 578 feet MSL adjacent to the site) (Ninyo & Moore 2022b, Appendix F-2).

Groundwater

A subsurface evaluation was conducted on April 26, 27, and 28, 2022, and consisted of the drilling, logging, and sampling of five hollow-stem-auger borings (B-1A, B-2A, B-3A, and P-1A through P-4A). Seepage was encountered during drilling in borings B-1A, B-2A, and P-4A at depths of approximately 10.3, 12, and 8.5 feet, respectively. The depths of seepage suggest that perched groundwater is present at the contact between the younger alluvium and bedrock. The proximity of the borings to the edge of the wetland are an influence on the seepage conditions encountered.

Groundwater was measured in borings B-1A and B-2A at depths of approximately 20 and 25.5 feet, respectively, after completion of drilling. Groundwater was not encountered in boring B-3A to the total depth explored of approximately 31.5 feet. The historic high depth to groundwater at the San Pascual site is 20 feet.

Fluctuations in the level of groundwater will occur due to variations in ground surface topography, subsurface stratification, rainfall, irrigation practices, groundwater pumping, and other factors that were not evident at the time of the field evaluation (Ninyo & Moore 2022b, Appendix F-2).

Flood Hazards

The San Pascual site is not located within a FEMA 100-year flood zone. This site is located within Flood Zone "X", which is described as "Areas Outside the 0.2% Annual Chance Floodplain" (FEMA 2008b).

3.6.3 RELEVANT PROGRAMS AND REGULATIONS

Federal

Clean Water Act

In 1972, the Federal Water Pollution Control Act (Clean Water Act or CWA) was amended to require National Pollutant Discharge Elimination System (NPDES) permits for the discharge of pollutants to waters of the United States[2] from any point source.[3] Final regulations regarding stormwater discharges were issued on November 16, 1990, and they require that municipal separate storm sewer system (MS4) discharges and industrial (including construction) stormwater discharges to surface waters be regulated by an NPDES permit, as discussed further below. MS4s are a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) and are owned or operated by a public body that has jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes. The MS4s are designated or used for collecting or conveying stormwater only, not wastewater or combined sewage.

Clean Water Act Section 303(d) and Total Maximum Daily Loads

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point source pollutants are controlled with pollutant discharge regulations or waste discharge requirements (WDRs). Non-point source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas. Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, and the amount and frequency of rainfall and irrigation practices. The highest pollutant concentrations usually occur at the beginning of the wet season during the "first flush."

The CWA requires that the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs) conduct a Water Quality Assessment that addresses the condition of its surface waters (required in Section 305[b] of the CWA). Water bodies not meeting water quality standards are deemed "impaired," and under CWA Section

[2] Waters of the United States include all waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide and all interstate waters, including interstate wetlands (33 *Code of Federal Regulations* 328.3).

[3] Point sources are discrete water conveyances, such as pipes or man-made ditches.

303(d), are placed on a list of impaired waters for which a total maximum daily load (TMDL) must be developed for the impairing pollutant(s). The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved. This Water Quality Assessment is then submitted to the U.S. Environmental Protection Agency (USEPA) for review and approval. The Water Quality Assessment integrates the requirements of Sections 305(b) and 303(d) of the CWA and is referred to as the "Integrated Report."

National Pollutant Discharge Elimination System Program

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges, including point source waste discharges and non-point source stormwater runoff. The Regional Water Quality Control Boards (RWQCBs) in California are responsible for implementing the NPDES permit system.

"Non-point source" pollution originates over a wide area rather than from a definable point. Non-point source pollution often enters a receiving water in the form of surface runoff and is not conveyed by way of pipelines or discrete conveyances. Two types of non-point source discharges are controlled by the NPDES program: discharges caused by general construction activities, and the general quality of stormwater in municipal stormwater systems. The goal of the NPDES non-point source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. Each NPDES permit identifies limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits.

Under Section 401 of the CWA, every applicant for a federal permit or license for any activity which may result in a discharge of dredge or fill material to a water body must obtain State Water Quality Certification (certification). The 401 certification provides that the proposed activity will comply with state water quality standards (i.e., beneficial uses, objectives, and anti-degradation policy). The CWA Section 404 permits and authorizations, described in the next paragraph, are subject to Section 401 certification by the RWQCB.

Section 404 of the CWA regulates the discharge of dredged and fill material into "waters of the U.S.," including wetlands. Activities in "waters of the U.S." regulated under this program include fill for development (including physical alterations to drainages to accommodate storm drainage, stabilization, and flood-control improvements); water resource projects (such as dams and levees); infrastructure development (such as highways and airports); and conversion of wetlands to uplands.

Section 402 of the CWA requires that the EPA establish regulations for permitting municipal and industrial stormwater discharges under the NPDES permit program. The regulations require that Municipal Separate Storm Sewer System (MS4) discharges to surface waters be regulated by a NPDES permit. An MS4 is a publicly owned conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs,

gutters, ditches, man-made channels, or storm drains) designed or used for collecting or conveying stormwater separately from wastewater.

National Toxics Rule and California Toxics Rule

In 1992, EPA issued the National Toxics Rule (NTR) (40 CFR Section 131.36) under the CWA to establish numeric criteria for priority toxic pollutants in 14 states and jurisdictions, including California, to protect human health and aquatic life. The rule established water quality standards for 42 pollutants for which water quality criteria exist under CWA Section 304(a), but for which the respective states had not adopted adequate numeric criteria.

The California Toxics Rule (CTR) (40 CFR. Section 131.38) is a federal regulation issued by the EPA in May 2000. The CTR carried forward the previously established criteria of the NTR, thereby providing a single document listing California's fully adopted and applicable water quality criteria for priority pollutants.

Federal Antidegradation Policy

The federal antidegradation policy, established in 1968, is designed to protect existing uses and water quality, and national water resources. The federal policy directs states to adopt a statewide policy that includes the following primary provisions:

- Existing instream uses and the water quality necessary to protect those uses shall be maintained and protected
- Where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development
- Where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance that water quality shall be maintained and protected

National Flood Insurance Program

The National Flood Insurance Act of 1968 established the National Flood Insurance Program in order to provide flood insurance within communities that were willing to adopt floodplain management programs to mitigate future flood losses. The act also required the identification of all floodplain areas within the United States and the establishment of flood-risk zones within those areas. FEMA is the primary agency responsible for administering programs and coordinating with communities to establish effective floodplain management standards. FEMA is responsible for preparing Flood Insurance Rate Maps that delineate the areas of known special flood hazards and their risk applicable to the community. The program encourages the adoption and enforcement by local communities of floodplain management ordinances that reduce flood risks. In support of the program,

FEMA identifies flood hazard areas throughout the United States on FEMA flood hazard boundary maps.

State

Urban Water Management Planning Act

California urban water providers are required by state law to develop an Urban Water Management Plan (UWMP) to ensure sufficient water supplies are available to meet the long-term needs of its customers during normal, dry, or multiple-dry years. The Urban Water Management Planning Act requires urban water suppliers, which provide water for municipal purposes to more than 3,000 customers or supply more than 3,000 acre-feet of water annually, to develop an UWMP every five years, in the years ending in zero and five.

In the act, the California Legislature declared that the waters of the state are a limited and renewable resource subject to ever increasing demands, that the conservation and efficient use of urban water supplies are of a statewide concern, that successful implementation of plans is best accomplished at the local level, that conservation and efficient use of water shall be actively pursued to protect both the people of the state and their water resources, that conservation and efficient use of urban water supplies shall be a guiding criterion in public decisions, and that urban water suppliers shall be required to develop water management plans to achieve conservation and efficient use.

The City of South Pasadena, the Pasadena Water and Power Department, and the Los Angeles Department of Water and Power have prepared UWMPs for the 2020 planning year in compliance with the requirements of the act, as well as the additional reporting requirements of the Water Conservation Act of 2009. The 2020 UWMPs prepared by the three aforementioned agencies are updates of the 2015 UWMPs and address the water supply sources, projected demands, and supply reliability for the cities of Los Angeles, Pasadena, and South Pasadena. The 2025-cycle UWMPs are being prepared by the said municipalities and will be adopted by the State deadline of July 1, 2026.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, Fish and Game Code Sections 1600 – 1605 require a project proponent to notify CDFW before initiating any project that may impact a river, stream, or lake. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks, and that support fish or other aquatic life. It also includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

In addition, Fish and Game Code, Section 1602 requires that any entity notify the CDFW of a project, prior to beginning construction, that will: (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream,

or lake. If the CDFW determines that the project may adversely affect existing fish and wildlife resources, the project applicant and CDFW must enter into a Lake and Streambed Alteration Agreement.

California Porter-Cologne Act

California's Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act) grants the SWRCB and the RWQCBs the power to protect surface water and groundwater quality and is the primary vehicle for implementing California's responsibilities under the CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies; regulate discharges of waste to surface and groundwater; regulate waste disposal sites; and require cleanup of discharges of hazardous materials and other pollutants.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The Basin Plan must conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State Water Policy. The Basin Plan establishes beneficial uses for surface and groundwater in the region and sets forth narrative and numeric water quality standards to protect those beneficial uses. The RWQCBs are also authorized to enforce discharge limitations; take actions to prevent violations of these limitations from occurring; and conduct investigations to determine the status of the quality of any of the waters of the State. Civil and criminal penalties are also applicable to people who violate the requirements of the Porter-Cologne Act or any SWRCB/RWQCB orders.

National Pollutant Discharge Elimination Program

As discussed above, the NPDES permit program is administered by the nine RWQCBs in the state. These boards have the mandate to develop and enforce water quality objectives and implementation plans within their regions. If discharges from industrial, municipal, and other facilities go directly to surface waters, those project applicants must obtain permits from the applicable RWQCB. An individual NPDES permit is specifically tailored to a facility. A general NPDES permit covers multiple facilities in a specific activity category such as construction activities. The proposed Project is located within the jurisdiction of the Los Angeles RWQCB.

Construction General Permit

Pursuant to Section 402(p) of the CWA, which requires regulations for permitting certain stormwater discharges, the State Water Resources Control Board (SWRCB) has issued the Statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2022-0057-DWQ, NPDES No. CAS000002, which became effective on September 1, 2023) (Construction General Permit). Individual NPDES permits or Construction General Permit coverage must be obtained for discharges of stormwater from construction sites with a disturbed area of one or more acres. To obtain coverage, the Project Applicant/Property Owner must retain the services of a certified Qualified SWPPP Developer (QSD) to prepare a SWPPP for the Project. The Project Applicant/Property Owner, or the contractor, if

specifically delegated, would electronically submit permit registration documents prior to beginning construction activities in the Storm Water Multi-Application Report Tracking System (SMARTS), which would consist of a Notice of Initiation (NOI), Risk Assessment, Post-Construction Calculations, a site map, the SWPPP, a signed certification statement, and the first annual fee. Project construction would also be required to adhere to the SCAQMD's Rule 402 (Nuisance) and Rule 403 (Fugitive Dust) to avoid and minimize airborne dust from leaving the site.

General Waste Discharge Requirements for Construction Non-Stormwater Discharges

Dewatering or discharges from other specific construction activities (e.g., water line testing, sprinkler system testing) are sometimes required to proceed with Project implementation. Discharges from dewatering operations can contain high levels of fine sediments, which if not properly treated, could lead to exceedance of the NPDES requirements. A NPDES Permit for dewatering discharges was adopted by the Los Angeles RWQCB on September 13, 2018 (Order No. R4-2018-0125, General NPDES Permit No. CAG994004).

Similar to the Construction General Permit, to be authorized to discharge under this Permit, the developer must submit a Notice of Intent (NOI) at least 45 days prior to discharging groundwater generated from dewatering operations during construction, in accordance with the requirements of this Permit. The authorization shall remain in full force until the Permit expires. In accordance with the NOI, among other requirements and actions, the discharger must demonstrate that the discharges shall not cause or contribute to a violation of any applicable water quality objective/criteria for the receiving waters, perform reasonable potential analysis using a representative sample of groundwater or wastewater to be discharged.

The General Waste Discharge Requirements (WDRs) include provisions mandating notification, testing, and reporting of dewatering and testing-related discharges, and contain numeric and performance-based effluent limits depending upon the type of discharge. The General WDRs authorize such construction-related activities so long as all conditions of the permit are fulfilled.

Statewide General NPDES Permit for Discharges from Drinking Water Systems

This Order is an NPDES general permit that authorizes discharges from drinking water systems. This Order provides regulatory coverage for short-term or seasonal planned and emergency (unplanned) discharges resulting from a water purveyor's essential operations and maintenance activities undertaken to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and the State Water Board's Division of Drinking Water permitting requirements for providing reliable delivery of safe drinking water.

Planned discharges include regularly scheduled, automated, or non-regularly scheduled activities that must take place to comply with mandated regulations and that the water purveyor knows in advance will result in a discharge to surface water. Emergency discharges include unplanned discharges that occur due to facility leaks, system failures, operational errors, or catastrophic events for which the water purveyor is not aware of the discharge

until after the discharge has commenced. Planned and emergency discharges may occur directly, through a constructed storm drain or through another conveyance system, to waters of the United States (U.S.).

The Federal Water Pollution Control Act (also referred to as the Clean Water Act) section 402 requires that a discharge of any pollutant or combination of pollutants to surface waters that are deemed waters of the U.S., with certain exceptions, be regulated by a NPDES permit. (For the purpose of this Order, the terms "waters of the United States [or U.S.]", "surface waters" and "receiving waters" are used interchangeably unless noted otherwise.) On September 22, 1989, the U.S. Environmental Protection Agency (U.S. EPA) granted the State of California, through the State Water Resources Control Board (State Water Board) and the Regional Water Quality Control Boards (Regional Water Boards), the authority to issue NPDES permits pursuant to title 40 Code of Federal Regulations parts 122 and 123.

Discharges of a pollutant from a drinking water system, regardless of the size of the system, are required to be regulated by an NPDES permit if the discharges flow into a water of the U.S. Title 40 Code of Federal Regulations part 122.28 provides for issuance of general permits to regulate a category of dischargers if they involve the same or substantially similar types of operations; discharge the same type of waste; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a general order rather than individual orders. Discharges from drinking water systems that result from mandated activities to protect public health are of substantially similar types of operations, discharging the same type of waste.

This Order requires all water purveyors in California with drinking water system discharges to waters of the U.S. as described in Section I.B of this Order, except those water purveyors that meet the exception criteria identified in section I.A of this Order, to obtain NPDES regulatory coverage through enrollment in this statewide NPDES General Order. The water purveyor shall submit an application package to the State Water Board in accordance with section II.C.1 Application Package Requirements any time after the effective date of the permit but no later than September 1, 2015 (SWRCB 2014).

State Antidegradation Policy

In 1968, as required under federal antidegradation policy, the State Water Resources Control Board adopted an antidegradation policy aimed at maintaining high quality for waters in California (Resolution No. 68-16). The antidegradation policy applies to the disposal of waste to high-quality surface water and groundwater. This policy requires that the quality of existing high-quality water be maintained unless the state finds that any change will be consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in policies as of the date on which such policies became effective. The policy provides as follows:

- Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent with maximum benefit to the

people of the state and would not unreasonably affect present and anticipated beneficial uses of such water.

- Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements.

The antidegradation policy also requires best practicable treatment or control (BPTC) of discharges to high-quality waters to assure that pollution or nuisance will not occur, and that the highest water quality consistent with maximum benefit to the people of the state will be maintained.

California Toxics Rule

On May 18, 2000, the State Environmental Protection Agency (CalEPA) promulgated numeric water quality criteria for priority toxic pollutants and other provisions for water quality standards to be applied to waters in the State of California. The CalEPA promulgated this rule based on the Administrator's determination that the numeric criteria are necessary in California to protect human health and the environment. The rule fills a gap in California's water quality standards that was created in 1994, when a state court overturned the state's water quality control plans containing water quality criteria for priority toxic pollutants. Thus, California has been without numeric water quality criteria for many priority toxic pollutants, as required by the CWA, necessitating this action by CalEPA. These federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA.

California Water Code

The California Water Code includes 22 kinds of districts or local agencies with specific statutory provisions to manage surface water. Many of these agencies have statutory authority to exercise some forms of groundwater management. For example, a Water Replenishment District (California Water Code Section 60000 et seq.) is authorized to establish groundwater replenishment programs and collect fees for that service, while a Water Conservation District (California Water Code Section 75500 et seq.) can levy groundwater extraction fees. Through special acts of the legislature, 13 local agencies have been granted greater authority to manage groundwater. Most of these agencies, formed since 1980, have the authority to limit export and control some in-basin extraction upon evidence of overdraft or the threat of an overdraft condition. These agencies can also generally levy fees for groundwater management activities and for water supply replenishment.

California Green Building Code

The California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations is designed to improve public health, safety, and general welfare by using design and construction methods that reduce the negative environmental impact of development and to encourage sustainable construction practices. The standards provide mandatory direction to developers of all new construction and renovations of residential and

non-residential structures with regard to all aspects of design and construction, including, but not limited to, site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

California Sustainable Groundwater Management Act

In 2014, the California Sustainable Groundwater Management Act (SGMA) was passed. The law provides authority for agencies to develop and implement groundwater sustainability plans or alternative plans that demonstrate the basin is being managed sustainably.

Local

City of Pasadena

Pasadena Municipal Code

Title 8, Chapter 8.70

Title 8 of the City of Pasadena Municipal Code (Municipal Code) contains a number of regulations that address hydrology and water quality. Chapter 8.70 of the Municipal Code, Stormwater Management and Discharge Control, contains requirements that regulate non-stormwater discharges to the municipal stormwater system; provide for the control of spillage, dumping or disposal of materials into the municipal storm-water system; and reduce pollutants in stormwater and urban runoff to the maximum extent practicable.

Article 4, Chapter 17.44, Section 17.44.050

Pasadena adopts the State Model Water Efficient Landscape Ordinance (MWELO) as its standard for water-efficient landscaping. As such, Section 17.44.050 of the Municipal Code formally incorporates California's MWELO, as published in Title 23, CCR, Chapter 2.7, into Pasadena's zoning requirements. All administrative procedures, enforcement, and technical requirements for landscaping must follow MWELO. If any definitions in Pasadena's code conflict with MWELO, the MWELO definitions take precedence when applying water-efficiency requirements.

2020 Urban Water Management Plan

The Pasadena Department of Water and Power (PWP) published its 2020 UWMP in July of 2021. The UWMP supports Pasadena's long-term resource planning to ensure adequate water supplies for current and future demands and covers approximately 25 square miles, including parts of Altadena, East Pasadena, and San Gabriel. The UWMP indicated that there are adequate supplies to meet demands during a normal year, slightly reduced groundwater but sufficient imported water during a single dry year, and consistent groundwater and imported water supplies during five consecutive dry years (PWP 2021).

City of South Pasadena

South Pasadena Municipal Code

Chapter 23 – Stormwater and Urban Runoff Pollution Control

Stormwater and urban runoff is regulated under Chapter 23 of the South Pasadena Municipal Code (SPMC) in accordance with the Clean Water Act. The purpose of this chapter is to protect and improve water quality of receiving waters by reducing illicit discharges to the municipal stormwater system to the maximum extent practicable; eliminating illicit connections to the municipal stormwater system; eliminating spillage, dumping, and disposal of pollutant materials into the municipal stormwater system; reducing pollutant loads in stormwater and urban runoff from land uses and activities identified in the municipal NPDES permit; and reducing the contribution of pollutants from the MS4 through interagency coordination.

The intent of Chapter 23 is to enhance and protect the water quality of the receiving waters of the United States in a manner that is consistent with the Clean Water Act and acts amendatory thereof or supplementary thereto; applicable implementing regulations, the municipal NPDES permit and any amendment, revision, or reissuance thereof.

Chapter 35 – Water, Article III – Water Efficient Landscape

The City created Article III in response to then Governor Jerry Brown's Executive Order No. B-29-15. Article III regulates the design, installation, maintenance, and management of water efficient landscaping in new development to promote water conservation.

2020 Urban Water Management Plan

The City of South Pasadena published its 2020 UWMP in October of 2021. The UWMP ensures long-term water supply reliability for South Pasadena. The City constitutes an urban water supplier since the City provides water for more than 3,000 customers within a service area of approximately 3.4 square miles, serving most residents of the City. The UWMP indicated that there are adequate supplies to meet demands during a normal year, slightly reduced groundwater but sufficient imported water during a single dry year, and consistent groundwater and imported water supplies during five consecutive dry years (City of South Pasadena 2021).

City of South Pasadena General Plan

The South Pasadena General Plan contains policies aimed at reducing stormwater runoff, increasing awareness and preparation for emergencies, and minimizing threats to life and damage to structures from natural and human-caused hazards.

City of Los Angeles

Los Angeles Municipal Code

Chapter VI, Article 4.4 – Stormwater and Urban Runoff Pollution Control

Article 4.4 of Chapter VI of the Los Angeles Municipal Code (LAMC) sets forth uniform requirements and prohibitions for discharges and places of discharge into the storm drain system and receiving waters necessary to adequately enforce and administer all federal and state laws, legal standards, orders and/or special orders that provide for the protection, enhancement and restoration of water quality. The City seeks to protect and promote the public health, safety and general prosperity of its citizens with the implementation of the following objectives:

1. To comply with all Federal and State laws, lawful standards and orders applicable to stormwater and urban runoff pollution control;
2. To prohibit any discharge which may interfere with the operation of, or cause any damage to the storm drain system, or impair the beneficial use of the receiving waters;
3. To prohibit illicit discharges to the storm drain system;
4. To reduce stormwater runoff pollution;
5. To reduce non-stormwater discharge to the storm drain system to the maximum extent practicable; and
6. To develop and implement effective educational outreach programs designed to educate the public on issues of stormwater and urban runoff pollution.

Any owner or operator of a facility or business within the City of Los Angeles engaged in activities or operations as listed in the Critical Sources Categories, Section III of the Board's Rules and Regulations, shall be required to implement Best Management Practices (BMPs) as promulgated in the Rules and Regulations. Any owner/developer of a property under construction within the City of Los Angeles or their designated representative shall be required to implement the stormwater pollution control requirements for construction activities as depicted in the project plans approved by the Department of Building and Safety. In the event a specified BMP proves to be ineffective or infeasible, the Director of Building and Safety may require additional and/or alternative, site-specific BMPs or conditions deemed appropriate to achieve the objectives of this ordinance as defined in Subsection B of LAMC Section 64.70.

Section 99.04.304 – Outdoor Water Use

99.04.303.3 Metering Outdoor Water Use.

A landscape water meter provided by the City of Los Angeles Department of Water and Power shall be installed for landscape irrigation for the following:

1. New construction projects, as defined by the California Department of Water Resources Model Water Efficient Landscape Ordinance, with aggregate landscape area over 500 square feet.
2. When required by the California Department of Water Resources Model Water Efficient Landscape Ordinance.
3. Additions and alterations, with a valuation of $200,000 or more, where the entire potable water system is replaced, including all underground piping to the existing meter.

2020 Urban Water Management Plan

The City of Los Angeles' Department of Water and Power (LADWP) published its 2020 UWMP as an update to its 2015 UWMP. The City's 2020 UWMP presents general policies which guide LADWP's decision making process to maintain and secure a sustainable water supply for the City. The 2020 UWMP serves as the master plan for water supply and resource management consistent with LADWP's goals and policy objectives and provides full compliance with California's Urban Water Management Planning Act (LADWP 2020).

3.6.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. The project would result in a significant adverse impact related to hydrology and water quality if it would:

Threshold 3.6a Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Threshold 3.6b Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Threshold 3.6c Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which 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.

Threshold 3.6d In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

Threshold 3.6e Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

3.6.5 REGULATORY REQUIREMENTS

RR HYD-1 The Project is required to prepare a SWPPP to demonstrate compliance with the SWRCB's NPDES Construction General Permit and all Best Management Practices (BMPs) outlined in the SWPPP must be implemented during construction.

3.6.6 ENVIRONMENTAL IMPACTS

Threshold 3.6a: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact. The Project site is within the jurisdiction of the Los Angeles RWQCB. The Project could result in short-term, construction-related impacts to surface water quality from grading and other construction activities (e.g., erosion, spills, and leaks from construction equipment). In addition, since the Project site would have more than one acre of ground disturbance, compliance with the SWRCB's NPDES Construction General Permit would be required (RR HYD-1). This includes preparation of a project-specific SWPPP, which describes practices to reduce pollutants in stormwater discharges from the construction site by implementing BMPs, such as sandbags, silt fences, stabilized construction entrances, and detention basins (RR HYD-1). Compliance with stormwater management and pollution control BMPs, as outlined in the SWPPP required for the Project consistent with the NPDES Construction General Permit would ensure the pollutant levels in runoff do not violate standards.

Operation of the Project would not violate any water quality standards, as the Project would contribute to meeting the ULAR water quality targets and would not introduce new contaminants to the runoff from the site. More specifically, the Project includes use of man-made treatment wetlands as a major feature of both BMPs. Treatment wetlands are constructed ecosystems that remove pollutants by mimicking natural processes to slow, detain, capture, and absorb and infiltrate water in a manner that protects, enhances, and/or restores habitat, green space, and usable open space. The San Rafael and San Pascual sites would each have diversion structures with maximum diversion rates of 10 and 15 cubic feet per second (cfs), respectively, for a total Project diversion rate of 25 cfs. Diversion structures

generally apply to 'off-line' regional projects where stormwater is diverted from a major water conveyance and directed to that project at a predetermined maximum rate.

Other components of the BMPs include post-treatment filtration systems, infiltration basins, inlets, outlets, drains, new or restored trails, new pedestrian bridge/cap (over San Rafael Creek), native landscaping, and hardscape elements including reclaimed wood log benches, post-and-rail fencing, concrete seat walls, and informational signs. Existing paths along the edge of the Channel would be rehabilitated and expanded as needed to provide vehicular access to the diversion structures for operation and maintenance activities, and additional trails would be established at both sites. The Project would also create a watershed education opportunity regarding its contributions towards protecting the water quality in the Arroyo Seco. An estimated two to three informational signs, total for both sites, would be installed in and around the new treatment wetlands and improved trails to provide park user education.

The Project as proposed, in line with green infrastructure systems, would provide water quality benefits for multiple jurisdictions within the 5,005-acre drainage area in which the two sites are located.

The Project would include an irrigation system that is for the early stages of plant establishment period only. As further discussed below, once the plants have formed a stable, healthy root system, the irrigation system is shut off and removed or left inactive. Water percolating into soils from the infiltration basin at the San Rafael site would further treat that water. Therefore, in light of the above, construction and operation of the Project would not degrade surface or groundwater quality. There would be less than significant impacts, and no mitigation is required.

Threshold 3.6b: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact. The Project would minimally increase demand for water associated with use of the proposed irrigation system to support the new landscaping. Irrigation is typically needed only during the early stages of plant establishment. At first, consistent watering supports root development and helps the new vegetation adapt to the site conditions. Once the plants have formed a stable, healthy root system and can rely on natural rainfall or ambient moisture, the irrigation system is shut off and removed or left inactive. This transition ensures long-term sustainability while reducing water use and maintenance demands. Additionally, a nominal amount of water may be used during construction for dust suppression. These potable water supplies may be in part derived from the City's groundwater sources but would not change the volume of water withdrawn from the Raymond Basin, as such withdrawal is controlled by the Raymond Basin Management Board. Moreover, the Project would result in an estimated water supply benefit of 320 af per year on average, from approximately 258 af of groundwater recharge and approximately 30 af of irrigation reuse at the Arroyo Seco Golf Course. The irrigation reuse would reduce

dependence of potable water use at this recreational facility. There would be no adverse impact, and no mitigation is required.

Threshold 3.6c: Would the Project substantially alter the existing drainage pattern of the site or area including the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which 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

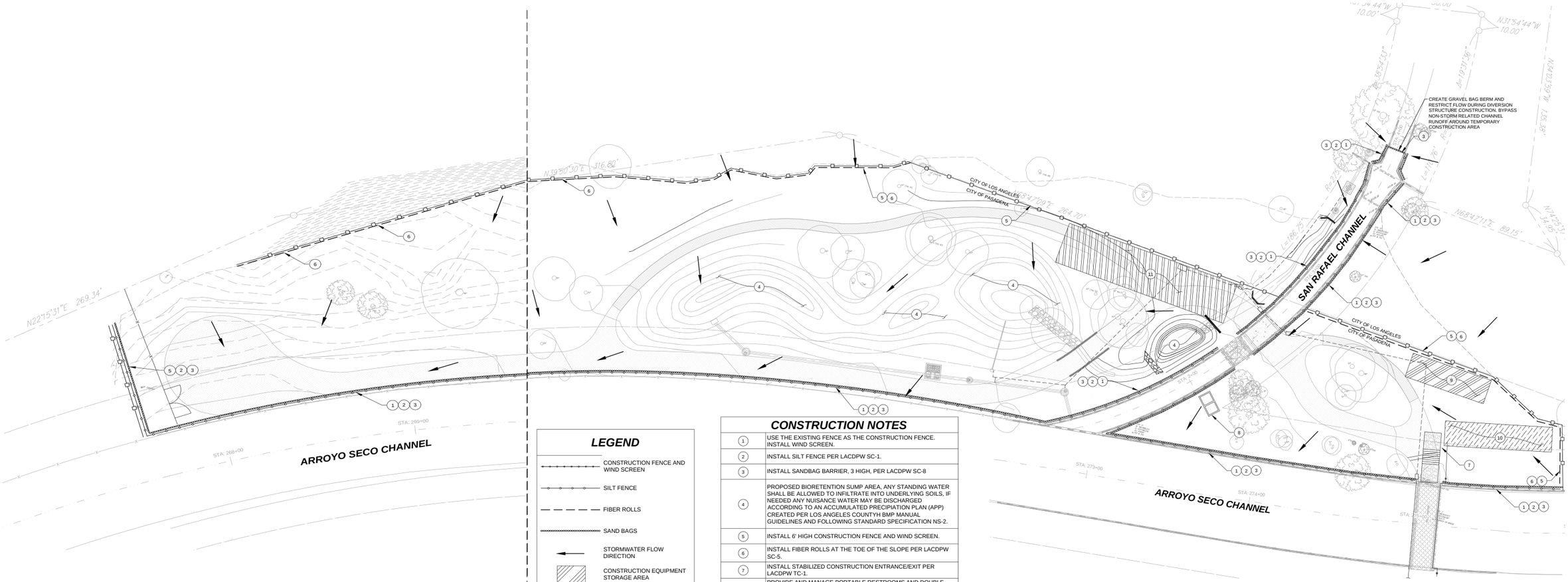
(iv) impede or redirect flood flows?

(i)

Less than Significant Impact. The Project would change the existing drainage condition on the San Rafael and San Pascual sites. The change at the San Rafael site would represent a new stormwater diversion into new treatment wetlands. The change at the San Pascual site would represent the reuse of an existing diversion and treatment wetland. Regardless, at both sites the stormwater capture and treatment BMPs have been designed to ensure sediment entrained in the stormwater as well as surrounding soils are adequately managed to allow the proper functioning of the BMPs through a Project-specific Erosion Control Plan, as shown as Exhibits 3.6-2, San Rafael Construction Erosion Control Plan and 3.6-3, San Pascual Construction Erosion Control Plan. More specifically, sediments at the San Rafael site are captured in a forebay before flows enter the treatment wetlands. The forebay will be mechanically cleaned once sediment accumulation reaches a specified capacity. At the San Pascual site, a CDS pretreatment unit removes sediments before the flow enters the pump station. In light of this, the Project would not result in substantial erosion or siltation on- or off-site. There would be a less than significant impact, and no mitigation is required.

(ii) and (iii)

Less than Significant Impact. The Project would not result in increased stormwater runoff volumes. The proposed BMPs would include a small extent of new impervious surfaces, such as concrete seat walls and the San Pascual pretreatment infrastructure concrete cover (refer to Exhibit 2-14). However, the treatment wetlands have been designed to optimize infiltration and would facilitate a greater amount of on-site infiltration than in the existing condition. Therefore, there would be no adverse effects related to stormwater drainage capacity and the Project would not substantially increase the rate or amount of runoff such that on- or off-site flooding would occur. There would be a less than significant impact, and no mitigation is required.



LEGEND

- CONSTRUCTION FENCE AND WIND SCREEN
- SILT FENCE
- FIBER ROLLS
- SAND BAGS
- STORMWATER FLOW DIRECTION
- CONSTRUCTION EQUIPMENT STORAGE AREA
- MATERIAL STORAGE AREA
- STOCKPILE AREA
- STABILIZED CONSTRUCTION ENTRANCE/EXIT

CONSTRUCTION NOTES

1	USE THE EXISTING FENCE AS THE CONSTRUCTION FENCE. INSTALL WIND SCREEN.
2	INSTALL SILT FENCE PER LACDPW SC-1.
3	INSTALL SANDBAG BARRIER, 3 HIGH, PER LACDPW SC-8
4	PROPOSED BIORETENTION SUMP AREA, ANY STANDING WATER SHALL BE ALLOWED TO INFILTRATE INTO UNDERLYING SOILS, IF NEEDED ANY NUISANCE WATER MAY BE DISCHARGED ACCORDING TO AN ACCUMULATED PRECIPIATION PLAN (APP) CREATED PER LOS ANGELES COUNTYH BMP MANUAL GUIDELINES AND FOLLOWING STANDARD SPECIFICATION NS-2.
5	INSTALL 6' HIGH CONSTRUCTION FENCE AND WIND SCREEN.
6	INSTALL FIBER ROLLS AT THE TOE OF THE SLOPE PER LACDPW SC-5.
7	INSTALL STABILIZED CONSTRUCTION ENTRANCE/EXIT PER LACDPW TC-1.
8	PROVIDE AND MANAGE PORTABLE RESTROOMS AND DOUBLE CONTAINMENT PER LACDPW WM-9. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.
9	PROVIDE AND MANAGE CONSTRUCTION PARKING AREA PER LACDPW NS-8, NS-9, AND NS-10. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.
10	PROVIDE AND MANAGE MATERIAL STORAGE AREA PER LACDPW WM-1 AND WM-2. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.
11	PROVIDE AND MANAGE STOCKPILE AREA PER LACDPW WM-3. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.

Source: Craftwater Engineering, Inc 2024

San Rafael Construction Erosion Control Plan

Exhibit 3.6-2

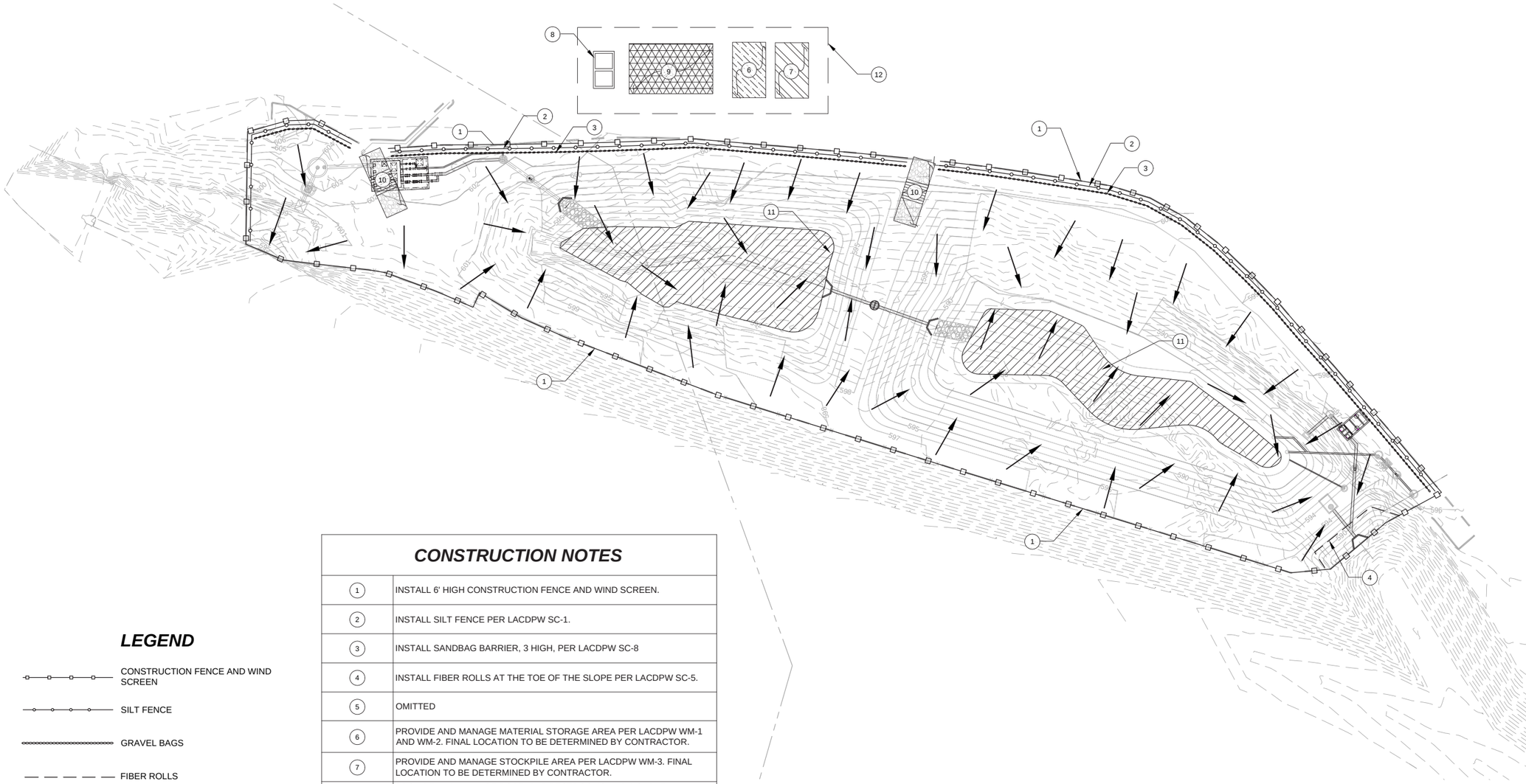
Arroyo Seco Water Reuse Project

Map not to scale

PSOMAS

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CONSTRUCTION NOTES

1	INSTALL 6' HIGH CONSTRUCTION FENCE AND WIND SCREEN.
2	INSTALL SILT FENCE PER LACDPW SC-1.
3	INSTALL SANDBAG BARRIER, 3 HIGH, PER LACDPW SC-8
4	INSTALL FIBER ROLLS AT THE TOE OF THE SLOPE PER LACDPW SC-5.
5	OMITTED
6	PROVIDE AND MANAGE MATERIAL STORAGE AREA PER LACDPW WM-1 AND WM-2. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.
7	PROVIDE AND MANAGE STOCKPILE AREA PER LACDPW WM-3. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.
8	PROVIDE AND MANAGE PORTABLE RESTROOMS AND DOUBLE CONTAINMENT PER LACDPW WM-9. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.
9	PROVIDE AND MANAGE CONSTRUCTION PARKING AREA PER LACDPW NS-8, NS-9, AND NS-10. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.
10	INSTALL STABILIZED CONSTRUCTION ENTRANCE/EXIT PER LACDPW TC-1.
11	ANY PONDED WATER FOLLOWING RAIN EVENT THAT DELAYS CONSTRUCTION ACTIVITIES SHALL BE DEWATERED BY THE CONTRACTOR IN ACCORDANCE WITH APPROPRIATE DEWATERING BMPS (SEE NS-2) AND IN ACCORDANCE WITH LOCAL PERMITS AS APPLICABLE.
12	IF ADEQUATE STORAGE SPACE IS NOT AVAILABLE ON-SITE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND ACQUIRE ADDITIONAL STORAGE SPACE OFF-SITE.

LEGEND

- CONSTRUCTION FENCE AND WIND SCREEN
- SILT FENCE
- GRAVEL BAGS
- FIBER ROLLS
- STORMWATER FLOW DIRECTION
- CONSTRUCTION EQUIPMENT STORAGE AREA
- MATERIAL STORAGE AREA
- STOCKPILE AREA
- CONSTRUCTION PARKING AREA
- STABILIZED CONSTRUCTION ENTRANCE/EXIT

Source: Craftwater Engineering, Inc 2024

San Pascual Construction Erosion Control Plan

Exhibit 3.6-3

Arroyo Seco Water Reuse Project

Map not to scale

PSOMAS

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(iv)

No Impact. The Project site is not located in the FEMA 100-year Flood Hazard Area and is designated as "Other Flood Areas – Zone X," which includes areas potentially subject to 500-year floods, areas of 100-year floods with average depths of less than one foot, and areas protected by levees (Ninyo & Moore 2022a, 2022b, Appendices G-1 and G-2). Therefore, the Project would not impede or redirect flood flows. There would be no impact, and no mitigation is required.

Threshold 3.6d: Would the Project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact. Threshold 3.6(c)(iv) above addressed flood hazards. Based on the discussion above, neither the San Rafael site nor the Pascual site is located within a FEMA 100-year flood zone. Both sites are within Flood Zone "X", which is described as "Areas Outside the 0.2% Annual Chance Floodplain" (FEMA 2008a). Additionally, the Project site is more than 25 miles from the Pacific Ocean, and as such, no impacts related to tsunami or seiche would result, and no mitigation is required.

However, it is noted that the Arroyo Seco corridor is located within the dam inundation zone associated with the Devil's Gate Dam, a flood control facility operated by the Los Angeles County Department of Public Works. A dam inundation area could be flooded in the unlikely event of a dam failure or uncontrolled release. Nevertheless, catastrophic dam failure is rare, and dams are subject to ongoing inspection and maintenance. Additionally, the Project would not expose people or structures to significant risk beyond existing conditions, as the Project does not propose development that would generate new population or create new structures. Therefore, potential impacts are less than significant, and no mitigation is required.

Threshold 3.6e: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. As discussed under Threshold 3.6(a) above, operation of the Project would not violate any water quality standards. The LARWQCB's Water Quality Control Plan (Basin Plan) establishes beneficial uses, water quality objectives, and implementation programs for all surface and groundwater bodies within the region. The Basin Plan is designed to preserve and enhance water quality, protect beneficial uses, and ensure compliance with state and federal water quality policies, including antidegradation requirements (Water Quality Control Plan: Los Angeles Region – Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties). The Basin Plan referenced herein is the governing document that established beneficial uses, water quality objectives, and implementation programs for all surface and groundwater bodies in the region.

The proposed water reuse project is designed to improve local water sustainability and quality, which aligns with the Basin Plan's goals of protecting and enhancing beneficial uses. Additionally, the Project would be required to meet all applicable water quality objectives

and standards for surface water discharge, groundwater protection, and antidegradation. No component of the Project involves activities that would violate these objectives.

Furthermore, the Basin Plan includes implementation programs intended to protect water quality and beneficial uses across the region. Water reuse projects are consistent with these programs because they reduce pollutant loads to receiving waters, enhance water supply reliability, and support watershed-based management strategies.

The Basin Plan incorporates state and regional policies related to water quality protection, including recycled water use, stormwater management, and watershed protection. The Project is consistent with these policies and does not introduce activities that would impede their implementation.

Based on the Basin Plan's purpose, objectives, and implementation framework, the Project would neither conflict with nor obstruct the LARWQCB's Water Quality Control Plan. Instead, the Project supports regional goals for water quality protection, beneficial use enhancement, and sustainable water resource management.

Additionally, the Raymond Basin, PWP's source of groundwater, is defined by the California Department of Water Resources (DWR) as very-low priority pursuant to the 2014 Sustainable Groundwater Management Act (DWR 2023). As such, there is currently no sustainable groundwater management plan applicable to the Project site.

Therefore, in light of the above, there would be no impact, and no mitigation is required.

3.6.7 CUMULATIVE IMPACTS

Projects considered in the cumulative impact analysis are within the cities of Los Angeles, Pasadena, and South Pasadena, particularly those located within or adjacent to the Lower Arroyo Seco corridor. As discussed in Section 2.5, Approach to Cumulative Impacts, related projects within approximately one-quarter mile of each of the sites that may be constructed at the same time are limited to two residential additions in the single-family neighborhood to the east-southeast of the San Pascual site within South Pasadena.

Collectively, the cumulative projects and the proposed Project would result in increased development that would have the potential to increase demand for stormwater conveyance. However, the Project as well as the two residential additions would be required to develop hydrology studies and water quality management plans to avoid and minimize potential for runoff to result in erosion, sedimentation, flooding, or other issues. These projects would all result in short-term construction water quality impacts; however, cumulative impacts would be avoided through each project's compliance with requirements including NPDES), and implementation of a SWPPP to control stormwater runoff (RR HYD-1). Additionally, the construction effects of the two residential projects would be localized and temporary in nature and would not meaningfully compound with effects from the Project to result in cumulative adverse impacts related to hydrology and water quality. Because the Project would not create significant hydrological issues with implementation of regulatory

requirements, it would not contribute to cumulative hydrology and water quality impacts during construction, and impacts would be less than significant.

During operations, the Project and the two residential additions would be required to comply with LID requirements through BMPs. The Project would implement BMPs including post-treatment filtration systems and infiltration basins, which would treat and manage stormwater runoff prior to discharge or infiltration. Similarly, the two residential additions would be subject to similar requirements and would incorporate site-appropriate LID features to minimize runoff and improve water quality. These BMPs would reduce the potential for downstream erosion, sedimentation, or water quality degradation. Because all projects would be required to comply with applicable stormwater management regulations and implement BMPs, the potential for cumulative impacts related to hydrology and water quality during operations would be less than significant.

Therefore, cumulative impacts related to hydrology and water quality would be less than significant, and no additional mitigation measures would be required.

3.6.8 MITIGATION MEASURES

No significant impacts pertaining to Hydrology and Water Quality were identified; therefore, no mitigation measures are required.

3.6.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project-specific and cumulative impacts related to Hydrology and Water Quality would be less than significant, and no mitigation measures are required or recommended.

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3.7 LAND USE AND PLANNING

3.7.1 METHODOLOGY

This section discusses consistency of the proposed Project with applicable land use and planning documents and regulations as well as land use consistency. Information in this section is derived primarily from the General Plans and zoning codes of the City of Pasadena (Pasadena), City of South Pasadena (South Pasadena), and City of Los Angeles (Los Angeles).

3.7.2 EXISTING CONDITIONS

Existing On-Site Uses

San Rafael Site

The San Rafael Project site totals 1.4 acres and consists of undeveloped open space located southwest of the San Rafael Avenue overpass of the Arroyo Seco Channel and along the northwest side of the Arroyo Seco channel. This site is adjacent to Pasadena's southern boundary. In addition to the property within Pasadena, the San Rafael site includes a linear feature that is within the limits of the San Rafael Creek easement under LACFCD jurisdiction. This site is occupied by public open space, which is open daily from sunrise to sunset. The San Rafael site is fully accessible to the public via public and private transportation routes, and/or by various trails for pedestrians, bicyclists, and equestrians.

San Pascual Site

The San Pascual Project site encompasses 2.2 acres and consists of undeveloped open space bound on the north by San Pascual Avenue and on the east by Stoney Drive. The San Pascual site is located southeast of the San Pascual Avenue overpass of the Arroyo Seco Channel and on the east side of the Arroyo Seco Channel. In addition, the San Pascual site is situated in between Arroyo Park, located along the east side of Stoney Drive, and San Pascual Park, partially located in the City of Los Angeles and partially in the City of South Pasadena, west of the Arroyo Seco Channel. This site is occupied by open space, which is open daily from sunrise to sunset. The San Pascual site is fully accessible to the public via public and private transportation routes, and/or by various trails for pedestrians, bicyclists, and equestrians.

Surrounding Uses

San Rafael Site

Land uses surrounding the San Rafael site include the soft-bottom portion of San Rafael Creek and an undeveloped slope with single-family residential on the hilltop to the north (Los Angeles zoning of R1-1 [One-Family Zone]) at an elevation of approximately 40 feet above the site; the Arroyo Seco Channel, Arroyo Seco open space, and San Pascual Avenue to the east; San Pascual Stables located at 221 San Pascual Avenue, South Pasadena, to the south and southeast across the Arroyo Seco Channel; and undeveloped slopes and single-family

residential (Los Angeles zoning of R1-1) on the hilltop to the west at elevations 160 to 200 feet above the San Rafael site.

San Pascual Site

Land uses surrounding the San Pascual site include San Pascual Avenue and single-family residential (Los Angeles zoning of R1-1) on San Ramon Drive to the north; the Burke, Clarich, Nelson Fields (649 Stoney Drive, South Pasadena) and Arroyo Park (614 Stoney Drive, South Pasadena) beyond Stoney Drive to the east; Stoney Drive and the Arroyo Seco Channel to the south; and San Pascual Park (930 San Pascual Avenue, Los Angeles) across the Arroyo Seco Channel to the west; and single-family residential (Los Angeles zoning of R1-1) on North Avenue 67 and Gold Place to the northwest.

General Plan Designations and Zoning

San Rafael Site

The San Rafael site is located in Pasadena and has a zoning and general plan land use designation of Open Space (OS). Per Section 17.26.020(A) of the Pasadena Municipal Code (PMC), "[t]he OS district is applied to sites with open space, parks, and recreational facilities of a landscaped, open character having a minimum contiguous site area of two acres." Section 17.26.030 of the PMC specifies that development of "Park and Recreation Facilities" in the OS zone requires a Conditional Use Permit (CUP). Consultation with the Pasadena Planning Department determined that no entitlement is anticipated to be required. However, City Council will adopt the Final EIR and approve the proposed ASWR Project plans.

San Pascual Site

As indicated previously, the San Pascual site is located in both Los Angeles and South Pasadena. The approximate 1.7-acre portion of the San Pascual Project site that is situated in South Pasadena has a zoning and general plan land use designation of Open Space (OS). Per Section 36.240.020(B) of the South Pasadena Municipal Code (SPMC), " The OS zoning district is applied to areas suitable for open space land uses including parks, natural open space areas, recreational facilities, and areas used for flood control. The OS zoning district is consistent with the Open Space land use designation of the [South Pasadena] General Plan." Per Section 36.240.030 of the SPMC, permitted uses in the OS zone include hiking trails and nature preserves and accessory uses.

The approximate 0.5-acre portion of the San Pascual site located in the City of Los Angeles has a zoning and general plan (community plan) land use designation of Open Space (OS).

3.7.3 RELEVANT PROGRAMS AND REGULATIONS

In each topical analysis section, this section summarizes plans, programs, policies, codes, and other regulations that are relevant to the Project. Not all land use and planning-related programs and regulations for the three jurisdictions involved in the Project are listed, and

not all programs and regulations related to the San Rafael Creek, Arroyo Seco Channel, and Los Angeles River, or water resources from the State level are applicable to this Project.

There were several Notice of Preparation (NOP) comments that requested the EIR analysis consider various studies to restore the Arroyo Seco Channel including the Arroyo Seco Restoration Study recently announced by Supervisor Barger; other watershed projects; all policies concerning the Arroyo Seco; and applicable adopted local, regional, and State water policies and plans. Regarding NOP comments referring to naturalization or restoration of the Arroyo Seco Channel, this is outside of the scope of the Project and the EIR. The Project would not alter the existing Arroyo Seco Channel in any way nor would it impede possible future efforts to remove concrete from a section(s) of the Channel and restore it to a soft-bottom condition. Regardless, there is currently no adopted plan to restore the Arroyo Seco Channel. Analysis of potential impacts in an EIR under CEQA considers the existing conditions at the time of NOP distribution (May 2025). As such, analysis of conflict with plans or projects to restore the Arroyo Seco Channel is not appropriate in or applicable to this EIR.

Those plans and policies relevant to the Arroyo Seco, the Project sites, and the proposed components of the Project are discussed below. However, it is not necessary or appropriate to analyze every policy in every plan or study concerning the Arroyo Seco. Similarly, there are innumerable adopted water-related plans and policies. The Project is being proposed expressly to implement the applicable State, regional, and local plans and policies, which are discussed in Section 2.2, Project Background and Purpose, in Section 2.0, Environmental Setting and Project Description. These include:

- Upper Los Angeles River (ULAR) Enhanced Watershed Management Programs,
- ULAR Coordinated Integrated Monitoring Program,
- ULAR Load Reduction Strategy for the Arroyo Seco,
- Los Angeles County Municipal Separate Storm Sewer System Permit Order No. R4-2012-0175, and
- Los Angeles Regional Water Quality Control Board (RWQCB) Resolution No. R10-007 and Los Angeles RWQCB Basin Plan Amendment to incorporate a total maximum daily load for indicator bacteria in the Los Angeles River watershed.

Additionally, several NOP comments assert the Project improperly disregards the trails standards presented in the Los Angeles County Trails Manual, California State Parks Trail Handbook, and/or California Department of Parks and Recreation Trails Manual. These documents apply solely to trail development on County or State lands, respectively. These standards do not apply to projects developed on incorporated city lands, such as the Project.

Federal and State

There are no applicable federal or State regulations related to land use and planning.

Local

City of Pasadena

General Plan

The relevant elements of Pasadena's General Plan are summarized below.

Land Use Element

The Land Use Element of the City of Pasadena General Plan serves as a guide for future development proposed in the City. The Land Use Element is guided by certain principles, such as maintaining a focus on community needs, enhancing quality of life, and directing higher density development away from residential neighborhoods; preserving Pasadena's historic resources and ensuring new development harmonizes with the City's character; fostering a diverse economic base with job opportunities and support for existing businesses and promotion of a socially, economically, and environmentally sustainable community with accessible residential and commercial areas (City of Pasadena 2022a). The following goals and policies would be applicable to the Project:

Goal 10 - City Sustained and Renewed. Development and infrastructure practices that sustain natural environmental resources for the use of future generations and, at the same time, contribute to the reduction of greenhouse gas emissions and impacts on climate change.

> Policy 10.1 - Environmental Quality and Conservation. Establish Pasadena as a leader on environmental stewardship efforts, including air quality protection, energy and water efficiency, renewable energy standards, natural resource conservation, and greenhouse gas emission standards in the areas of energy, water, air and land.
>
> Policy 10.2 - Land Uses Supporting Sustainability. Encourage land uses and improvements that reduce energy and water consumption, waste and noise generation, air quality impacts and support other comparable resource strategies for a sustainable Pasadena; including alternative energy generation, electric vehicle parking and charging, recycling, and similar facilities.
>
> Policy 10.3 - Best Practices for Sustainability. Monitor evolving sustainable development practices and technologies and implement those deemed appropriate and feasible in Pasadena.
>
> Policy 10.7 - Landscape. Encourage sustainable practices for landscape materials, landscape design, and land development.
>
> Policy 10.9 - Natural Open Space. Protect natural open spaces, hillsides, watersheds, and critical habitats to safeguard the health, safety, and beauty of the City for the benefit of present and future generations.
>
> Policy 10.11 - Eaton Canyon Corridor and the Arroyo Seco. Preserve and maintain the natural character of the Eaton Canyon Corridor and the Arroyo Seco as self-sustaining

healthy ecosystems of plants and animals, in balance with the integration of recreational facilities and flood control improvements.

Policy 10.16 - Infrastructure. Design, construct, maintain, and improve Pasadena's infrastructure to conserve and reduce impacts to the natural environment.

Policy 10.18 - Water Quality. Encourage the use of natural processes to capture, treat, and infiltrate urban runoff throughout the watershed. In appropriate and feasible locations, construct stormwater curb extensions and street planters to transform impervious street surfaces into landscaped green spaces that capture stormwater runoff and let water soak into the ground as plants and soil filter pollutants.

Green Space, Recreation, and Parks Element

The Green Space, Recreation and Parks Element of the City's General Plan provides the community's vision for natural open space, developed parkland, urban open spaces, and recreation facilities and programs. Together with the Green Space, Recreation and Parks Master Plan, the Element provides the background data, recommendations and implementation programs for using, maintaining and expanding additional parks and natural open spaces, recreation facilities and programs and the community's needs and desires for open space, parks and recreation. The Green Space, Recreation and Parks Element is an optional Element of the General Plan and will work in conjunction with the Open Space and Conservation Elements to guide the preservation and expansion of Pasadena's existing green spaces, ensure that opportunities for both active and passive uses of parks and open space are available throughout the City, and that these opportunities are responsive to the community's needs (City of Pasadena 2007). The following objectives and policies would be applicable to the Project:

OBJECTIVE 1 – STEWARDSHIP OF THE NATURAL ENVIRONMENT: Encourage and promote the stewardship of Pasadena's natural environment, including water conservation, clean air, natural open space protection, and recycling. (Land Use Element Policy 9.5)

Policy 1.2 – Protect Open Spaces: Protect natural open areas, watersheds, and environmentally sensitive areas such as Hahamongna, Eaton Canyon, riparian areas, and other open spaces.

Policy 1.8 – Water Resources: Conserve and protect water resources in parks and open spaces; maximize the quality and quantity of groundwater recharge to minimize the dependence on imported water.

OBJECTIVE 2 – PRESERVATION AND PROTECTION OF THE ARROYO SECO AND ADJACENT OPEN SPACE AREAS: Recognize the importance to Pasadena of the history, cultural resources, and unique character of the Arroyo Seco, and conserve and enhance these assets.

Policy 2.3 – Balance Recreation with Environmental Protection: Implement the Arroyo Seco Master Plans by balancing recreational opportunities with protection and

restoration of the ecosystem, while recognizing the important existing water resources and flood management functions of the area.

Open Space and Conservation Element

The Open Space and Conservation Element provides a blueprint for natural open space and conservation. The Element includes an inventory of existing open space areas, a summary of existing open space and conservation plans, and agencies that the City partners with to protect and enhance natural open space. The Element also reviews the existing documents related to conservation, including the plans of the City's Green City Program, the Water and Power Integrated Resource Plans (IRP), and the California Green Building Code. The Element establishes goals and objectives in the areas of Open Space, Wildlife and Native Plants, Environmental Quality, Conservation, and Sustainable Use Practices. The Element also includes a series of implementation measures to achieve these goals and objectives (Pasadena 2012).

City of Pasadena Zoning Ordinance

The City's Zoning Ordinance is contained in Title 17 of the Pasadena Municipal Code. The purpose of the Pasadena Zoning Code is to protect and promote the public health, safety and general welfare, and to implement the policies of the General Plan by classifying and regulating the uses of land and structures within the City of Pasadena in a manner consistent with the General Plan. The Zoning Code describes various types of zoning districts and land use classifications, land use regulations, development standards, and environmental performance standards.

Arroyo Seco Public Lands Ordinance

The Arroyo Seco Public Lands Ordinance (Ordinance), as part of the Pasadena Municipal Code (Chapter 3.32 et. seq.), identifies the uses, activities, facilities and structures permitted on the public lands of the Arroyo Seco as well as their limitations. The Ordinance does not include Hahamongna Watershed Park. The Ordinance identifies sub-areas within the Arroyo Seco for the application of certain regulations. The identified sub-areas include natural preservation areas, Brookside Park area, Rose Bowl area, and Brookside Golf Course. The Lower Arroyo from the south city limit to Holly Street Bridge is included as a natural preservation area. The following uses are permitted on public lands in the natural preservation areas (Section 3.32.070):

A. Low-intensity recreational activities within defined activity areas including hiking, horseback riding, archery, casting, picnicking and jogging.
B. New structures shall be limited to those required for utility operations, park maintenance, and protection of plant and animal communities. Such structures are to be adequately screened to conceal their visual presence.
C. All existing uses may be allowed to remain but not allowed to expand.

Special regulations for the natural preservation area (Section 3.32.080 of the Ordinance) specify that all lands within the natural preservation area are to be designated as a natural preserve.

Arroyo Seco Master Plan and Lower Arroyo Master Plan

The Arroyo Seco Master Plan is a park/facility planning document that consists of four separate elements: (1) Hahamongna Watershed Park Master Plan, (2) Central Arroyo Seco Master Plan, (3) Lower Arroyo Seco Master Plan, and (4) Design Guidelines for the Arroyo Seco. The purpose of these four plans is to provide facilities for passive and active recreation that support Policy 9.2 of the City of Pasadena's Comprehensive General Plan in order to provide recreation facilities and programs to meet the diverse needs of City of Pasadena residents and visitors. The Lower Arroyo Seco Master Plan and the Arroyo Seco Design Guidelines are applicable documents that address the portion of the Project located in Pasadena (i.e., San Rafael site).

The Lower Arroyo Seco Master Plan addresses the area between the Colorado Street Bridge on the north to the Pasadena city boundary on the south. The Lower Arroyo was created to preserve the cultural resources, restore the habitat, and provide the recreational opportunities unique to Lower Arroyo Seco. The goal of the Lower Arroyo Master Plan is to restore, preserve, and enhance the natural character of the Lower Arroyo Seco (Pasadena 2015).

The Arroyo Seco Design Guidelines provide a unifying set of criteria for the site development improvements set forth in the Arroyo Seco Master Plan for on-going, long-range improvements for the Arroyo Seco. These guidelines will lead to a unified park design that reflects the heritage of the Arroyo Seco and its relationship to the tradition of the City of Pasadena. The Arroyo Seco Design Guidelines provide specific site design solutions that are consistent with the existing Arroyo Seco Ordinance and a vehicle by which practical inputs for ongoing improvements can take place (Pasadena 2003).

City of South Pasadena

General Plan

The South Pasadena General Plan is an integrated plan which includes a community driven vision, direction, and policy guidance on the physical structure of the City. The General Plan lays out how the City should harness the tools at its disposal to achieve this vision (South Pasadena 2023). The City's General Plan is divided into nine elements. The relevant elements of the South Pasadena General Plan are summarized below.

Our Natural Community Element

The primary goal of the Our Natural Community Element is to promote clean air, clean water, and habitat for native species, prevent urban heat islands, reduce stormwater runoff, and promote a greener downtown, a healthier lifestyle and nature-based recreation (South Pasadena 2023).

P1.1 Maximize the interrelationship between the City's natural and built infrastructure to benefit people, wildlife, and the economy.

P1.5 Promote integration of Green Infrastructure into storm water management systems.

P1.6 Preserve, manage, and grow the tree canopy.

Our Well Planned Community Element

This Element serves as South Pasadena's Land Use Element. The goal of this Element is to preserve and enhance the distinctive residential neighborhoods; provide housing opportunities for all; reinvest in downtown corridors and neighborhood centers; and ensure that new development contributes its fair share towards the provision of affordable housing, adequate parks, schools, and other public facilities.

P3.12 Ensure continuity of critical services and ensure that adequate infrastructure is provided to accommodate new development by identifying capital improvements necessary to support long-term needs and responsibilities for funding and implementing improvements.

A3.12a Create a long-term plan to update infrastructure not only to accommodate growth, but also the effects of climate change.

Zoning Code

The South Pasadena's Zoning Code is found in Chapter 36 of the SPMC. The Zoning Code implements the policies of the South Pasadena General Plan by classifying and regulating the uses of land and structures within the City in a manner consistent with the General Plan. To achieve this purpose, it is the intent of this Zoning Code to: provide standards for the orderly development of the City, and continue a stable pattern of land uses; conserve and protect the historical integrity and character of the City's neighborhoods; maintain and protect the value of property; protect views of hillsides, ridgelines, open space, and other natural resources of the City; ensure compatibility between land uses; and encourage a pedestrian-friendly community by promoting a mix of land uses and pedestrian oriented development in commercial areas.

City of Los Angeles

City of Los Angeles General Plan

The relevant elements of the Los Angeles General Plan are summarized below.

Public Facilities and Services Element

The purpose of the Public Facilities and Services Element is to identify and preserve cultural and historical monuments, as well as develop additional public facilities such as power transmission lines, equestrian and hiking trails, public libraries, parks, and schools (Los Angeles 2025).

Open Space Element

The purpose of the Open Space Element is to guide the identification, preservation, conservation, and acquisition of open space in Los Angeles (Los Angeles 1973).

Northeast Los Angeles Community Plan

The General Plan's Land Use Element is divided into 35 separate Community Plans. The northern portion of the San Pascual site is located within the *Northeast Los Angeles Community Plan* (Community Plan) area. The Northeast Los Angeles Community Plan area encompasses the hills and valleys lying east of the Los Angeles River and north of the Boyle Heights Community Plan area within Los Angeles; and includes the neighborhoods of Atwater Village, Cypress Park, Eagle Rock, El Serreno, Garvanza, Glassell Park, Highland Park, Hermon, Lincoln Heights, Montecito Heights, Monterey Hills, and Mount Washington, among others. This Community Plan area serves as a transition between the downtown center of Los Angeles and the neighboring cities of Glendale, Pasadena, South Pasadena and Alhambra to the north and east, as well as the City of Monterey Park and the unincorporated community of City Terrace on the south.

Among the relevant issues identified in the Community Plan area are the following:

- Unsightliness of and lack of amenities and public access to areas adjacent to the Los Angeles River, Arroyo Seco, and other flood control channels.

- Destruction and deterioration of community resources, including scenic views and viewsheds, open space, open space corridors, and historic structures.

Among the corresponding opportunities for these issues identified in the Community Plan is the following:

- Preservation of open space and open space corridors, and enhancement of greenways amenities and public access, particularly in hillside areas and near flood control channels.

The following objectives and policies from the Community Plan are applicable to the Project:

Objective 4-2 To preserve existing open space resources and, where possible, encourage acquisition of new open space.

Policy 4-2.1 Accommodate and promote active use of parklands and open space and promote and preserve greenways.

Objective 5-1 To conserve, expand, maintain, and better utilize existing recreation and park facilities to address the recreational needs of the community.

Policy 5-1.1 Preserve the existing recreational facilities and park space.

Policy 5-1.2 Increase accessibility to parkland along the Arroyo Seco and potential parkland along the Los Angeles River.

Objective 13-3 To develop equestrian trails for recreational use.

Policy 13-3.1 Support the development of equestrian trails along the Los Angeles River and the Arroyo Seco Channel.

In Chapter IV, Coordination Opportunities for Public Agencies, of the Community Plan, the following actions to further the Plan's policies related to the Project include:

- Increase utilization of existing nature education and recreational facilities and encourage development of additional facilities.
- Coordinate with City [of Los Angeles] departments; neighboring cities; and County, State, and federal agencies to utilize existing public lands such as flood control channels, utility easements, and [Los Angeles] Department of Water and Power properties to provide for such recreational needs as hiking, biking, and equestrian trails (Los Angeles 1999).

Los Angeles Zoning Code

The City's Zoning Code is divided into two parts: the Original Zoning Code and the New Zoning Code. The Original Zoning Code applies to any Community Plan Area that was updated prior to the Downtown Community Plan, which went into effect in January 2025. When the Original Zoning Code first was first adopted in 1946, it consolidated 11 separate zoning ordinances into one zoning code and established the zoning system that is most used today. This code has evolved over the years as new approaches to planning have emerged and local priorities have shifted. Specific Plans and Supplemental Use Districts have supplemented the original code to establish functions that are not available using base zoning. Having learned from past planning efforts and building upon them, the Los Angeles Planning Department created a new innovative approach to zoning that better regulates buildings based on their surroundings. The new approach focuses on the size, scale, and relationship of buildings to the street, and includes customized regulations for different neighborhoods. The New Zoning Code went into effect in early 2025 for the Downtown Community Plan Area and will apply to all future Community Plan Area updates.

Los Angeles City Charter

The Los Angeles City Charter discusses the powers and limitations of the Los Angeles Department of Recreation and Parks (RAP) in managing existing recreation areas in Section 594, Control and Management of Recreation and Park Lands, of said charter. The relevant portions of this section are as follows:

a) **Management and Control.** The Department of Recreation and Parks shall operate, manage and control all property now or hereafter owned or controlled by the City for public recreation, including parks, and shall have power in the name of the City to

acquire and take by purchase, lease, condemnation, gift, in trust or otherwise, any and all property necessary or convenient for recreation, including park purposes.

b) **Acquisition of Property.** No real property shall be acquired by the City for recreation sites, including parks, unless first approved by the Board of Recreation and Park Commissioners.

c) **Restrictions on Transfer of Dedicated Parks.** All lands heretofore or hereafter set apart or dedicated as a public park shall forever remain for the use of the public inviolate; but the board may authorize use of the lands for any park purpose, and for:

    1) Easements or rights-of-way for any work, improvement or structure necessary and convenient for giving service to the City or its inhabitants in connection with any public utility owned by the City. Under similar circumstances, similar permission may be given to any private public utility holding a franchise, and limited to the life of the franchise. These easements or rights-of-way shall be subject to regulation by ordinance.

    2) Leases to the County of Los Angeles, the Los Angeles Unified School District, the State of California, or the United States for a period not to exceed 50 years, of a site in any public park for the erection and maintenance of public buildings consistent with public park purposes.

    3) Taking and disposal of molding sand, or other natural resources under terms as the board may prescribe and in a manner as to work no substantial impairment of public use and enjoyment of the premises.

    4) Opening, establishment, and maintenance of streets or other public ways in and through the parkland controlled by the board.

3.7.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. The project would result in a significant adverse land use and planning impact if it would:

Threshold 3.6a: Physically divide an established community; and/or

Threshold 3.6b: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.7.5 REGULATORY REQUIREMENTS

There are no regulatory requirements applicable to Land Use and Planning.

3.7.6 ENVIRONMENTAL IMPACTS

Threshold 3.6a: Would the Project physically divide an established community?

No Impact. The Project would not physically divide an existing community, as the proposed Project consists of water capture and treatment infrastructure and recreational improvements within existing recreation/open space areas. There are no residential uses or otherwise established communities located within the Project sites.

The Project would also not divide any existing community resources, such as recreation areas, or otherwise limit access to either the San Rafael or San Pascual site. On the contrary, the Project would develop improved and expanded passive recreation opportunities that would be accessible to all members of the public from sunrise to sunset, as in the existing condition. Specifically, the Project would improve existing and create new decomposed granite (DG) trails on the sites; remove non-native plants and restore native landscaping that is appropriate to the sites; and install new or replacement hardscape including reclaimed wood log benches, post-and-rail fencing, concrete seat walls, and informational signs (refer to Exhibits 2-8, 2-11, 2-12, 2-14, 2-17, and 2-18 in Section 2.0, Environmental Setting and Project Description). The post-and-rail fencing would be four feet in height and is the style typical of equestrian and ranch areas; this type of fencing is not a style intended to restrict access but is generally used to delineate areas and/or for decorative purposes. The proposed water infrastructure components would be hidden from public view by being mostly underground or, where necessary to place equipment above ground, by screening with vegetation. The Project has been expressly designed to appear fully naturalized at the surface.

There would be no impact related to dividing an established community, or dividing or limiting access to a community resource, and no mitigation is required.

Threshold 3.6b: Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The primary land use planning documents that govern the Project sites are the General Plans, Community Plan(s), zoning codes, and/or other codes and plans of the cities of Pasadena, South Pasadena, and Los Angeles. As discussed above, Pasadena, South Pasadena, and Los Angeles all have a General Plan land use designation and zoning designation of OS/Open Space for each respective city's portions of the two sites. The following analyzes the consistency of the Project with the applicable land use policies and zoning of each of the three jurisdictions.

Pasadena

As discussed above, the San Rafael site, located in Pasadena, has a General Plan land use designation and zoning of Open Space (OS).

The Project is consistent with Pasadena's General Plan. Relevant goals and policies of the Land Use and the Green Space, Recreation, and Park elements are provided in Section 3.6.3, Relevant Programs and Regulations, above. These goals and policies focus on sustainability and conservation of natural resources as part of development and infrastructure practices.

In particular, the Project implements the following Pasadena General Plan policies:

> Policy 10.11 – Eaton Canyon Corridor and the Arroyo Seco: Preserve and maintain the natural character of the Eaton Canyon Corridor and the Arroyo Seco as self-sustaining healthy ecosystems of plants and animals, in balance with the integration of recreational facilities and flood control improvements.
>
> Policy 1.8 – Water Resources: Conserve and protect water resources in parks and open spaces; maximize the quality and quantity of groundwater recharge to minimize the dependence on imported water.
>
> Policy 2.3 – Balance Recreation with Environmental Protection: Implement the Arroyo Seco Master Plans by balancing recreational opportunities with protection and restoration of the ecosystem, while recognizing the important existing water resources and flood management functions of the area.

The Project would provide water treatment and conservation using state-of-the-art engineering design to enable a large volume of water handling in a small area of land. The proposed drainage basins are mostly unlined and natural infiltration would enable stormwater capture for groundwater recharge. Moreover, additional effort was made to ensure a naturalized appearance at the surface, by placing almost all infrastructure underground and screening the remaining equipment as much as possible. The surfaces of the Project sites have been designed to expand and enhance public recreation opportunities, in particular passive recreation, by providing access to a new area of native landscape, trails, and water features.

Per Section 17.26.020(A) of the Pasadena Municipal Code (PMC), "[t]he OS district is applied to sites with open space, parks, and recreational facilities of a landscaped, open character having a minimum contiguous site area of two acres." Section 17.26.030 of the PMC specifies that development of "Park and Recreation Facilities" in the OS zone requires a Conditional Use Permit (CUP). Consultation with the Pasadena Planning Department determined that no entitlement is anticipated to be required, as the Project would not be considered the development of a park and recreation facility (e.g., sports courts, ballfields, disc golf, archery facility). The Project would be reviewed by the City of Pasadena Planning and Community Development Department consistent with the applicable procedures defined in the Pasadena zoning code.

The San Rafael component of the Project, within Pasadena, would be consistent with the uses permitted on public lands in the natural preservation area designated under the Arroyo Seco Public Lands Ordinance, which include:

A. Low-intensity recreational activities within defined activity areas including hiking, horseback riding, archery, casting, picnicking and jogging.

B. New structures shall be limited to those required for utility operations, park maintenance, and protection of plant and animal communities. Such structures are to be adequately screened to conceal their visual presence.

C. All existing uses may be allowed to remain but not allowed to expand.

The San Rafael site would provide expanded passive, low-intensity recreational opportunities in the Lower Arroyo Seco, primarily hiking, horseback riding, and nature-watching. As discussed above, the proposed water infrastructure components would be hidden from public view by being mostly underground or, where necessary to place equipment above ground, by screening with vegetation. The Project has been expressly designed to appear fully naturalized at the surface. Additionally, the landscape plan would include installing over 1,100 understory plants at the San Rafael site. This would improve the habitat value substantially compared to the existing condition, because there is currently little to no understory throughout this site.

The Project would be consistent with the Lower Arroyo Seco Master Plan. Although no specific improvements are identified for the San Rafael site itself, the restoration of "Annandale Creek/Laguna Canyon" is among the Master Plan elements illustrated on Exhibit 4-1. Annandale Creek/Laguna Canyon in the Master Plan is referring to the drainage running parallel to Laguna Road that flows into San Rafael Channel to drain into the Arroyo Seco Channel. The primary goal of this Master Plan project element is to "improve water quality entering the Arroyo Seco channel/stream course", which is precisely what the Project would do. Additionally, the Project's hardscape and landscape elements at both the San Rafael and San Pascual sites have been designed to conform with the Arroyo Seco Design Guidelines, although the San Pascual site is not within the Lower Arroyo Seco. The materials and features at the two sites would be consistent visually.

South Pasadena

As discussed above, the San Pascual site, located partially in South Pasadena, has a General Plan land use designation and zoning of Open Space (OS).

The Project is consistent with South Pasadena's General Plan. Relevant goals, policies, and actions of the Our Natural Community and Our Well Planned Community elements are provided in Section 3.6.3, Relevant Programs and Regulations, above.

The primary goal of the Our Natural Community Element is to promote clean air, clean water, and habitat for native species, prevent urban heat islands, reduce stormwater runoff, and promote a greener downtown, a healthier lifestyle and nature-based recreation (South

Pasadena 2023). In general, the relevant goals, policies, and actions focus on integrating natural resources and built infrastructure, including stormwater management systems.

Similar to the discussion above for Pasadena, the Project is consistent with South Pasadena's General Plan intent because the Project integrates built infrastructure necessary to improve stormwater management and conservation while prioritizing natural resources. The long-term landscape would be entirely native and would include a greater number of trees in total on both sites than the existing condition. Additionally, the landscape plan would include installing over 2,100 understory plants at the San Pascual site. This would improve the habitat value substantially compared to the existing condition, because there is currently little to no understory throughout this site.

Per Section 36.240.020(B) of the South Pasadena Municipal Code (SPMC), "The OS zoning district is applied to areas suitable for open space land uses including parks, natural open space areas, recreational facilities, and areas used for flood control. The OS zoning district is consistent with the Open Space land use designation of the [South Pasadena] General Plan." Per Section 36.240.030 of the SPMC, permitted uses in the OS zone include hiking trails and nature preserves and accessory uses. The San Pascual BMP can be considered a nature preserve with accessory uses and would provide hiking trails. As such, the Project would be considered consistent with South Pasadena's land use designation and zoning code.

Los Angeles

As discussed above, a portion of the San Pascual site located in the City of Los Angeles has a zoning and general plan (Community Plan) land use designation of Open Space (OS). The Project is consistent with the Northeast Los Angeles Community Plan. Relevant objectives and policies, and other relevant issues, from the Community Plan are provided in Section 3.6.3, Relevant Programs and Regulations, above.

In particular, the Project implements the following opportunity identified in the Community Plan: "Preservation of open space and open space corridors, and enhancement of greenways amenities and public access, particularly in hillside areas and near flood control channels".

The Project would preserve open space on the Project site, as the site would remain public open space, and would enhance greenway amenities and public access near a flood control channel.

Additionally, the Project implements the following Community Plan objectives and policies definitively:

Objective 5-1 To conserve, expand, maintain, and better utilize existing recreation and park facilities to address the recreational needs of the community.

Policy 5-1.1 Preserve the existing recreational facilities and park space.

Policy 5-1.2 Increase accessibility to parkland along the Arroyo Seco and potential parkland along the Los Angeles River.

Objective 13-3 To develop equestrian trails for recreational use.

Policy 13-3.1 Support the development of equestrian trails along the Los Angeles River and the Arroyo Seco Channel.

The Project would preserve the existing recreational facilities and open space, increase accessibility to a larger area of open space, and develop additional equestrian trails on both sites along the Arroyo Seco. With Project implementation, the San Pascual site would remain as open space in use for passive recreation activities, especially walking, riding, and sitting on the sites for nature-watching, seeking shade, or general relaxation. The Project site would now provide a greater number of trails, permanent seating, and two water basins that would treat water.

Further, the Project is fully consistent with the following actions in Chapter IV, Coordination Opportunities for Public Agencies, of the Northeast Los Angeles Community Plan:

- Increase utilization of existing nature education and recreational facilities and encourage development of additional facilities.
- Coordinate with City [of Los Angeles] departments; neighboring cities; and County, State, and federal agencies to utilize existing public lands such as flood control channels, utility easements, and [Los Angeles] Department of Water and Power properties to provide for such recreational needs as hiking, biking, and equestrian trails.

The Project represents increased utilization of an existing nature education and recreational facility on Los Angeles land; and development of the Project has involved coordination between Los Angeles' RAP's and the neighboring cities of Pasadena and South Pasadena since 2020 to utilize existing public lands, in this case the land adjacent to the Arroyo Seco flood control channel, to provide for enhanced and expanded hiking and equestrian trails and other passive recreational pursuits.

Per Section 12.05.05(A) of the Los Angeles Municipal Code (LAMC), "It is the purpose of the 'OS' Open Space Zone to provide regulations for publicly owned land in order to implement the City's adopted [Los Angeles] General Plan, including the recreation, parks and open space designations in the City's adopted district and community plans, and other relevant elements, including the Open Space, Conservation and Public Recreation Elements. Implementation of the General Plan will serve to protect and preserve natural resources and natural features of the environment; to provide outdoor recreation opportunities and advance the public health and welfare; to enhance environmental quality; to encourage the management of public lands in a manner which protects environmental characteristics; and to encourage the maintenance of open space uses on all publicly owned park and recreation land, and open space public land which is essentially unimproved."

Applicable allowed uses in Los Angeles' Open Space zone include:

- Parks and recreation facilities, including bicycle trails, equestrian trails, walking trails, nature trails, parkland/lawn areas, children's play areas, childcare facilities,

picnic facilities, and athletic fields (not to exceed 200 seats in park) used for park and recreation purposes; and

- Water conservation areas, including percolation basins and flood plain areas.

The Project site is considered open space and includes passive recreation facilities with trails and a water conservation area. As such, the Project would be considered consistent with both Los Angeles' General Plan land use designation and zoning code.

Therefore, the Project would not conflict with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. There would be no impact, and no mitigation is required.

3.7.7 CUMULATIVE IMPACTS

Within the cities of Los Angeles, Pasadena, and South Pasadena, recent development actions have continued the ongoing trend of redevelopment of underdeveloped and undeveloped areas. However, previously approved and future development within these three cities are required to comply with the adopted land use standards, policies, and ordinances set forth in each jurisdiction's General Plan and Municipal Code. As stated previously, the Project would be consistent with each of the three cities' General Plan goals and policies, Zoning Ordinances, and regional planning programs. Similar guidelines would be required for cumulative projects to minimize potential land use incompatibility for future; therefore, the Project would not contribute to a significant cumulative impact.

3.7.8 MITIGATION MEASURES

No significant impacts pertaining to Land Use and Planning were identified; therefore, no mitigation measures are required.

3.7.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have no impacts related to Land Use and Planning, and no mitigation measures are required or recommended.

3.7.10 REFERENCES

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3.8 NOISE

3.8.1 METHODOLOGY

This section analyzes potential noise and vibration impacts from implementation of the Arroyo Seco Water Reuse Project (Project). Information in this section is derived from (1) the ambient noise survey conducted at the sites on June 9, 2023; and (2) the *Arroyo Seco Water Reuse Project Traffic Evaluation* (Traffic Evaluation), dated October 27, 2023, prepared by Psomas (Psomas 2023). The ambient noise survey in 2023 remains valid as no material changes, such as new projects in the area or notable change in traffic volumes or patterns, to the existing setting of the Project have occurred between that time and distribution of the Notice of Preparation (NOP) in May 2025. The Traffic Evaluation is discussed further in Section 1.3.3, Issues to be Addressed in this EIR, under the heading of "Transportation", and is provided in Appendix H to this EIR. Construction noise levels reported in the U.S. Environmental Protection Agency's (USEPA) *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances* were used to estimate construction noise levels for the Project (USEPA 1971). It should be noted that noise analysis associated with the Project's construction activities is conservative and may be overestimated because it is based on noise levels from construction machinery engines developed in the 1970s and earlier, which did not have modern engine designs or noise attenuation systems.

The analysis of construction vibration is based on the vibration levels presented in the Federal Transit Administration's (FTA) 2018 *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). The assessment of construction vibration is performed by assuming that construction equipment would be operating near the Project site boundaries closest to nearby receptors. The traffic (i.e., mobile source) noise analysis has been prepared based on the 2023 Traffic Evaluation. The results of the noise and vibration analyses are presented below, and the Noise Supporting Documentation is provided as Appendix G to this EIR.

3.8.2 EXISTING CONDITIONS

Fundamentals of Noise and Vibration

Noise

"Sound" is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. "Noise" is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance; interference with speech communication; sleep disturbance; and, in the extreme, hearing impairment (Caltrans 2013).

Sound pressure levels are described in units called the decibel (dB). Decibels are measured on a logarithmic scale. A doubling of the energy of a noise source (such as doubling of traffic volume) would increase the noise level by 3 dB. The human ear is not equally sensitive to all frequencies within the sound spectrum. To accommodate this phenomenon, the A-scale was

devised; the A-weighted decibel scale (dBA) approximates the frequency response of the average healthy ear when listening to most ordinary everyday sounds and is used in this analysis.

Human perception of noise has no simple correlation with acoustical energy. Due to subjective thresholds of tolerance, the annoyance of a given noise source is perceived very differently from person to person. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at 3 feet is approximately 60 dBA, while loud jet engine noises at 1,000 feet equate to 100 dBA, which can cause serious discomfort. Table 3.8-1, Noise Levels for Common Events, shows the relationship of various noise levels in dBA to commonly experienced noise events.

TABLE 3.8-1
NOISE LEVELS FOR COMMON EVENTS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet fly-over at 300 m (1,000 ft)	100	
Gas lawn mower at 1 m (3 ft)	90	
Diesel truck at 15 m (50 ft) at 80 km/hr (50 mph)	80	Food blender at 1 m (3 ft); garbage disposal at 1 m (3 ft)
Noisy urban area, daytime gas lawn mower at 30 m (100 ft)	70	Vacuum cleaner at 3 m (10 ft)
Commercial area, heavy traffic at 90 m (300 ft)	60	Normal speech at 1 m (3 ft)
Quiet urban daytime	50	Large business office, dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural nighttime	20	Bedroom at night, concert hall (background)
	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing
dBA: A-weighted decibels; m: meter; ft: feet; km/hr: kilometers per hour; mph: miles per hour Source: Caltrans 2013.		

Two equal noise sources, when heard together, do not "sound twice as loud" as one of the sources. As stated above, a doubling of noise sources results in a noise level increase of 3 dB. It is widely accepted that (1) the average healthy ear can barely perceive changes of a 3 dB increase or decrease; (2) a change of 5 dB is readily perceptible; and (3) an increase (decrease) of 10 dB sounds twice (half) as loud (Caltrans 2013).

From the source to the receiver, noise changes both in the level and frequency spectrum. The most obvious change is the decrease in noise level as the distance from the source increases. Sound from a small, localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. For point sources, such as

heating, ventilation, and air conditioning (HVAC) units or construction equipment, the sound level attenuates (or drops off) at a rate of 6 dB for each doubling of distance (i.e., if the noise level is 70 dBA at 25 feet, it is 64 dBA at 50 feet). Vehicle movement on a road makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The sound level attenuates or drops off at a rate of 3 dB per doubling of distance for line sources.

A large object in the path between a noise source and a receiver can significantly attenuate noise levels at that receiver location. The amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain or landform features as well as man-made features (e.g., buildings and walls) can significantly alter noise exposure levels. For a noise barrier to work, it must be high enough and long enough to block the view from the receiver to a road or to the noise source. Effective noise barriers can reduce outdoor noise levels at the receptor by up to 15 dB.

Several rating scales (or noise "metrics") exist to analyze effects of noise on a community. These scales include the average equivalent noise level (L_{eq}), maximum noise level (L_{max}), and minimum noise level (L_{min}), which are respectively the highest and lowest A-weighted sound levels that occur during a noise event, and the Community Noise Equivalent Level (CNEL). Average noise levels over a period of minutes or hours are usually expressed as dBA L_{eq}, which is the equivalent average noise level for that period of time. The period of time averaging may be specified; for example, $L_{eq(3)}$ would be a three-hour average. Noise of short duration (i.e., substantially less than the averaging period) is averaged into ambient noise during the period of interest. Thus, a loud noise lasting a few seconds may have minimal effect on the measured sound level averaged over a one-hour period.

To evaluate community noise impacts, CNEL was developed to account for human sensitivity to nighttime noise. CNEL represents the 24-hour average sound level with a penalty for noise occurring at night. The CNEL computation divides a 24-hour day into three periods: daytime (7:00 AM to 7:00 PM), evening (7:00 PM to 10:00 PM), and nighttime (10:00 PM to 7:00 AM). The evening sound levels are assigned an approximately 5-dB penalty, and the nighttime sound levels are assigned a 10-dB penalty prior to averaging with daytime hourly sound levels.

Vibration

Vibration is an oscillatory motion through a solid medium in which the amplitude of the motion can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities such as railroads or vibration-intensive stationary sources but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. Vibration displacement is the distance that a point on a surface moves away from its original static position. The instantaneous speed at which a point moves on a surface is described as the velocity, and the rate of change of the speed is described as the acceleration. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction of a project, the operation of construction equipment can cause ground borne vibration. During the operational phase of a project, receptors may be subject to levels of

vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure. Analysis of this type of vibration is best measured in velocity and acceleration.

The three main wave types of concern in the propagation of groundborne vibrations are surface or Rayleigh waves, compression or P-waves, and shear or S-waves.

- Surface or Rayleigh waves travel along the ground surface. They carry most of their energy along an expanding cylindrical wave front, similar to the ripples produced by throwing a rock into a lake. The particle motion is more or less perpendicular to the direction of propagation (known as retrograde elliptical).
- Compression or P-waves are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal, in a push-pull motion. P-waves are analogous to airborne sound waves.
- Shear or S-waves are also body waves, carrying their energy along an expanding spherical wave front. Unlike P-waves, however, the particle motion is transverse, or perpendicular to the direction of propagation.

The peak particle velocity (PPV) or the root mean square (rms) velocity is usually used to describe vibration amplitudes. The PPV is defined as the maximum instantaneous peak of the vibration signal and the rms is defined as the square root of the average of the squared amplitude of the signal. The PPV is more appropriate for evaluating potential building damage and also used for evaluating human response.

The units for PPV are normally inches per second (in/sec). Often, vibration is presented and discussed in VdB units in order to compress the range of numbers required to describe the vibration. In this study, all PPV velocity levels are in in/sec and all vibration levels are in VdB relative to one microinch per second.

The threshold of human perception is approximately 0.3 in/sec PPV. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Even the more persistent Rayleigh waves decrease relatively quickly as they move away from the source of the vibration. Man-made vibration problems are, therefore, usually confined to short distances (500 feet or less) from the source.

Construction generally includes a wide range of activities that can generate groundborne vibration. In general, blasting and demolition of structures and pile driving generate the highest vibrations. Heavy trucks can also generate groundborne vibrations, which vary depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, differential settlement of pavement, and other anomalies all increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration of normal traffic on streets and freeways with smooth pavement conditions (FTA 2018).

Noise-Sensitive Receptors

The State of California defines noise-sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Furthermore, Pasadena attempts to minimize exposure to excessive noise levels to residents, workers, and visitors. The land use categories requiring the lowest noise thresholds are schools, libraries, churches, hospitals, and residences. The nearest noise sensitive uses are residential uses proximate to the BMP sites. There are no residences near the Golf Course maintenance yard.

Existing Measured Noise Levels

The existing noise environment in the Project area is primarily influenced by traffic noise on nearby roads. The roadways contributing the most noise to the Project site are State Route (SR) 110 located to the south and local residential streets.

To characterize the existing noise environment, an ambient noise survey was conducted at the site on June 9, 2023. Short-term (approximately 20 minutes each) noise level measurements were taken using a Larson Davis Laboratories SoundTrack LxT® sound level meter. At each noise monitoring location, the sound level meter microphone was placed approximately five feet above the ground and equipped with a windscreen.

Table 3.8-2, Existing Ambient Noise Levels, describes the location of each monitoring site and the measured existing noise levels. As shown, existing average noise levels (L_{eq}) ranged from 57 dBA to 64 dBA, with the highest measured noise levels at Site NM2, located near the corner of Stoney Drive and San Pascual Avenue. Existing noise levels at the Project sites are considered low and typical of recreational areas. Noise monitoring data and calculations are provided in Appendix G, Noise Supporting Documentation of this EIR.

TABLE 3.8-2
EXISTING AMBIENT NOISE LEVELS

Noise Monitoring Location	Primary Noise Sources	L_{min} dBA (Minimum)	L_{eq} dBA (Average)	L_{max} dBA (Maximum)
NM1 – At the southern end of the San Pascual site along Stoney Dr. between the Arroyo Seco Channel and Arroyo Park (614 Stoney Drive)	Vehicular Traffic, and Park and Trail Activity	56.7	62.6	77.4
NM2 – At the northern end of the San Pascual site at the Stoney Drive and San Pascual Avenue intersection across from Arroyo Park	Vehicular Traffic, and Park and Trail Activity	50.5	64.4	80.6
NM3 – Across from the San Rafael site along the hiking trail on the east side of the Channel below the bridge crossing downstream of San Rafael Avenue	Hiking and Equestrian Activity	40.5	57.1	78.6
dBA: A-weighted decibels Source: Noise Supporting Documentation is provided as Appendix G to this EIR.				

3.8.3 RELEVANT PROGRAMS AND REGULATIONS

Federal

Occupational Safety and Health Act of 1970

Under the Occupational Safety and Health Act of 1970 (29 U.S.C. Section 1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any degradation.

Federal Interagency Committee on Noise

In 1992 the Federal Interagency Committee on Noise (FICON) assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. Although the FICON recommendations were developed to address aircraft noise impacts, they are used in this analysis to define a substantial increase in community noise levels related to roadway traffic.

Noise Control Act of 1972

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

This act authorized the USEPA to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels). The USEPA cautions that these identified levels are not standards because they do not consider the cost or feasibility of the levels.

For protection against hearing loss, 96 percent of the population would be protected if sound levels were less than or equal to an $L_{eq}(24)$ of 70 dBA. The "(24)" signifies an L_{eq} duration of 24 hours. The USEPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

At 55 dBA L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 11 feet, and no substantial community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. Among the agencies now regulating noise are OSHA, which limits noise exposure of workers to 90 dB L_{eq} or less for 8 continuous hours or 105 dB L_{eq} or less for 1 continuous hour; the United States Department of Transportation, which assumed a significant role in noise control through its various operating agencies; and the Federal Aviation Administration, which regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the FTA. Transit noise is regulated by the FTA, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA).

Finally, the federal government encourages local jurisdictions use their land use regulatory authority to site new development in such a way that "noise-sensitive" uses are either prohibited from being sited adjacent to a highway, or alternatively, that developments are planned and constructed in such a manner that minimize potential noise impacts. Since the federal government has preempted the setting of standards for noise levels that can be emitted by transportation sources, local jurisdictions are limited to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

Federal Transit Administration

The FTA Transit Noise and Vibration Impact Assessment Manual (FTA 2018) has developed construction noise impact guidelines shown in Table 3.8-3, FTA Construction Noise Criteria.

TABLE 3.8-3
FTA CONSTRUCTION NOISE CRITERIA

1-Hour Criteria (L_{eq})		
Land Use	**Day**	**Night**
Residential	90	80
Commercial	100	100
Industrial	100	100
8-Hour Criteria (L_{eq})		
Land Use	**Day**	**Night**
Residential	80	70
Commercial	85	85
Industrial	90	90
Source: FTA 2018		

The FTA has also adopted standards associated with building damage for determining the groundborne vibration impacts on various building categories (FTA 2018).

Table 3.8-4 provides the FTA vibration damage criteria for various structural categories. A damage risk criterion of 0.2 inch per second PPV is protective of all but the most fragile buildings. The limit of 0.12 PPV for fragile, historic structures is among the most restrictive limits used for vibration damage risk to buildings.

TABLE 3.8-4
FTA CONSTRUCTION VIBRATION DAMAGE RISK CRITERIA

Building Category	PPV (inches per second)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Historic buildings that have average sensitivity to vibration damage and non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12
PPV = peak particle velocity Source: FTA, 2018	

State

California Building Standards Code - Title 24

The California Buildings Standards Code, Title 24 of the *California Code of Regulations*, also known as the CBC, establishes building standards, including noise insulation standards, applicable to all occupancies throughout the State. The most recent building standards adopted by the legislature and used throughout the State are the 2022 version. Section 1206.4, Allowable interior noise levels, states "Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric shall be either the day-night average sound level (L_{dn}) or the CNEL, consistent with the noise element of the local general plan.". These noise standards are for new construction in California for the purposes of interior compatibility with exterior noise sources. The regulations specify that acoustical studies must be prepared for new buildings with habitable rooms that are near major transportation noises, and where such noise sources create an exterior noise level of 60 dBA CNEL/L_{dn} or higher.

General Plan Guidelines/California Office of Noise Control—Noise Compatibility Standards

Established in 1973, the California Department of Health Services Office of Noise Control was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which allows the local jurisdiction to delineate compatibility of sensitive uses with various incremental levels of noise.

The California Office of Noise Control has set published acceptable noise limits guidelines for sensitive uses. Sensitive land uses, such as homes, are "normally acceptable" in exterior noise environments up to 65 dBA CNEL and "conditionally acceptable" in areas up to 70 dBA CNEL. A "conditionally acceptable" designation implies that new development should be undertaken only after a detailed analysis of the necessary noise reduction measures that would need to be incorporated into the new development to ensure that acceptable noise levels could be achieved (e.g., needed noise insulation features are incorporated in the design). By comparison, a "normally acceptable" designation indicates that standard construction could occur with no special noise reduction requirements incorporated into the design of the new development (LCI 2024).

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines referenced above, which rank noise/land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable. As discussed further below, because the Project is subject to review under CEQA, the impact thresholds for potential noise and vibration impacts set forth in Appendix G of the CEQA Guidelines are relevant in applying the foregoing guidelines.

California Department of Transportation Vibration Guidelines

Caltrans, in its *Transportation and Construction Vibration Guidance Manual*, has established vibration damage potential guideline thresholds (Caltrans 2020). Caltrans vibration structural damage potential guideline thresholds are generally consistent with the FTA criteria that are used for determination of impacts from the proposed Project.

Local

City of Pasadena

City of Pasadena General Plan

The City of Pasadena is affected by several different sources of noise, including automobile traffic, Rose Bowl events, commercial activity, and periodic nuisances such as construction, loud parties, and other events. The City's Noise Element is intended to identify these sources and provide objectives and policies that ensure that noise from these sources does not create an unacceptable noise environment (Pasadena 2002). The Noise Element also contains guidelines for noise compatible land use for long-term operations.

The Noise Element of the Pasadena General Plan acknowledges that noise from major roadways may affect sensitive receptors. The following policy and implementation measures are applicable to the Project:

Policy 2a: The City will encourage noise-compatible land uses along major roadways.

Measure 1: The City will consult the guidelines for noise compatible land use shown on Figure 1 [Table 3 of the Noise Analysis] to guide the appropriateness of land uses relative to roadway noise.

The Noise Element of the Pasadena General Plan recognizes that construction activity is a source of occasional temporary nuisance noise throughout the City of Pasadena and that these and other such nuisance noises are common to cities and, because of their unpredictable nature, must be addressed on a case-by-case basis. The following General Plan policies are applicable to the Project:

Policy 7b: The City will encourage limitations on construction activities adjacent to sensitive noise receptors.

Policy 7c: The City will encourage construction and landscaping activities that employ techniques to minimize noise.

City of Pasadena Municipal Code

Chapter 9.36, Noise Restrictions, of the Pasadena Municipal Code (PMC) is Pasadena's Noise Ordinance. It states it is the City's policy ". . . to prohibit unnecessary, excessive and annoying noises from all sources. Noise at certain levels is detrimental to the health and welfare of the general public." The following sections of the Pasadena Noise Ordinance are applicable to the Project:

Section 9.36.030, Definitions of the PMC states:

As used in this chapter, unless the context otherwise clearly indicates, the words and phrases used in the ordinance codified in this chapter are defined as follows:

A. "Ambient noise" means the all-encompassing noise associated with a given environment, being usually a composite of many sources near and far. For the purpose of this chapter, ambient noise level is the level obtained when the noise level is averaged over a period of 15 minutes without inclusion of noise from isolated identifiable sources, at the location and time of day near that at which a comparison is to be made. This value shall not include noise from occasional, or occasional and transient sources.

Section 9.36.040, Ambient Noise Level, of the PMC states:

A. When "ambient noise level" is referred to in this chapter, it means the actual measured ambient noise level.

B. Any sound level measurement made pursuant to the provisions of this chapter shall be measured with a sound level meter using the A weighting.

1. Where the sound alleged to be offending is of a type or character set forth below, the following values shall be added to the sound level measurement of the offending noise:
    a. Except for noise emanating from any electrical transformer or gas metering and pressure control equipment existing and installed prior to the effective date of the ordinance codified herein, any steady audible tone: + 5;
    b. Repeated impulsive noise: + 5;
    c. Noise occurring more than 5 but less than 15 minutes per hour: - 5;
    d. Noise occurring more than 1 but less than 5 minutes per hour: - 10;
    e. Noise occurring less than 1 minute per hour: -20.
2. Values of subsections (B)(1)(c), (B)(1)(d), and (B)(1)(e) of this section shall be added to the sound level measurements during daytime (6 AM to 11 PM) periods only.

Section 9.36.050, General Noise Sources, of the PMC states:

9. A. It is unlawful for any person to create, cause, make or continue to make or permit to be made or continued any noise or sound which exceeds the ambient noise level at the property line of any property by more than 5 decibels.

Section 9.36.070, Construction Projects, of the PMC states:

A. No person shall operate any pile driver, power shovel, pneumatic hammer, derrick power hoist, forklift, cement mixer or any other similar construction equipment within a residential district or within a radius of 500 ft therefrom at any time other than as listed below:
    1. From 7:00 AM to 7:00 PM Monday through Friday;
    2. From 8:00 AM to 5:00 PM on Saturday; and
    3. Operation of any of the listed construction equipment is prohibited on Sundays and holidays.

B. No person shall perform any construction or repair work on buildings, structures or projects within a residential district or within a radius of 500 ft there from in such a manner that a reasonable person of normal sensitivity residing in the area is caused discomfort or annoyance at any time other than as listed below:
    1. From 7:00 AM to 7:00 PM Monday through Friday;
    2. From 8:00 AM to 5:00 PM on Saturday; and
    3. Performance of construction or repair work is prohibited on Sundays and holidays.

C. For purposes of this section, holidays are New Year's Day, Martin Luther King Jr. Day, Lincoln's Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, and Christmas.

Section 9.36.080, Construction Equipment of the PMC states:

> It is unlawful for any person to operate any powered construction equipment if the operation of such equipment emits noise at a level in excess of 85 dBA when measured within a radius of 100 ft from such equipment.

Section 9.36.090, Machinery, equipment, fans and air conditioning, of the PMC states:

> Except for emergency work, as defined in this chapter it is unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than 5 decibels.

City of South Pasadena

South Pasadena General Plan

The City of South Pasadena General Plan Part B, Chapter 6: Our Healthy Community, provides the City of South Pasadena's regulations and policies related to environmental noise. The City of South Pasadena has adopted the State of California's land use compatibility guidelines for noise, which establish noise limits guidance for sensitive land uses. For residential land uses, exterior noise environments up to 65 dBA CNEL are "normally acceptable" and areas up to 70 dBA CNEL are "conditionally acceptable."

The City's General Plan mentions the FTA detailed assessment criteria including an eight-hour construction noise level threshold of 80 dBA L_{eq} during daytime at residential (noise-sensitive) uses, and 85 dBA L_{eq} during daytime hours at commercial uses. The noise study relies on the FTA thresholds for land uses adjacent to future development.

Related to vibration, the City of South Pasadena General Plan states: "Pile driving, loaded trucks, large bulldozers, and jackhammers within 50 feet of nearby sensitive land uses (e.g. residential, school, etc.) shall be minimized, or alternative equipment or methods shall be used, unless the vibration levels are shown to be less than the County of Los Angeles root-mean square velocity (RMS) threshold of 0.01 in/sec RMS."

South Pasadena Municipal Code

The South Pasadena Municipal Code (SPMC), Chapter 19A Noise Regulation, establishes exterior noise level limits for stationary noise sources in the City as measured at the adjacent property line. Sections 19A.7(b) and 19A.12 indicate that radios, television sets, machinery, equipment, fans, air conditioning units, and similar devices/equipment shall not generate

exterior noise levels in excess of the ambient noise level by more than 5 dBA. Further, amplified sound (e.g., any machine or device for the amplification of the human voice, music, or any other sound) shall not generate noise levels in excess of the ambient noise level by more than 15 dBA.

To control noise impacts associated with construction, the City of South Pasadena has established limits to the hours of operation. Section 19A.13(a) indicates that within a residential zone or within 500 feet thereof, construction activities are limited to between 8:00 AM to 7:00 PM, Monday through Friday; 9:00 AM to 7:00 PM on Saturdays; and 10:00 AM to 6:00 PM on Sundays and holidays. The Municipal Code does not establish numeric maximum acceptable construction source noise levels at potentially affected receivers.

City of Los Angeles

The City of Los Angeles has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses. The Los Angeles Municipal Code (LAMC) and the *City of Los Angeles General Plan Noise Element* are the two documents designed to regulate noise within the City (Los Angeles 1999).

Section 41.40 of the LAMC states that engaging in construction, repair, or excavation work with any construction type device or jobsite delivering of construction materials without a Police Commission approved variance would constitute a violation:

- Between the hours of 9:00pm and 7:00am of the following day
- In any residential zone, or within 500 feet of land so occupied, before 8:00am or after 6:00pm on any Saturday, or at any time on any Sunday
- In a manner as to disturb the peace and quiet of neighboring residents or any reasonable person of normal sensitivity residing in the area.

Further, Section 41.40(j) of the LAMC states that the noise standards do not apply to major public works construction by the City of Los Angeles and its proprietary Departments, including all structures and operations necessary to regulate or direct traffic due to construction activities. It also states that the Board of Police Commissioners will grant a variance for this work and construction activities will be subject to all conditions of the variance as granted. Concurrent with the request for a variance, the City of Los Angeles Department that will conduct the construction work will notify each affected Council district office and established Neighborhood Council of projects where proposed Sunday and/or Holiday work will occur.

Section 112.05 of the LAMC specifies the maximum noise level of powered equipment or powered hand tools. Any powered equipment or hand tool that produces a maximum noise level exceeding 75 dBA at a distance of 50 feet when operated within 500 feet of a residential zone is prohibited between the hours of 7:00am and 10:00pm. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means the

above noise limitation cannot be met despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of equipment.

In addition, the City of Los Angeles in its *Construction Noise and Vibration* document has updated the construction noise and vibration thresholds to be used in assessing the environmental impacts of projects in accordance with CEQA (Los Angeles 2024). The Department of City Planning has established a daytime (7:00 A.M. and 7:00 P.M.) maximum 80 dBA L_{eq} (8-hour) absolute threshold at noise sensitive uses (at the property line with outdoor uses or at the exterior of the building). These include single-family and multi-unit dwellings, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels, transient lodging, and other residential uses; places of assembly including churches or houses of worship; hospitals; libraries; schools; auditoriums; concert halls; outdoor theaters; nature and wildlife preserves; outdoor public recreational areas; and parks. This does not include private residential balconies which may or may not extend past the exterior of a building, or to private outdoor spaces.

3.8.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. The project would result in a significant adverse noise impact if it would:

Threshold 3.8a: Result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

Threshold 3.8b: Result in the generation of excessive groundborne vibration or groundborne noise levels; and/or

Threshold 3.8c: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

3.8.5 REGULATORY REQUIREMENTS

RR NOI-1 In accordance with Section 9.36.070 of the City of Pasadena Municipal Code, construction activities are limited to the hours of 7:00 AM to 7:00 PM Monday through Friday, 8:00 AM to 5:00 PM on Saturday, and prohibited on Sundays and holidays.

In accordance with Section 9.36.080 of the City of Pasadena Municipal Code, it is unlawful for any person to operate any powered construction equipment in the City of Pasadena if the operation of such equipment emits noise at a level in excess of 85 dBA when measured within a radius of 100 feet from such equipment.

RR NOI-2 In accordance with Section 19A.13(a) City of South Pasadena Municipal Code, construction activities are limited to between 8:00 AM to 7:00 PM Monday through Friday, 9:00 AM to 7:00 PM on Saturdays, and 10:00 AM to 6:00 PM on Sundays and holidays.

RR NOI-3 In accordance with Section 41.40 of the City of Los Angeles Municipal Code, construction activities are limited to between the hours of 7:00 AM and 9:00 PM; in any residential zone, or within 500 feet of land so occupied, between 8:00 AM and 6:00 PM on Saturdays or at any time on Sundays; and may not be performed in a manner as to disturb the peace and quiet of neighboring residents or any reasonable person of normal sensitivity residing in the area.

3.8.6 ENVIRONMENTAL IMPACTS

Threshold 3.8a: Would the Project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction (Temporary) Noise

Construction of the Project would entail noise generated from site preparation, grading/excavation, and infrastructure construction activities. Project construction is anticipated to begin in Fall 2026 and occur over a total period of approximately 17 months in a single phase, with semi-consecutive construction of the San Rafael and San Pascual BMPs. The San Rafael construction period would be approximately 9 months, and the San Pascual construction period would be approximately 13 months. Construction at the San Pascual site would be initiated after demolition, site preparation, and grading activity at San Rafael are complete, which is expected to require about 4 months. Therefore, there would be construction activity at San Rafael only for 4 months, construction at both sites simultaneously for 5 months, and construction at San Pascual only for 8 months. Installation of the off-site water harvester and related infrastructure at the Golf Course maintenance yard is anticipated to overlap with construction activities at the San Pascual site during the last eight months of the Project construction period.

Local residents in the vicinity of both Project sites would be subject to elevated noise levels due to the Project-related construction activities. Construction activities would be carried out in discrete steps, each of which will have its own mix of equipment and, consequently, its own noise characteristics. These sequential phases would change the character of the noise levels surrounding the Project construction site as work progresses. Construction noise levels reported in the USEPA's *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances* were used to estimate construction noise levels for the Project. Typically, the estimated construction noise levels are governed primarily by equipment that produces the highest noise levels. Construction noise levels for each generalized construction phase of the Project are based on a typical mixed-use project

construction fleet and do not include use of atypical, very loud, and vibration-intensive equipment (e.g., pile drivers).

It is noted that noise analysis associated with the Project's construction activities is conservative and may be overestimated because it is based on noise levels from construction engines developed in the 1970s and earlier, which did not have modern engine designs or noise attenuation systems. Construction activities were also assessed with noise for all construction equipment being utilized at the same time, which would not occur for the majority of the construction period. Finally, the construction noise levels presented below do not consider intervening topography or structures that may reduce noise. In particular, it is noted that the residential uses near the San Rafael site are situated at elevations from approximately 40 feet to 200 feet above the site.

The degree to which noise-sensitive receptors are affected by construction activities depends heavily on their distance from the noise source. Table 3.8-7, Construction Noise Levels at Surrounding Uses, on the following page, shows both the estimated maximum and average noise levels for the most intense (i.e., noise generating) construction activity anticipated to occur during Project implementation. Maximum noise levels represent the noise levels from construction equipment occurring nearest to the noise sensitive use/receptor. Average noise levels represent the noise exposure at sensitive uses based on the distance to the center of the Project site during construction of each of the Project sites.

Table 3.8-7, Construction Noise Levels at Surrounding Uses, on the following page shows the estimated construction noise exposure levels for the surrounding land uses nearest to the two Project sites. Pasadena evaluates excessive construction noise levels based on the average noise level from construction equipment exceeding 85 dBA L_{eq} at a reference distance of 100 feet from construction equipment. As shown in Table 3.8-7, Construction Noise Levels at Surrounding Uses, noise levels from construction equipment at the San Rafael site would be less than the 85 dBA noise limit as measured at 100 feet from the equipment pursuant to Section 9.36.080, Construction Equipment, of the Pasadena Municipal Code. Estimated maximum noise levels from Project-related construction activities at nearby sensitive receptor locations would range from 61 to 92 dBA; and average noise levels would range from 57 to 80 dBA L_{eq}, depending on distance.

South Pasadena and Los Angeles have adopted construction noise limits based on the FTA construction noise criteria of 80 dBA L_{eq} (eight-hour) during daytime at noise-sensitive uses. As shown in Table 3.8-7, an 80 dBA Leq noise level would be generated during the foundation construction phase at the nearest noise-sensitive areas in Arroyo Park.

TABLE 3.8-5
CONSTRUCTION NOISE LEVELS AT SURROUNDING USES

Construction Phase[a]	San Rafael Construction Noise Exposure Levels (dBA L_{eq}) (Pasadena Noise Threshold Applied)									
	North – San Rafael Avenue Residences		West – Aratina Street Residences		South – San Pascual Stables		East – Arroyo Drive Residences		Noise Level at 100 ft	Exceeds 85 dBA L_{eq} at 100 feet?
	Max (80 ft)	Avg (350 ft)	Max (170 ft)	Avg (380 ft)	Max (60 ft)	Avg (130 ft)	Max (340 ft)	Avg (580 ft)		
Ground Clearing/Demo	80	67	73	66	82	76	67	63	78	No
Excavation	74	61	67	60	76	70	61	57	72	No
Foundation Construction	84	71	77	70	86	80	71	67	82	No
Building Construction	74	61	67	60	76	70	61	57	72	No
Paving and Site Cleanup	80	67	73	66	82	76	67	63	78	No

Construction Phase[a]	San Pascual Construction Noise Exposure Levels (dBA Leq) (South Pasadena and Los Angeles Noise Threshold Applied)								
	North – San Ramon Drive Residences		Northwest – San Pascual Ave Residences		West – San Pascual Park		East – Arroyo Park		Exceeds daytime 80 dBA L_{eq} (avg)?
	Max (30 ft)	Avg (460 ft)	Max (70 ft)	Avg (470 ft)	Max (110 ft)	Avg (200 ft)	Max (40 ft)	Avg (130 ft)	
Ground Clearing/Demo	88	65	81	65	77	72	86	76	No
Excavation	82	59	75	59	71	66	80	70	No
Foundation Construction	92	69	85	69	81	76	90	**80**	**Yes**
Building Construction	82	59	75	59	71	66	80	70	No
Paving and Site Cleanup	88	65	81	65	77	72	86	76	No

L_{eq} dBA: average noise energy level in A-weighted decibels; max: maximum; avg: average; ft: feet

[a] These construction phase names relate to the anticipated equipment mix as applied in the noise model and are named for more typical land development projects.

Note: Noise levels from construction activities do not account for attenuation provided by intervening structures.

Source: Noise Supporting Documentation is provided as Appendix G to this EIR.

Truck trips are needed for delivery of construction equipment and materials as well as the export of greenwaste, excavated soil, and other construction debris. Noise generated from truck trips would add to the ambient noise level generated by existing vehicle traffic and other noise sources in the Project area. It is anticipated that excavation of the Project sites, which would involve the greatest number of daily truck trips, would result in between approximately 3 to 6 one-way truck trips per day. These truck trips, in addition to similar numbers of trips by worker and staff trips, would result in a contribution of less than 46 dBA to hourly L_{eq} or daily CNEL at a distance of 50 feet from centerlines of local roadways. Such levels are more than 10 dB below the measured existing noise levels (in terms of L_{eq}) in the

Project area. Therefore, Project-related construction traffic noise would not result in a substantial increase in traffic noise levels. Noise level increases associated with construction truck traffic would be less than the 3 dB increase threshold that is discernable to human hearing due to the small magnitude of traffic resulting from a combination of worker vehicles and hauling of grading materials relative to background traffic.

In summary, noise from construction activities on the sites would be clearly audible above the existing ambient noise environment. However, construction would occur during the least noise-sensitive portions of the day. Specifically, Project construction is anticipated to occur from Mondary through Friday, between the hours of 7:00 AM and 5:00 PM, without activity on weekends or federal holidays. All construction activity would occur consistent with the allowable construction hours as established by the relevant jurisdictions. Construction at the San Rafael site would be consistent with Section 9.36.070, Construction Projects, of the PMC (RR NOI-1); and construction at the San Pascual site would be consistent with the stricter of Section 19A.13(a) SPMC (RR NOI-2) and Section 41.40 of the LAMC (RR NOI-3).

Noise levels from construction equipment would not exceed the noise level limit established under Section 9.36.080 of the PMC of 85 dBA at 100 feet (RR NOI-1); therefore, construction noise at the San Rafael site would not result in a significant impact. However, Project construction at the San Pascual site would be at the daytime noise limit threshold of 80 dBA at noise-sensitive areas within the Arroyo Park and would be considered a significant impact.

Therefore, MM NOI-1 requires erection of a temporary construction noise barrier along the east side of the San Pascual site at heights that block the line of sight to receptors standing in the affected locations. Additionally, Pasadena would voluntarily install the construction noise barrier along the north side of the San Pascual site, although a significant impact is not identified, in light of the relatively close proximity of residences across San Pascual Avenue. A construction noise barrier meeting the height and material specifications described in MM NOI-1 is known to reduce the noise level by at least five dBA. Therefore, with implementation MM NOI-1, the construction noise impact at Arroyo Park would be reduced to a less than significant level.

Operational (Permanent) Noise Increases

Off-site Traffic Noise Generation

A three-decibel increase occurs when traffic volumes double or a project increases the percentage of noisy trucks on roadways. Three decibels is considered the minimum change needed for humans to detect a change in noise levels in outdoor environments.

The Project would provide expanded and improved physical facilities and open space resources to existing users of the Lower Arroyo Seco. However, the Project is not anticipated to directly increase use of the Lower Arroyo Seco area as a destination. It is expected that existing users of the Arroyo Seco area would use the proposed Project features, as they would be similar to and complement the passive and active recreation features existing in the area. As such, there would not be a measurable increase in vehicle trips by visitors traveling to and from the sites.

Long-term maintenance is expected to involve, on average, a single visit to both sites per month by a two- to four- person crew during a one-day (e.g., up to eight-hour) visit. The maintenance performed during each visit would vary depending on the equipment status and the season (wet or dry). It is expected that maintenance personnel would travel to and from the sites in one to two vehicles – such as a pickup truck, or pickup truck and a vacuum truck, for instance. Occasional visits for more intensive maintenance activities or to respond to equipment issues may occur. This level of maintenance activity would not result in a substantial permanent increase in ambient noise levels.

Removal of trees on the San Pascual site is not expected to result in a noticeable change in noise at the residential areas along the north side of San Pascual Avenue. According to the Caltrans Technical Noise Supplement, it is uncommon for trees and vegetation to result in a noticeable reduction in noise. A vegetative strip must be very dense and wide for there to be any meaningful shielding effect (Caltrans 2013). Similarly, receptors located a greater distance from the San Pascual site would not perceive a noticeable change in noise levels resulting from tree removals. This is because the existing ambient noise in those areas is primarily due to multiple sources from all directions, including distant and local vehicular traffic as well as park and trail activities. These activities are mostly not shielded by the trees to be removed. There would be less than significant impacts related to operation of the Project, and no mitigation is required.

Equipment Noise Generation

Operational noise sources associated with the proposed Project would include, but are not limited to, landscape maintenance equipment, and infrastructure such as water pumps at the San Rafael and San Pascual sites and the water harvester sited at the Arroyo Seco Golf Course maintenance yard. Noise from landscape maintenance would be similar to noise currently being generated by landscape maintenance in the more naturalized areas of the Arroyo Seco. There would be pumps installed at both Project sites. A small low flow pump would function year-round, but larger pumps would only work when it rains and likely once every few weeks to ensure proper functionality during long-term dry periods. The pumps would be constructed with a subsurface installation at a depth of at least 10 feet underground. Subsurface installation of these pumps will attenuate noise levels such that they would comply with the noise limits identified in the Pasadena Municipal Code and South Pasadena Municipal Code. A stormwater harvester would be installed in a prefabricated building in the existing maintenance yard at Arroyo Seco Golf Course, and it would be essentially inaudible outside the enclosure due to sound attenuation provided by the building. The adjacent AST would not be housed in a structure but would not include any noise sources that generate high enough noise levels to be heard outside its immediate vicinity. Compliance with Pasadena's and South Pasadena's requirements would result in noise levels that would not violate either jurisdiction's standards. As such, noise impacts from the long-term operation and maintenance of the Project would not result in a substantial increase in ambient noise levels at the nearest off-site noise-sensitive receptors. There would be a less than significant impact, and no mitigation is required.

Threshold 3.8b: Would the Project result in the generation of excessive groundborne vibration or groundborne noise levels?

Construction Vibration

Table 3.8-6, Vibration Levels for Construction Equipment, below, summarizes typical vibration levels measured during construction activities for various vibration-inducing pieces of equipment. Pile driving and blasting are generally the sources of the most severe vibration during construction. Neither pile driving nor blasting would be used during Project construction. Conventional construction equipment would be used for Project construction. For analyses of Project construction vibration levels, the reference vibration level from the specific construction source is projected to the closest off-site structures, unlike analyses of noise impacts, which are conducted at the exterior use areas of affected properties.

TABLE 3.8-6
VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment		PPV at 25 ft (in/sec)
Pile driver (impact)	upper range	1.518
	typical	0.644
Pile driver (sonic)	upper range	0.734
	typical	0.170
Vibratory roller		0.210
Large bulldozer		0.089
Caisson drilling		0.089
Loaded trucks		0.076
Jackhammer		0.035
Small bulldozer		0.003
PPV: peak particle velocity; ft: feet; in/sec: inches per second. Source:		

The City of Pasadena uses the vibration-induced structural damage criteria developed by the FTA to assess significance of impacts. Generally, the City of Pasadena does not consider annoyance from short-term construction vibrations to be a significant CEQA impact. Rather, a significant impact could occur if vibrations would prevent the normal operation of regular activities at a receiving sensitive land use. Table 3.8-9, Construction *Vibration Levels at Nearby Land Uses*, shows the estimated vibration level (in PPV) from construction activities at the Project sites compared to the structural damage criteria. The distances at which vibration levels were calculated represent the distance from the nearest construction activity to the nearest structure, rather than nearest property line.

As shown in Table 3.8-7, the vibration levels generated by Project construction activities at surrounding land uses near both sites would not exceed the significance criteria when construction activities occur under maximum (i.e., closest to the receptor) exposure

conditions against the FTA structural damage significance criterion of 0.2 in/sec PPV for Class III (non-engineered timber and masonry) buildings. Construction-related vibration levels would be substantially less under average conditions when construction activities are located further away. Furthermore, sensitive receptors in the vicinity of the San Pascual Site are located at distances greater than 50 feet from the Project construction site. Therefore, South Pasadena's RMS velocity limit of 0.01 in/sec would not apply to these receptors. As vibration levels would be below the applicable criteria, vibration generated by the Project's construction equipment would not be expected to result in any structural damage at the nearest uses. There would be a less than significant impact, and no mitigation is required.

Operations Vibration

The proposed Project would not include any sources of operational vibration. Stationary equipment associated with the Project is not expected to generate any detectable vibrations. In addition, rare vehicular traffic associated with the Project would include a mix of automobiles and medium-sized trucks which would not result in any perceptible vibration levels at nearby sensitive land uses because of roadway conditions and distances to the receptors. Therefore, Project operational vibration impacts would be less than significant.

TABLE 3.8-7
CONSTRUCTION VIBRATION LEVELS AT NEARBY LAND USES

	San Rafael Site Vibration Levels (PPV, in/sec)			
	North – San Rafael Avenue Residences	**West - Aratina Street Residences**	**South - San Pascual Stables**	**East – Arroyo Drive Residences**
Equipment	**(PPV @ 115 ft)**	**(PPV @ 190 ft)**	**(PPV @ 125 ft)**	**(PPV @ 360 ft)**
Large Bulldozer	0.009	0.004	0.008	0.002
Small bulldozer	0.0003	0.0001	0.0003	0.0001
Loaded trucks	0.008	0.004	0.007	0.001
Structural Damage Criteria	***0.2***	***0.2***	***0.2***	***0.2***
Exceeds Criteria?	**No**	**No**	**No**	**No**
	San Pascual Site Vibration Levels (PPV, in/sec)			
	North - San Ramon Drive Residences	**Northwest – San Pascual Ave Residences**	**West - San Pascual Park**	**East - Arroyo Park**
Equipment	**(PPV @ 65 ft)**	**(PPV @ 120 ft)**	**(PPV @ 630 ft)**	**(PPV @ 80 ft)**
Large Bulldozer	0.021	0.008	0.001	0.016
Small bulldozer	0.001	0.0003	0.00002	0.001
Loaded trucks	0.018	0.007	0.001	0.013
Structural Damage Criteria	***0.2***	***0.2***	***0.2***	***0.2***
Exceeds Criteria?	**No**	**No**	**No**	**No**

PPV: peak particle velocity; ft: feet; in/sec: inches per second

Source: Caltrans 2020 (for criteria only); Noise Supporting Documentation is provided as Appendix G to this EIR.

Threshold 3.8c: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?

There are no public or private airports located within two miles of the Project sites. The Project sites are located approximately eight miles northwest of the San Gabriel Valley Airport and approximately 12 miles southeast of the Hollywood Burbank Airport at the closest points. The Project sites are located well outside the existing and projected 65-dBA CNEL noise contour of both of these airports, and they are not located within the vicinity of a private airstrip. Aircraft overflights do not significantly contribute to the noise environment at the Project sites. There would be no impact, and no mitigation is required.

3.8.7 CUMULATIVE IMPACTS

The geographic context for cumulative noise impacts includes other nearby, reasonably foreseeable, projects in the cities of Pasadena, South Pasadena, and Los Angeles , particularly those located within or adjacent to the Lower Arroyo Seco corridor (i.e., within one-quarter mile of the project sites). As discussed in Section 2.5, Approach to Cumulative Impacts, of this EIR, related projects within approximately one-quarter mile of each of the sites that may be constructed at the same time is are limited to two residential additions in the single-family neighborhood to the east-southeast of the San Pascual site within South Pasadena. These two projects are anticipated to be implemented in the 2026-2027 timeframe. There are no projects in the vicinity of the Project sites that would be considered major construction activity.

Noise and vibration generated during construction of the proposed Project on each site would be geographically limited, because of noise attenuation, and would occur at varying levels for varying periods of time throughout the construction period. Short-term cumulative impacts related to ambient noise and vibration levels could occur if construction associated with the Project in combination with another project with major construction activity occurring simultaneously within approximately one-quarter mile of the sites could adversely impact sensitive receptors in the vicinity of that site with a cumulative noise level greater than the noise generated solely at the Project site. Both related projects are well over 1,000 feet from the San Rafael site (1,650 feet and 2,175 feet); but are approximately 550 feet and 950 feet from the San Pascual site. If either related project is in construction in 2027, they would overlap with the San Pascual construction period. However, these two projects, which are relatively small-scale single-family residential additions, are not considered to require major construction activity. Even if the two related residential projects generate construction noise levels similar to the proposed Project, the highest construction noise levels at distances of 550 feet and 950 feet from those projects would be 67 dBA and 63 dBA, respectively. When combined with the Project's estimated construction noise levels shown in Table 3.8-5, overall construction noise levels would remain below the 80 dBA daytime limit at receptors shown to be below this threshold. This means the noise and vibration generated by construction of either of the related projects would not be great enough that,

when considering noise attenuation, it could combine with the noise and vibration generated by San Pascual construction to result in exceedance of the applicable construction noise criteria or even an audible increase in noise or vibration perceived by individuals in the Project area.

Therefore, at this time there are no related projects within one-quarter mile that are anticipated to be constructed concurrently with the Project that have the potential to generate cumulatively considerable noise or vibration levels. As such, the Project would not result in a cumulatively considerable construction noise and vibration impact.

3.8.8 MITIGATION MEASURES

MM NOI-1 Prior to initiation of Project construction activities at the San Pascual site, the Construction Contractor shall be responsible for erecting a temporary noise barrier along the east side of the San Pascual site at heights that block the line of sight to receptors standing within Arroyo Park, and along the north side of the San Pascual site at heights that block the line of sight to receptors standing at the single-family residences across San Pascual Avenue. To be effective, the temporary noise barrier must be continuous without gaps and made of massive enough materials to minimize transmission of sound waves through the material itself such that there is at least a five dBA L_{eq} reduction in construction noise levels. Acceptable materials include any outdoor weather-resistant solid material that is dense and heavy enough to meet the minimum sound transmission loss, such as 16-gauge steel, minimum 1-inch thick plywood, loaded curtain, or any reasonable thickness of concrete. The Construction Contractor shall be responsible for inspecting and maintaining the noise barrier throughout the San Pascual site construction period. The City of Pasadena Department of Public Works shall be responsible for ensuring the noise barrier is installed, meets specifications, and is properly maintained.

3.8.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Through compliance with construction noise hours and noise limits (RRs NOI-1 through NOI-3) and implementation of Project construction noise mitigation–in the form of temporary noise barriers at the San Pascual site as described under MM NOI-1–construction noise impacts at the San Pascual site would be less than significant. There would be less than significant construction noise impacts at the San Rafael site with regulatory compliance (RRs NOI-1 through NOI-3) and no mitigation is required. There would be less than significant impacts related to vibration from construction activities and long-term noise and vibration from operation and maintenance activities on both sites, and no mitigation is required.

3.8.10 REFERENCES

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U.S. Environmental Protection Agency (USEPA). 1971 (December 31). *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*. Washington, D.C.: USEPA.

3.9 PUBLIC SERVICES AND RECREATION

3.9.1 METHODOLOGY

This section analyzes the potential impacts on park services and recreation from implementation of the Arroyo Seco Water Reuse Project (Project). This analysis is based on information collected from online resources provided in Section 3.9.10, References.

3.9.2 EXISTING CONDITIONS

Both the San Rafael and San Pascual sites are situated within the Arroyo Seco, which is part of a regionally significant open space and recreational resource spanning the cities of Pasadena. South Pasadena and Los Angeles.

San Rafael Site

The San Rafael site is located in the City of Pasadena (Pasadena). The site encompasses 1.4 acres and is comprised of undeveloped open space land located along the northwest side of the Arroyo Seco Channel southwest of the San Rafael Avenue overpass of the Channel. The site includes a linear feature, the San Rafael Creek, which is within the limits of the Los Angeles County Flood Control District's (LACFCD's) easement. The site is occupied by public open space/recreational land, which is open daily from sunrise to sunset. The San Rafael site is fully accessible to the public via public and private transportation routes, and/or by various trails for pedestrians, bicyclists, and equestrians. The sole existing recreational feature present on the San Rafael site is a segment of Pasadena's Arroyo Trail, which is a shared pedestrian/equestrian trail that traverses the eastern side of the site generally parallel to the Arroyo Seco Channel. This segment of the Arroyo Trail is nearly overgrown with vegetation in places and generally very narrow. The remainder of the site is vegetated open space and may be used for passive recreation such as nature watching.

San Pascual Site

The San Pascual site is located in both the City of Los Angeles (Los Angeles) and the City of South Pasadena (South Pasadena). The site encompasses 2.2 acres and consists of undeveloped open space bound on the north by San Pascual Avenue and on the east by Stoney Drive. The site is located on the east side of the Arroyo Seco Channel southeast of the San Pascual Avenue overpass of the Channel. The San Pascual site is fully accessible to the public via public and private transportation routes, and/or by various trails for pedestrians, bicyclists, and equestrians. An existing pedestrian/equestrian trail is located along the eastern side of the site. The remainder of the site is vegetated open space and may be used for passive recreation such as nature watching.

Additionally, the San Pascual site is situated in between Arroyo Park, located on the east side of Stoney Drive in South Pasadena, and San Pascual Park, located west of the Arroyo Seco Channel in Los Angeles and South Pasadena. As discussed in Section 2.0, Environmental Setting and Project Description, comments have been received that assert the San Pascual

site is an extension of San Pascual Park. Accordingly, this was researched as part of EIR preparation.

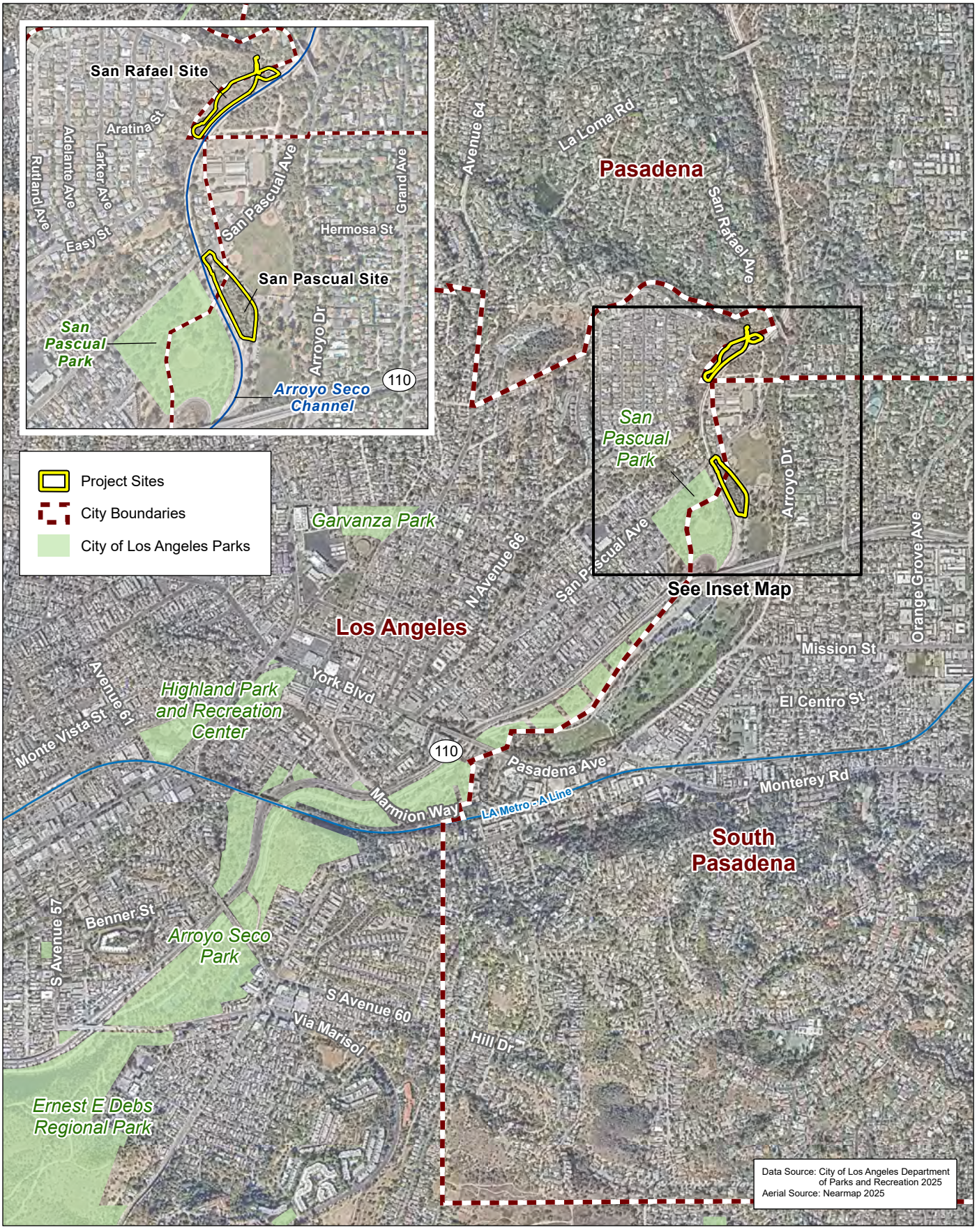
Based on recent (2025) public data published by the City of Los Angeles Department of Parks and Recreation, San Pascual Park is defined by Los Angeles as solely the open space to the west of the Arroyo Seco Channel. Exhibit 3.9-1, City of Los Angeles Parks in the Project Area, illustrates the limits of San Pascual Park and other parks and open space maintained by Los Angeles. However, the portion in South Pasadena's jurisdiction–which is about three-quarters of the area–is identified as part of Arroyo Park in South Pasadena's General Plan (South Pasadena 2023). Exhibit 3.9-2, Parks and Open Space in the Project Area, illustrates the parks and open space provided by all jurisdictions in the Project area.

It appears the 0.5-acre portion of the San Pascual site in Los Angeles' jurisdiction is not part of any established, named park or other recreation area designated by either Los Angeles (see Exhibit 3.9-1) or South Pasadena (South Pasadena 2023). Regardless of jurisdiction, the San Pascual site is an overgrown, man-made wetland originally built in the 1930s[1] to divert and reuse water from the Arroyo Seco Channel and that is now used informally for recreation and other purposes.

Existing Parks and Recreation Facilities and Services

The Lower Arroyo Seco corridor supports a regional network of passive and active recreational resources, including multi-use trails and open space areas, that serve surrounding communities. Table 3.9-1, below, describes existing parks, recreation facilities, and amenities within one-mile of the Project sites that are owned or managed by the cities of Pasadena, South Pasadena, and Los Angeles. These include local parks, trails, and open space areas, along with developed recreation facilities and the amenities available.

[1] Based on review of historic aerial photographs.



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City of Los Angeles Parks in the Project Area

Exhibit 3.9-1

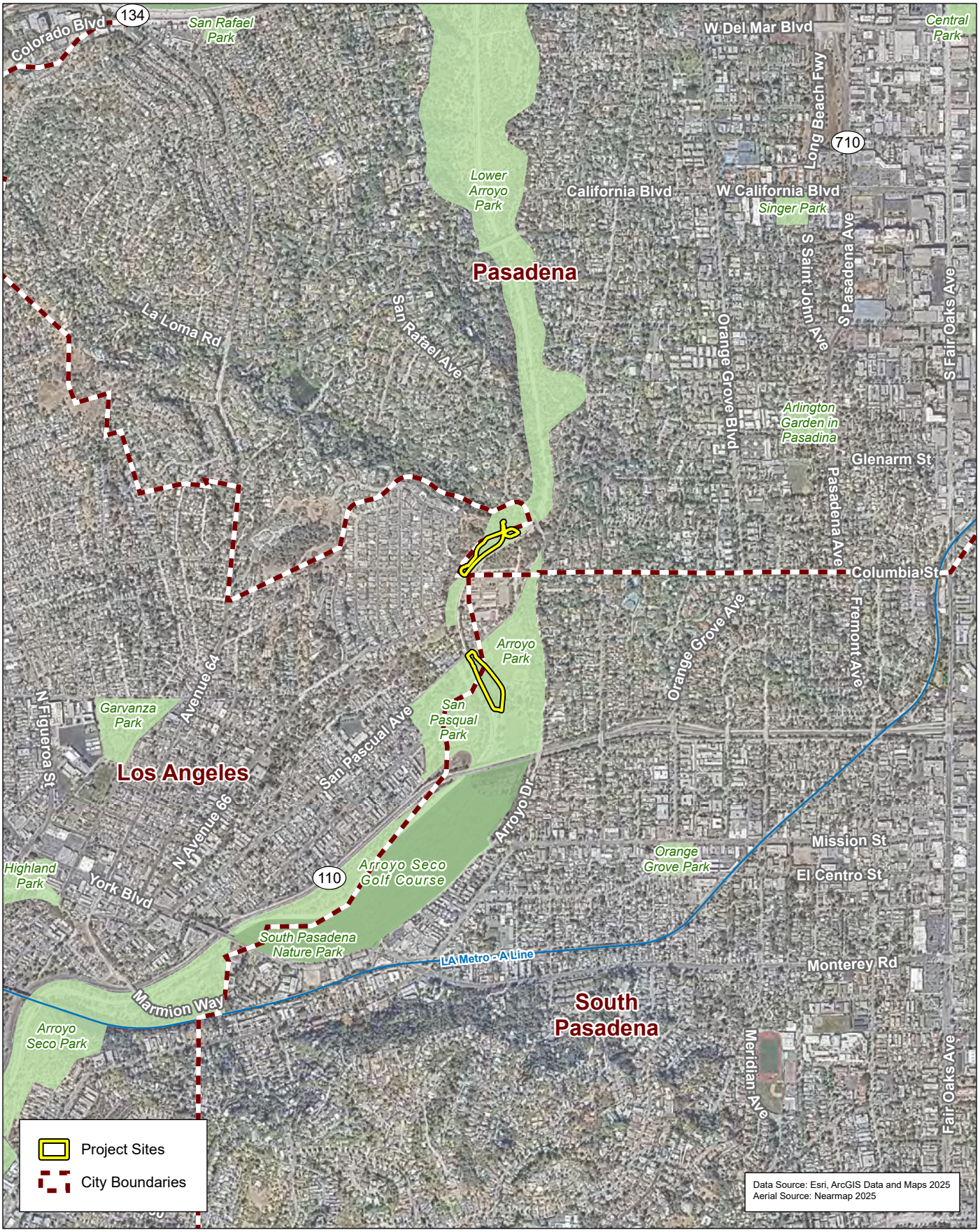
Arroyo Seco Water Reuse Project

N W E S

0 750 1,500 Feet

PSOMAS

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Parks and Open Space in the Project Area

Exhibit 3.9-2

Arroyo Seco Water Reuse Project

N W E S

0 750 1,500 Feet

PSOMAS

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TABLE 3.9-1
EXISTING PARKS AND RECREATION FACILITIES
WITHIN ONE-MILE OF THE PROJECT SITES

Name	Size (acres)	Facilities and Amenities Offered	Distance from Project Sites (mi)	
			San Rafael Site	San Pascual Site
City of South Pasadena				
Arroyo Park 614 Stoney Dr	78.3	Golf course, racquet club, San Pascual Stables, batting cages, dog park, skate park, lighted athletic fields, playgrounds & picnic areas	<0.1	<0.1
Arroyo Woodland and Wildlife Nature Park 100 Pasadena Ave		Educational material about native habitat, wildlife, natural sciences & site history	0.9	0.6
Arroyo Seco Bicycle and Pedestrian Trail		Trail connecting Pasadena and Los Angeles through South Pasadena	<0.1	<0.1
Orange Grove Park 815 Mission St	2.5	Lighted softball and soccer field, tennis courts, playgrounds & picnic tables	0.7	0.5
City of Pasadena				
Lower Arroyo Park 415 S Arroyo Blvd	50.9	Community Center, archery range, & casting pond	1.0	1.3
Arroyo Seco Trail		Pedestrian and equestrian trail connecting Pasadena and South Pasadena through the Lower Arroyo Seco	<0.1	0.3
Singer Park W California Blvd	2.9	Playgrounds, picnic tables & trails	1.0	1.2
City of Los Angeles				
San Pascual Park 930 San Pascual Ave	12.9	Barbeque pits, baseball diamond, basketball courts, soccer field, playgrounds & picnic tables	0.3	<0.1
Garvanza Park 6240 Meridian St	5.6	Playground equipment, baseball diamond & skatepark	0.7	0.8

Note: due to inconsistent classification methods across jurisdictions, facilities are not categorized by park type.

Source: City of South Pasadena 2023, City of Pasadena 2007, City of Los Angeles 2025a

3.9.3 RELEVANT PROGRAMS AND REGULATIONS

Local

City of Pasadena

Lower Arroyo Master Plan

The Lower Arroyo Master Plan is one of four master plans created to preserve the cultural resources, restore the habitat, and provide the recreational opportunities unique to Arroyo Seco. The goal of the Lower Arroyo Master Plan is to restore, preserve, and enhance the natural character of the Lower Arroyo Seco. The Lower Arroyo Master Plan covers the Lower Arroyo Seco from the Colorado Street Bridge to the South Pasadena city limits (Pasadena 2015).

City of Pasadena General Plan

Green Space, Recreation and Parks Element

The Green Space, Recreation and Parks Element of the City's General Plan provides the community's vision for natural open space, developed parkland, urban open spaces, and recreation facilities and programs. Together with the Green Space, Recreation and Parks Master Plan, the Element provides the background data, recommendations and implementation programs for using, maintaining and expanding additional parks and natural open spaces, recreation facilities and programs and the community's needs and desires for open space, parks and recreation. The Green Space, Recreation and Parks Element is an optional Element of the General Plan and works in conjunction with the Open Space and Conservation Elements to guide the preservation and expansion of Pasadena's existing green spaces, to ensure that opportunities for both active and passive uses of parks and open space are available throughout the City, and that these opportunities are responsive to the community's needs (Pasadena 2007).

Open Space and Conservation Element

The Open Space and Conservation Element provides a blueprint for natural open space and conservation. The Element includes an inventory of existing open space areas, a summary of existing open space and conservation plans, and agencies that the City partners with to protect and enhance natural open space. The Element also reviews the existing documents related to conservation, including the plans of the City's Green City Program, the Water and Power Integrated Resource Plans (IRP), and the California Green Building Code. The Element establishes goals and objectives in the areas of Open Space, Wildlife and Native Plants, Environmental Quality, Conservation, and Sustainable Use Practices. The Element also includes a series of implementation measures to achieve these goals and objectives (Pasadena 2012).

City of South Pasadena

City of South Pasadena General Plan

Our Active Community Element

The goal of this Element is to create environments that incorporate physical activity into daily activity that support health, wellness, and social connections, and provide children and adults with a range of high-quality recreation opportunities (South Pasadena 2023).

Our Natural Community Element

The primary goal of the Our Natural Community Element is to promote clean air, clean water, and habitat for native species, prevent urban heat islands, reduce stormwater runoff, and promote a greener downtown, a healthier lifestyle and nature-based recreation (South Pasadena 2023).

City of Los Angeles

City of Los Angeles General Plan

Public Facilities and Services Element

The goal of the Public Facilities and Services Element is to identify and preserve cultural and historical monuments, as well as develop additional public facilities such as power transmission lines, equestrian and hiking trails, public libraries, parks, and schools (Los Angeles 2025).

Open Space Element

The purpose of the Open Space Element is to guide the identification, preservation, conservation, and acquisition of open space in Los Angeles (Los Angeles 1973).

Northeast Los Angeles Community Plan

The General Plan's Land Use Element is divided into 35 separate Community Plans. The northern portion of the San Pascual site is located within the Northeast Los Angeles Community Plan area. Among the relevant issues identified in the Community Plan area are the following:

- Unsightliness and lack of amenities and public access to areas adjacent to the Los Angeles River, Arroyo Seco, and other flood control channels.
- Destruction and deterioration of community resources, including scenic views and viewsheds, open space, open space corridors, and historic structures.

Among the corresponding opportunities for these issues identified in the Community Plan is the following:

- Preservation of open space and open space corridors, and enhancement of greenways amenities and public access, particularly in hillside areas and near flood control channels.

In Chapter IV, Coordination Opportunities for Public Agencies, of the Community Plan, the following actions to further the Plan's policies related to the Project include:

- Increase utilization of existing nature education and recreational facilities and encourage development of additional facilities.
- Coordinate with City departments; neighboring cities; and County, State, and Federal agencies to utilize existing public lands such as flood control channels, utility easements, and [Los Angeles] Department of Water and Power properties to provide for such recreational needs as hiking, biking, and equestrian trails (Los Angeles 1999).

3.9.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. The Project would result in a significant adverse public service (parks only) and recreation impact if it would:

Threshold 3.9a: Result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities, need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks?[2]

Threshold 3.9b: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; and/or

Threshold 3.9c: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

3.9.5 REGULATORY REQUIREMENTS

There are no regulatory requirements applicable to Public Services and Recreation.

[2] Potential impacts to the other public services, including police protection, fire protection, schools, and libraries are discussed in Section 1.0, Introduction, of this EIR.

3.9.6 ENVIRONMENTAL IMPACTS

Threshold 3.9a: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities, need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks?

No Impact. The Project does not involve residential development or any components that would directly or indirectly generate a new permanent population in the area. As such, it would not increase demand for park services or facilities such that new or physically altered park facilities would be needed to maintain performance standards. Furthermore, no part of the Project includes or necessitates the dedication of land or funding for new parks to meet recreational demand. Therefore, there would be no impact related to new or physically altered park facilities, whose construction could result in significant environmental impacts, and no mitigation is required.

Threshold 3.9b: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. As mentioned above, the Project would construct two regional stormwater capture and treatment facilities within two existing, underutilized, open space areas near the Arroyo Seco Channel. The proposed Project would provide expanded and improved physical facilities and open space resources to existing users of the Lower Arroyo Seco. However, the Project is not anticipated to directly increase use of the Lower Arroyo Seco area as a destination. It is expected that existing users of the Arroyo Seco area would use the proposed Project features, as they are similar to existing passive recreation features in the area, such as those within the Arroyo Park, Lower Arroyo Park, and San Pascual Park. Additionally, as discussed under Threshold 3.9a, the Project would not generate new residents or new permanent population.

Further, the Project would improve passive recreational enhancements, such as improved trails and new pathways, shaded seating areas, and signage, on two underutilized sites. Accordingly, once completed, these amenities would serve to improve the existing user experience in the Lower Arroyo Seco by enhancing public access and regional connectivity on the Project sites. The Project's facilities would be open to all members of the public between sunrise and sunset, consistent with the rest of the Arroyo Seco. This would potentially reduce demand on the many nearby open space and recreation facilities relative to the existing condition.

Therefore, operation of the Project would not directly or indirectly increase the use of existing facilities such that substantial deterioration of these facilities would occur.

Construction activities would temporarily limit access to the Project sites, which include recreational trails and open space areas that can be used for passive recreation activity. Project construction is estimated to require 9 months at the San Rafael site and 13 months at the San Pascual site. The primary existing activities are (1) horseback riding and walking/running on the existing trails; and (2) sitting on the sites for nature-watching, seeking shade, or general relaxation. The alternatives for these activities available during construction are discussed below.

Regarding trail use, a safe detour for equestrian and pedestrian traffic would be provided to the maximum extent possible. In the event of temporary trail closure during construction, to transport equipment or materials across the trails to the sites, a flagman will be present to halt and direct equestrian and pedestrian traffic. The City of Pasadena has been in communication with the San Pascual Stables and would continue to communicate regarding equestrian access at both sites throughout the construction period.

At the San Rafael site, a safe path for equestrian and pedestrian traffic at the northern (upstream) end of the site would be made available to the maximum extent feasible during the construction period. There would be brief periods (i.e., few hours at a time) where the existing trail alignment on the west side of the Arroyo Seco Channel at the existing bridge crossing would be restricted to public access for safety and/or to allow the proposed improvements in this portion of the site to be completed.

For the San Pascual site, the paved parking lot with approximately 18 spaces that serves the adjacent ballfields in the southeast corner of San Pascual Avenue and Stoney Drive, in South Pasadena, has been identified as a staging and laydown area. This would result in closure of this parking lot to public and other municipal use during the construction period. There is additional parking for the ballfields and Arroyo Park along Stoney Drive and in the Arroyo Park paved parking lot, as well as street parking available on San Pascual Avenue.

Also, at the San Pascual site, a safe path for equestrian and pedestrian traffic would be available at all times. It is noted there may be occasions where large construction equipment or construction materials would be transported across Stoney Drive (i.e., between the staging/laydown area and the site), requiring temporary traffic control. Also, a two-inch-diameter water line would be installed across Stoney Drive via trenching. This would involve temporary closure of one lane of the road at a time. Throughout the construction period, at least a single lane for vehicular traffic along Stoney Drive at the San Pascual site would be available.

Regarding nature-watching, shade-seeking, and general relaxation in a natural setting in the immediate area of the Project site, there are abundant spaces nearby that can provide a similar setting. This includes the densely forested area north of the San Pascual Stables; the densely forested linear area extending approximately 0.4 miles along the west side of Arroyo Drive between San Pascual Avenue on the north and State Route 110 on the south; the northern portion of Arroyo Park, immediately to the east of the San Pascual site, that provides gazebos and benches among several mature trees; and the northern half of San Pascual Park, immediately to the west of the San Pascual site, that provides picnic tables and benches among mature trees.

As the Project sites are only informally utilized and are not established parks or recreation facilities (e.g., Arroyo Park, San Pascual Park, San Pascual Stables), the level of visitation to these sites is relatively low compared to visitation throughout the Lower Arroyo Seco in general. Therefore, the dispersion of these visitors to nearby similar facilities temporarily during the construction period would not cause substantial deterioration of these facilities. Therefore, construction of the Project would not directly or indirectly increase the use of existing facilities such that substantial deterioration of these facilities would occur.

There would be less than significant impacts during construction or operation of the Project, and no mitigation is required.

Threshold 3.9c: Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant with Mitigation. As stated above, the Project would include recreational components such as passive-use trails and seating, which are intended to support and enhance existing recreational uses and connectivity within the Lower Arroyo Seco. The proposed recreational components are small in scale and would be constructed within existing open space areas already available for public use. Any environmental impacts resulting from the construction of these facilities are addressed in this EIR (as a subset of the Project's overall impacts) and mitigated where appropriate. Additionally, the Project would not divide any existing community resources, such as recreation areas, or otherwise limit access to either the San Rafael or San Pascual site. On the contrary, the Project would develop improved and expanded passive recreation opportunities that would be accessible to all members of the public from sunrise to sunset, as in the existing condition. Specifically, the Project would improve existing and create new decomposed granite (DG) trails on the sites; remove non-native plants and restore native landscaping that is appropriate to the sites; and install new or replacement hardscape including reclaimed wood log benches, post-and-rail fencing, concrete seat walls, and informational signs (refer to Exhibits 2-8, 2-11, 2-12, 2-14, 2-17, and 2-18 in Section 2.0, Environmental Setting and Project Description). The post-and-rail fencing would be four feet in height and is the style typical of equestrian and ranch areas; this type of fencing is not a style intended to restrict access but is generally used to delineate areas and/or for decorative purposes. The proposed water infrastructure components would be hidden from public view by being mostly underground or, where necessary to place equipment above ground, by screening with vegetation. The Project has been expressly designed to appear fully naturalized at the surface.

As discussed in Sections 3.1 through 3.11 of this EIR, there would be less than significant impacts with implementation of the identified mitigation measures for biological resources, cultural and paleontological resources, and geology and soils, and tribal cultural resources. However, no new adverse environmental effects would result from the recreational components of the Project beyond those already analyzed in this EIR. As discussed under Threshold 3.9a, the Project would not require the construction or expansion of recreational facilities. Therefore, a less than significant impact would occur with implementation of mitigation measures for Biological Resources (TBD), Cultural and Paleontological Resources (MMs CUL-1 through CUL-3) and Tribal Cultural Resources (MMs TCR-1 through TCR-3).

3.9.7 CUMULATIVE IMPACTS

The geographic context for cumulative park services and recreation impacts includes other nearby, reasonably foreseeable, projects in the cities of Pasadena, South Pasadena, and Los Angeles, particularly those located within or adjacent to the Lower Arroyo Seco corridor. As discussed in Section 2.5, Approach to Cumulative Impacts, related projects within approximately one-quarter mile of each of the sites that may be constructed at the same time are limited to two residential additions in the single-family neighborhood to the east-southeast of the San Pascual site within South Pasadena.

The Project would not induce population growth, increase residential density, or generate substantial numbers of new permanent users of park and recreation facilities. Accordingly, it would not contribute to cumulative demand for new or expanded park facilities. Minor passive recreational features included in the Project are not visitor-generating facilities but are rather designed to complement existing recreational uses and serve patrons that would otherwise visit the area. Because the Project would not create demand for park services or require the construction of park facilities beyond those already integrated into the Project footprint and analyzed in this EIR, it would not contribute to a cumulative degradation of park infrastructure, exceed service ratios, or necessitate new park development. The construction effects of the two residential additions would be localized and temporary in nature and would not meaningfully compound with effects from the Project to result in cumulative adverse impacts related to recreation or park services. Therefore, the Project would not contribute to cumulatively considerable impacts, and no additional mitigation beyond the referenced mitigation measures for Biological Resources, Cultural and Paleontological Resources, and Tribal Cultural Resources is required.

3.9.8 MITIGATION MEASURES

No significant impacts related to public services and recreation would occur, and no mitigation is required. Regarding Threshold 3.9.c and the Project's inclusion of recreational improvements, the mitigation measures identified elsewhere in this EIR related to Biological Resources, Cultural and Paleontological Resources, Geology and Soils, and Tribal Cultural Resources, would apply to the recreational improvements as a subset of the Project's overall improvements.

3.9.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have no significant impacts related to Public Services and Recreation, and no mitigation measures are required or recommended beyond the referenced mitigation measures included elsewhere in this EIR addressing Biological Resources, Cultural and Paleontological Resources, Geology and Soils, and Tribal Cultural Resources.

3.9.10 REFERENCES

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3.10 TRIBAL CULTURAL RESOURCES

3.10.1 METHODOLOGY

This section of the Environmental Impact Report (EIR) analyzes the potential impacts on tribal cultural resources from implementation of the Arroyo Seco Water Reuse Project (Project). The information and analysis in this section is based upon the cultural and paleontological resources records search and literature review conducted by the South-Central Coastal Information Center (SCCIC) on January 18, 2022; the Sacred Lands File (SLF) records search conducted by the Native American Heritage Commission (NAHC) on January 12, 2022; and tribal consultation between the City of Pasadena (Pasadena) and local tribal representatives pursuant to Assembly Bill 52. The Cultural and Paleontological Resources Records Searches are included in Appendix D, and the Tribal Cultural Resources Supporting Documentation is included in Appendix I of this EIR.

3.10.2 EXISTING CONDITIONS

Cultural and Archaeological Resources

South-Central Coastal Information Center

As discussed in more detail in Section 3.4, Cultural and Paleontological Resources, of this EIR, a cultural and archaeological resources records search and literature review was conducted and completed at the South-Central Coastal Information Center (SCCIC) on January 18, 2022. The records search/literature review conducted for the Project revealed that 22 previous studies have been conducted within one half-mile of the Project sites, which includes 7 previous studies (LA-06334, LA-06385, LA-08252, LA-08928, LA-10541, LA-11231, LA-11529) covering the Project sites. In general, prior studies within a half-mile of the Project site consist of archaeological field studies and literature reviews, management/planning, architectural and historical evaluation, cultural resources mitigation monitoring and other research conducted between 1986 and 2009.

Additionally, the records search/literature review conducted for the Project revealed one previously recorded archaeological resource within a half-mile of the Project site. This archaeological resource is a precontact site and is documented as a lithic scatter (remnants of stone tool production) site with an ancestral Gabrielino/Tongva cemetery. No archaeological resources were identified within the Project sites. In addition, three non-archaeological resources (P-19-186859, P-19-189325, P-19-190590) were identified within the Project sites, which include one historic-era built environment site and two historic-era districts. The historic-era built environment resource is the Arroyo Seco Flood Control Channel, and the historic-era districts consist of the Arroyo Seco Park District and the Pasadena Arroyo Parks and Recreation District. The three non-archaeological cultural resources identified within the Project sites are discussed in Section 3.4, Cultural and Paleontological Resources.

Native American Heritage Commission

The results of the SLF records search conducted by the NAHC on January 12, 2022, were positive for sacred land within the vicinity of the Project sites associated with the Gabrieleño Band of Mission Indians – Kizh Nation. As such, tribal consultation was initiated by the City for the Project pursuant to Assembly Bill (AB) 52.

Native American Tribal Consultation

For purposes of this analysis, it is important to note that prior to the preparation of an EIR for this Project, a Mitigated Negative Declaration (MND) was previously prepared and circulated in 2023 for the Project. As part of the MND process, tribal consultation in accordance with AB 52 was conducted. Below is a summary of the previous tribal consultation that occurred during the MND process as it relates to this analysis.

Summary of Previous Tribal Consultation (2023 MND)

On April 3, 2023, Pasadena sent notification of the Project to Native American tribal contacts pursuant to AB 52–the Gabrieleño Band of Mission–Indians - Kizh Nation (Kizh Nation) and the Gabrielino-Tongva tribe. The Kizh Nation requested consultation and the Gabrielino-Tongva tribe did not respond.

In their response to Pasadena's notification of the Project, Kizh Nation has indicated that the City of Pasadena lies within an area where ancestral territories of Gabrieleño Tribe villages adjoined and overlapped, at least during the Late Prehistoric (i.e., before European contact) and Protohistoric Periods (i.e., post-contact). Kizh Nation stated that several Native American burials, foot trails, and water conveyance systems known as *zanja* irrigation systems built by the local Native American population under the supervision of the Spanish are documented nearby. Maps and documents have been provided by Kizh Nation, and while the documentation does not conclusively identify these resources within Pasadena, they do highlight the overall sensitivity of the area. Although existing site records and field surveys do not indicate archaeological resources significant to Native Americans on the Project sites, there is always the possibility that undiscovered intact cultural resources, including tribal cultural resources, may be present below the surface in native sediments.

During consultation, Pasadena reached mutual agreement regarding the mitigation measures with Kizh Nation. As mutually agreed upon, MMs TCR-1 through TCR-3, were to be implemented during construction activities to recognize Kizh Nation's concerns. The previous consultation was closed after Kizh Nation confirmed their satisfaction with MMs TCR-1 through TCR-3 being implemented for the Project during the MND process to mitigate potential impacts to tribal cultural resources.

Summary of Current Tribal Consultation (2025 EIR)

As part of the EIR process for the Project and pursuant to AB 52, Pasadena sent notification of the Project to Kizh Nation and the Gabrielino-Tongva tribe on April 17, 2025. Kizh Nation responded and requested consultation, and the Gabrielino-Tongva tribe did not respond. As

described in detail below in response to Threshold 3.10a(ii), consultation with Kizh Nation came to a close once it was understood that the Project remains unchanged from what was formerly proposed and previously discussed with Kizh Nation during the prior consultation, and that the same mitigation measures agreed upon by Pasadena and Kizh Nation would still be implemented for the Project. A general discussion of consultation process between Pasadena and Kizh Nation is provided below in response to Threshold 3.10a(ii).

3.10.3 RELEVANT PROGRAMS AND REGULATIONS

State

California Register of Historical Resources

The California Register of Historical Resources (CRHR) program encourages public recognition and protection of resources of architectural, historical, archaeological, tribal cultural resources, and cultural significance; identifies historical resources for State and local planning purposes; determines eligibility for State historic preservation grant funding; and affords certain protections under the California Environmental Quality Act. The criteria established for eligibility for the CRHR are directly comparable to the national criteria established for the National Register (as discussed in Section 3.4, Cultural and Paleontological Resources).

In order to be eligible for listing in the CRHR, a building, object, or structure must satisfy at least one of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
2. It is associated with the lives of persons important to local, California, or national history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Archaeologists and Tribal Representatives assess sites based on all four of the above criteria but usually focus on the fourth criterion provided above. Historical resources eligible for listing in the CRHR must also retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. For the purposes of eligibility for the CRHR, integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance". This general definition is generally strengthened by the more specific definition offered by the National Register of Historic Places (NRHP)—the criteria and guidelines on which the CRHR criteria and guidelines are based upon.

California Environmental Quality Act

CEQA requires lead agencies to evaluate whether a project may cause a substantial adverse change to the significance of Tribal Cultural Resources (TCRs), as defined in *California Public Resources Code* (PRC) Section 21074. TCRs include sites, features, places, or objects of cultural significance to a California Native American tribe, whether or not they are listed in or eligible for listing in the CRHR or a local register, or determined to be significant by the lead agency based on substantial evidence.

Pursuant to CEQA Guidelines Section 15064.5, impacts to TCRs are considered significant if a project would result in physical destruction, damage, disturbance, or alteration of a TCR or its immediate surroundings. CEQA establishes a preference for avoidance and preservation in place where feasible and requires that tribal information regarding the nature and location of resources be treated as confidential. Consultation procedures under AB 52 are addressed separately below.

Assembly Bill 52

AB 52, effective July 1, 2015 (PRC Section 21080.3.1 et seq.), amended CEQA to establish formal consultation requirements with California Native American tribes regarding projects that may affect Tribal Cultural Resources. Lead agencies must provide notice to tribes traditionally and culturally affiliated with the project area if the tribe has requested notification. Tribes then have 30 days to request consultation regarding potential impacts.

Consultation provides an opportunity for tribes to share knowledge about resources and to propose mitigation measures. If the lead agency and tribe agree on mitigation for potentially significant impacts to TCRs, those measures are recommended for inclusion in the CEQA environmental document.

California Native American Historic Resource Protection Act

Established in 2002, the Native American Historic Resource Protection Act, establishes a misdemeanor for unlawfully and maliciously excavating upon, removing, destroying, injuring, or defacing a Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the CRHR. The focus of this legislation was to provide additional legal protection for Native American historical and cultural sites, art, and other cultural artifacts found at those sites. The Act also encourages collaborative relationships for the protection of Native American cultural resources between Native Americans and landowners. Funding and other state assistance should be encouraged for support of voluntary agreements to conserve, maintain, and provide physical access for Native Americans to these cultural resources.

California Public Resources Code Section 5097

PRC Section 5097.99, as amended, prohibits obtaining or possessing Native American artifacts or human remains that are taken from a Native American grave or cairn. Knowingly or willfully obtaining or possessing Native American artifacts or human remains is a felony

punishable by imprisonment. Similarly, unlawful removal of any such items with an intent to sell or dissect or with malice or wantonness is a felony punishable by imprisonment.

California Health and Safety Code (Sections 7050.5, 7051, and 7054)

Sections 7050.5, 7051, and 7054 of the California Health and Safety Code (HSC) collectively address the illegality of interference with human burial remains (except as allowed under applicable sections of the PRC). These sections also address the disposition of Native American burials in archaeological sites and protect such remains from disturbance, vandalism, or inadvertent destruction. Procedures to be implemented are established for (1) the discovery of Native American skeletal remains during construction of a project; (2) the treatment of the remains prior to, during, and after evaluation; and (3) reburial. Section 7050.5 of the California Health and Safety Code specifically provides for the disposition of accidentally discovered human remains. Section 7050.5 states that if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

California Public Resources Code (Section 5097.98)

Section 5097.98 of the PRC states that, if remains are determined by the Coroner to be of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours. When the NAHC receives this notification from a County Coroner, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land or his or her authorized representative, inspect the site of the remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. This regulation also requires that, upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations and all reasonable options regarding their preferences for treatment. This section of the PRC has been incorporated into Section 15064.5(e) of the State CEQA Guidelines.

3.10.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. The project would result in a significant adverse tribal cultural resource impact if it would:

Threshold 3.10a: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); and/or

(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.10.5 REGULATORY REQUIREMENTS

Regulatory requirements related to Tribal Cultural Resources have been incorporated into MM TCR-3, which is discussed below.

3.10.6 ENVIRONMENTAL IMPACTS

Threshold 3.10a(i): Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

No Impact. As mentioned in Section 3.4, Cultural and Paleontological Resources above, the Project is subject to compliance with AB 52, which requires consideration of impacts to "tribal cultural resources" (TCRs), defined in Section 21074 of the PRC, as part of the CEQA process. AB 52 requires the City to notify any groups (who have requested notification) who

are traditionally or culturally affiliated with the geographic area of a project for which a negative declaration, mitigation negative declaration, or environmental impact report is required pursuant to CEQA. As discussed in more detail under Threshold 3.10a(ii), in Section 3.10.2, Existing Conditions below, the AB 52 process was initiated on April 17, 2025, and this consultation process has been completed. Based on the cultural resources analysis (refer to Section 3.4, Cultural and Paleontological Resources) and tribal consultation conducted for the Project, there are no known tribal cultural resources within the Project sites and therefore no resources listed or eligible for listing in the CRHR or other listed in a local register of historical resources exist within the Project area. There would be no impact, and no mitigation is required.

Threshold 3.10a(ii): Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

Less than Significant Impact with Mitigation. As described in detail in Section 3.10.2, Existing Conditions, previous tribal consultation pursuant to AB 52 was conducted in 2023 during the Project's MND process between Pasadena and Kizh Nation. During the previous consultation, Pasadena and Kizh Nation came to a mutual agreement regarding mitigation measures that were to be implemented for the Project that address Kizh Nation's concerns and reduce potential impacts to tribal cultural resources to a less than significant level.

On April 17, 2025, as part of the Project's EIR process, Pasadena sent notification of the Project to Kizh Nation and the Gabrielino-Tongva tribe pursuant to AB 52. Kizh Nation requested consultation and the Gabrielino-Tongva tribe did not respond.

During public review of the Notice of Preparation (NOP), two members of the Kizh Nation (Chairman Andy Salas and Ricardo Montijo, MSc.) submitted comment letters on the NOP registering opposition to the Project (see Appendix A to this EIR). Chairman Salas requested the Project be reassessed with a full tribal consultation during the environmental review. Additionally, Chairman Salas' letter states the original (this is inferred to mean MND-related) consultation was for a smaller component of the Project, and as such complete consultation under CEQA and AB 52 was never conducted. However, the letter and accompanying exhibit sent to request AB 52 consultation during preparation of the MND for the Project (provided in Appendix I to this EIR) described and illustrated two separate sites that are identical to the scope and location of the Project as currently proposed. As part of both consultations, the City of Pasadena has acknowledged the sensitivity of the area for tribal cultural resources. Accordingly, mitigation measures requiring that Native American monitoring be

conducted during ground disturbing activities, consistent with the request of the Kizh Nation, have been included in the environmental review documents.

As such, MM TCR-1 through MM TCR-3, which would designate Kizh Nation as the tribal monitor during ground disturbing activities and include protocols for the unanticipated discovery of tribal cultural resource objects, human remains and associated funerary or ceremonial objects of significance to Kizh Nation, would be implemented during ground disturbing activities. These measures recognize Kizh Nation's concerns associated with the Project and to mitigate significant impacts related to discovery of any unknown tribal cultural resources. Therefore, with implementation of MM TCR-1 through MM TCR-3, impacts to potential tribal cultural resources within the Project sites would be less than significant.

3.10.7 CUMULATIVE IMPACTS

Although tribal cultural resources impacts are site-specific with regard to any given resource (e.g., resources of important cultural value to Native Americans), impacts may be considered cumulative due to the loss of cultural resources in general over time throughout the region. There are no known tribal cultural resources listed or determined eligible for listing, on the national, State, or local register of historical resources on the Project site. However, should buried resources be identified, ground disturbance within native sediment could lead to the accelerated degradation of previously unknown tribal cultural resources. Mitigation can reduce potential impacts to a less than significant level and is often applied to. As with the Project, testing and data recovery is standard practice in the County and is routinely required of projects prior to and during grading activities. Despite the site-specific nature of tribal cultural resources, the mitigation identified for tribal cultural resources monitoring and adherence to State requirements would reduce the potential for cumulative impacts. As a result, with implementation of MM TCR-1, MM TCR-2, and MM TCR-3, the Project would not have a cumulatively considerable contribution to a significant cumulative impact related to tribal cultural resources.

3.10.8 MITIGATION MEASURES

MM TCR-1 Retain a Native American Monitor Prior to Commencement of Ground Disturbing Activities:

Prior to the commencement of any ground disturbing activities at the two project sites, the project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The tribal monitor will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the tribe as activities that may include demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching within the project areas.

The tribal monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including type of construction activities

performed, location of activities, soil types, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the project sites are completed, or when the tribal monitor has indicated that all upcoming ground-disturbing activities at the project sites have little to no potential for impacting Tribal Cultural Resources. Copies of the monitor logs will be provided to the lead agency upon written request to the consulting tribe.

MM TCR-2 Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial):

Upon discovery of any Tribal Cultural Resources, all construction activities shall cease in the immediate vicinity of the discovery (not less than the surrounding 50 feet) and shall not resume until the find can be assessed. All Tribal Cultural Resources unearthed by Project activities shall be evaluated by the tribal monitor and a qualified Archaeologist if one is present. If the resources are Native American in origin, the consulting tribe will retain it/them in the form and/or manner the tribe deems appropriate, for educational, cultural, and/or historic purposes.

MM TCR-3 Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects:

If human remains and/or grave goods are discovered or recognized at the Project sites, all ground disturbance shall immediately cease, and the County coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue in other parts of the Project sites while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). Preservation in place (i.e., avoidance) is the preferred manner of treatment for human remains and/or burial goods. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any discovery of human remains/burial goods that are Native American in origin shall be kept confidential to prevent further disturbance.

Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

3.10.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would result in no anticipated impact related to listed or eligible Tribal Cultural Resources, and no mitigation is required. However, a potential impact identified under Threshold 3.10a (ii) would result in less than significant related to tribal or tribal cultural resources with implementation of MM TCR-1 through MM TCR-3.

3.11 WILDFIRE

3.11.1 METHODOLOGY

This section describes the existing wildfire hazards in and near the Arroyo Seco Water Reuse Project (Project) and the potential for Project implementation to exacerbate wildfire risk.

3.11.2 EXISTING CONDITIONS

The Project site encompasses a total of approximately 3.6 acres across two sites in the Lower Arroyo Seco, immediately adjacent to the concrete Arroyo Seco Channel (Channel) that is under the jurisdiction of the Los Angeles County Flood Control District (LACFCD). Both sites, San Rafael and San Pascual, are comprised of vacant, open space lands and are approximately 850 feet (0.16 mile) apart at the closest points. Both sites are fully accessible to the public via public and private (i.e., city or other agency use) transportation routes, and/or by various trails used by pedestrians, bicyclists, and/or equestrians.

The San Pascual site has a history of fires, with at least three fires occurring in the last five years that required firefighting resources to contain. In July 2023, the largest of these recent fires spread to the vegetation on the hillside along Arroyo Drive to the east – on the far side of Arroyo Park –and San Pascual Park to the west before being fully contained. This incident required 30 fire units from multiple jurisdictions and 5 hours to contain. These recent fires are believed to be the result of accidental human-caused activity.

Fire Hazard Severity Zones and Wildfire Risk Factors

Fire Hazard Severity Zones (FHSZs) are geographic areas in California designated based on the likelihood and potential intensity of wildfire. FHSZs are developed by the California Department of Forestry and Fire Protection (CAL FIRE) using models that consider factors such as potential fuels, vegetation, topography, fire history, and weather patterns. FHSZ designations help inform land use planning, building code requirements, defensible space regulations, and emergency preparedness. FHSZs are classified into three levels of risk: Moderate, High, and Very High. These designations are mapped separately for State Responsibility Areas (SRA) and Local Responsibility Areas (LRA):

- SRA lands are areas where the State of California has the primary financial and administrative responsibility for wildfire protection. These areas typically include forested, wildland, and rangelands, and generally do not include lands within city limits.
- LRA lands are areas where local governments (i.e., cities or counties) have primary fire protection responsibility instead of State or federal agencies.

The most recent FHSZ maps for LRAs in Southern California, including the cities of Los Angeles, Pasadena, and South Pasadena, were released by CAL FIRE on March 24, 2025. While the adoption by local agencies is pending in some areas, State law requires local agencies to adopt CAL FIRE's recommended LRA maps by ordinance no more than 120 days

after their release to ensure consistency with State wildfire risk management policies. According to State law, local agencies may increase the level of fire hazard or make additions beyond what was recommended; however, they are prohibited from decreasing the level of FHSZ recommended by the State.

Based on review of the most recent (2025) mapping of Recommended FHSZ in LRAs, both the San Pascual and San Rafael sites are situated within Very High Fire Hazard Severity Zones (VHFHSZ) in LRAs (CAL FIRE 2025a). Neither site is located within or immediately near a FHSZ in an SRA. The nearest FHSZ in an SRA is located approximately 5.4 miles north of the San Rafael site in unincorporated Los Angeles County (VHFHSZ). It is noted that the LRA VHFHSZ designation is new as of March 2025. Prior to this date, the Project sites, and much of the Arroyo Seco to the north and south, were not mapped within a high fire hazard severity zone in either a SRA or LRA.

Topography

Topography influences fire risk by affecting fire spread rates. Typically, steep terrain results in faster fire spread up slope and slower spread down slope. Terrain that forms a funneling effect—such as chimneys, chutes, or saddles—on the landscape can result in especially intense fire behavior, including faster spread and higher intensity. Conversely, flat terrain tends to have little effect on fire spread, resulting in fires that are driven by vegetation and wind.

The San Rafael site is bound to the north by an approximate 70-foot-high slope that ascends to a residential property and surrounding residential neighborhood. The San Rafael site gently slopes downward toward the southwest, with site elevations ranging from 620 feet above mean sea level (msl) along the base of the slope at the north end of the site to approximately 615 feet above msl at the southwest corner of the site. Additionally, the adjacent, concrete-lined Arroyo Seco Channel and San Rafael Creek have depths of approximately 10 feet and 5 feet, respectively (Ninyo & Moore 2022a, Appendix G-1).

The San Pascual site contains an existing man-made wetland area that slopes downward toward the middle portions of the site approximately 8 to 10 feet below the surrounding surfaces. An outlet to Arroyo Seco Channel is located at the southern end of the wetland area. Elevations around the perimeter of the wetland area on the San Pascual site range from approximately 602 feet above mean sea level (msl) at the north end of the site to 596 feet above msl at the south end. The bottom elevations of the existing wetland and south outlet are approximately 590 and 578 feet, respectively. The adjacent Arroyo Seco Channel has depths ranging from approximately 12 to 15 feet in the area of the San Pascual site (Ninyo & Moore 2022b, Appendix G-2).

Vegetation and Land Cover

Wildland fire behavior is strongly influenced by vegetation (fuel) type, fuel moisture and the arrangement and continuity of fuels. Areas with dense or unmanaged vegetation can increase fire intensity and behavior, especially during dry or windy conditions. The type,

amount, and condition of onsite vegetation are important factors in assessing wildfire hazards.

The San Rafael site is undeveloped and contains areas of bare soil and relatively sparse vegetation consisting primarily of disturbed blue elderberry – laurel sumac scrub with widely scattered trees. The San Pascual site contains a poorly maintained man-made wetland area and most of the site is densely vegetated with trees and large shrubs but is lacking in understory vegetation. The northern end of this site is vegetated primarily with ruderal (i.e., weedy) grasses and forbs with some trees and large bushes along the western and northern edges. Several unpaved trails cross this area and there is a stone hitching post, a short section of post-and-rail fence, and boulders marking the edge of the parking area on the east side.

3.11.3 RELEVANT PROGRAMS AND REGULATIONS

Federal

There are no federal regulations related to wildfire that are applicable to the Project.

State

California Public Resources Code

The California Public Resources Code (PRC) includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire prone areas.

These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442);
- Appropriate fire suppression equipment would be maintained during the highest fire danger period—from April 1 to December 1 (PRC Section 4428);
- On days when a burning permit is required, flammable materials would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (PRC Section 4427); and
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (PRC Section 4431).

The PRC Sections 4201 through 4204 direct the California Department of Forestry and Fire Protection (CAL FIRE) to identify and map areas across California based on fire hazard

severity, resulting in the designation of FHSZs. These zones, categorized as Moderate, High, or Very High, are based on factors such as vegetation type, fire history, topography, and climate conditions.

While originally developed for SRAs, PRC Section 4202 requires the classification of lands within LRAs as well, in coordination with local jurisdictions. Local governments must then consider these designations when developing or amending general plans, zoning ordinances, and building standards to ensure compatibility with wildfire risk. FHSZs serve as a regulatory tool to guide land use decisions under the application of wildfire safety requirements, such as building code provisions under Chapter 7A of the CBC and vegetation management standards under PRC Section 4291.

PRC Section 4290 sets minimum fire safety standards related to road access, signage, water supply, and fuel modification for new development in fire-prone areas. PRC Section 4291 requires property owners in SRAs and applicable Wildland-Urban Interface (WUI) areas to maintain defensible space by clearing vegetation and flammable materials within 100 feet of structures. While primarily enforced in SRAs, many local jurisdictions in LRAs adopt similar standards to reduce fire risk and improve structure survivability in wildfire events.

California Department of Forestry and Fire Protection

CAL FIRE is the lead state agency responsible for fire protection and wildfire management on over 31 million acres of state and private lands, primarily in SRAs. CAL FIRE also provides oversight and guidance on fire prevention strategies statewide, including LRAs. CAL FIRE administers fire prevention programs, manages vegetation treatment efforts, and enforces defensible space regulations under PRC Sections 4290 and 4291. In addition, CAL FIRE is responsible for classifying FHSZs across the state and provides technical input to local governments to incorporate wildfire resilience into planning and development processes (CAL FIRE 2025b).

California Fire Code

The California Fire Code (CFC) (CCR Title 24, Part 9) establishes statewide fire safety standards intended to reduce the risk of fire and ensure the protection of life and property. The CFC incorporates by reference the International Fire Code with California-specific amendments and is updated triennially by the California Building Standards Commission.

Key provisions of the CFC include requirements for:

- Fire apparatus access roads and water supply for firefighting operations;
- Installation and maintenance of fire protection systems, such as fire alarms and sprinklers;
- Regulation of combustible materials, hazardous substances, and open flames;
- Building construction standards related to fire-resistance and defensible space; and
- Emergency planning and evacuation procedures.

The CFC is enforced by local fire authorities having jurisdiction and may be supplemented by more stringent local amendments. Compliance with the CFC is mandatory for new development and significant modifications to existing structures, particularly in areas designated as VHFHSZs or within the WUI.

California Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the California Governor's Office of Emergency Services, which coordinates the responses of other agencies.

Local

City of Pasadena General Plan – Safety Element

The Safety Element of the City of Pasadena General Plan identifies wildfire as a potential hazard, particularly in hillside and canyon areas adjacent to wildland vegetation. The Safety Element outlines policies and objectives to minimize fire risk through land use planning, fire-resistant construction, emergency response coordination, and vegetation management. It emphasizes the importance of reducing wildfire vulnerability in the wildland-urban interface and supports public education and outreach on fire prevention (Pasadena 2002).

City of Pasadena Hazardous Vegetation Ordinance

The City of Pasadena has established a Hazardous Vegetation Ordinance, which is designed to minimize fire danger by controlling the density and placement of flammable vegetation. The Hazardous Vegetation Ordinance provides that where the Fire Chief or his designee determines that the condition of a structure or property poses an immediate hazard to life or property, emergency action may be taken.

Pasadena Water and Power Wildfire Mitigation Plan

Pasadena Water and Power (PWP) routinely produces a Wildfire Mitigation Plan to identify and put into action wildfire prevention strategies for the City of Pasadena. The first PWP Wildfire Mitigation Plan was approved by City Council in November 2019, since then PWP has worked on several projects and implemented various programs. The latest version of the plan is the 2025 PWP Wildfire Mitigation Plan, herein referred to as the 2025 WMP. This WMP describes the range of activities that PWP is taking to mitigate the threat of power-line ignited wildfires, including its various programs, policies, and procedures. This plan complies with the requirements of California Public Utilities Code (CPUC) Section 8387 for publicly owned electric utilities to prepare a wildfire mitigation plan by January 1, 2020, and annually thereafter (PWP 2025).

City of Pasadena Local Hazard Mitigation Plan

The City of Pasadena's Local Hazard Mitigation Plan complies with the Federal Disaster Mitigation Act (2000), Federal Register 44 CFR Parts 201 and 206, which modified the Robert T. Stafford Disaster Relief and Emergency Assistance Act by adding a new section, 322 - Mitigation Planning. As of November 1, 2004, this law requires local governments to develop and submit hazard mitigation plans as a condition of receiving Hazard Mitigation Grant Program (HMGP) and other mitigation project grants. The City Fire Department has coordinated the preparation of the Local Hazard Mitigation Plan (LHMP) in cooperation with City departments, community stakeholders, partner agencies, and members of the public. The City of Pasadena adopted the most recent version of the LHMP in 2025. The City's LHMP includes technological and human-caused hazards as well as natural hazards. The planning team decided to cover both natural and technological/human-caused hazards for the LHMP, including a description and analysis of each hazard (Pasadena 2025).

City of South Pasadena General Plan Our Safe Community Element

The Our Safe Community Element of the City of South Pasadena General Plan addresses natural and human-caused threats and hazards within the City of South Pasadena. The primary goal of this Element is to increase awareness, be prepared for emergencies, and minimize threat to life and damage to structures from natural and human-caused hazards (South Pasadena 2023a).

City of South Pasadena Local Hazard Mitigation Plan

The City of South Pasadena's draft Local Hazard Mitigation Plan (LHMP) identifies wildfire as a significant natural hazard and outlines mitigation strategies to reduce risks to life, property, and critical infrastructure. South Pasadena's LHMP is developed in coordination with regional agencies and guides long-term investments in hazard resilience, including vegetation management, public education, and evacuation planning. Every five years the LHMP is required to be updated and submitted to the State Office of Emergency Services (CalOES) and the Federal Emergency Management Agency (FEMA). The latest version is the Draft City of South Pasadena LHMP 2023–2028 (South Pasadena 2023b).

City of South Pasadena and the South Pasadena Unified School District Joint Emergency Operations Plan

The City of South Pasadena, in collaboration with the South Pasadena Unified School District (SPUSD), has established a Joint Emergency Operations Plan (EOP). The EOP addresses the City's planned response to emergency/disaster situations associated with natural disasters, human made emergencies, and national security emergencies. The plan does not address day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies. Instead, the operational concepts reflected in this plan focus on large-scale events (South Pasadena 2012).

City of Los Angeles General Plan Safety Element

The City of Los Angeles Safety Element provides a contextual framework for understanding the relationship between hazard mitigation, response to a natural disaster and initial recovery from a natural disaster. The current City of Los Angeles General Plan Safety Element was approved in 1996. The City of Los Angeles is undertaking a targeted update of the Safety Element alongside the comprehensive update of the Housing Element, as directed by recent state legislation. This draft preserves the structure of the current 1996 Safety Element, with targeted amendments to better integrate related long range planning documents and comply with recent changes to State laws (Los Angeles 2021).

City of Los Angeles Local Hazard Mitigation Plan

The City of Los Angeles completed and enacted its most recent Local Hazard Mitigation Plan (LHMP) in 2024 to lessen the vulnerability to disasters and demonstrate the City's commitment to reducing risks from natural hazards. The LHMP serves as a guide for decision makers as they commit City resources to minimize the effects of natural hazards. The plan is intended to integrate with existing planning mechanisms such as building and zoning regulations, long-range planning mechanisms, and environmental planning. The planning process includes conducting a thorough hazard vulnerability analysis, creating community disaster mitigation priorities, and developing subsequent mitigation strategies and projects (Los Angeles 2024).

City of Los Angeles Base Emergency Operations Plan

The City of Los Angeles Base Emergency Operations Plan (EOP) outlines the City's response framework for all hazards. It serves as the foundation for emergency response within the City of Los Angeles and delineates coordination before, during, and after an event occurs. The plan is established in accordance with Division 8, Chapter 3 of the Los Angeles Administrative Code (LAAC), the City of Los Angeles Citywide American with Disabilities Act (ADA) guidelines and documents, FEMAs Comprehensive Preparedness Guide (CPG) 101, and the California Emergency Services Act. The EOP is also consistent and compatible with the State of California Emergency Plan. This plan delineates the functions, structure, stakeholders, activities, personnel, resources, capabilities, mutual aid processes, and goals of the City of Los Angeles during an emergency or disastrous event (Los Angeles 2023).

3.11.4 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. For projects located in or near SRAs or lands classified as VHFHSZ, a project would result in a significant adverse wildfire impact if it would:

Threshold 3.11a: Substantially impair an adopted emergency response plan or emergency evacuation plan;

Threshold 3.11b: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire;

Threshold 3.11c: Require the installation or maintenance of associated infrastructure (such as road, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; and/or

Threshold 3.11d: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

3.11.5 REGULATORY REQUIREMENTS

RR WF-1 Prior to commencement of any construction activities and in compliance with Article 87 of the California Fire Code and National Fire Protection Association Standard No. 1, the contractor shall prepare a Fire Protection Plan (Plan) that includes emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on site; procedures for "hot work" operations; management of hazardous materials and removal of combustible debris; maintenance of emergency access roads; identification of exit routes and assembly areas; and identification of fire apparatus. The Plan shall require that all on-site workers be trained annually on the requirements and protocols. The Fire Protection Plan shall be prepared to the satisfaction of the City of Pasadena, the City of South Pasadena, and the City of Los Angeles and provided to these agencies for review and approval prior to commencement of any Project activities.

3.11.6 ENVIRONMENTAL IMPACTS

Threshold 3.11a: Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. Implementation of the Project would not substantially impair implementation of the City of Pasadena, City of South Pasadena, or City of Los Angeles Emergency Operations Plans, herein referred to as Emergency Operations Plans. Construction activities have the potential to create sparks, which creates a wildfire risk as the Project sites are within a VHFHSZ. Accordingly, RR WF-1 requires compliance with Article 87 of the California Fire Code and National Fire Protection Association Standard No. 1. The construction contractor would prepare a Fire Protection Plan to include emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on site; procedures for "hot work" operations; management of hazardous materials and removal of combustible debris; maintenance of emergency access roads; identification of exit routes and assembly areas; and identification of fire apparatus.

Recent research into several large urban fires in Southern California indicates that non-native vegetation burned at much higher severities than native vegetation; and that palm trees–especially unpruned palms–can increase fire danger (Sever 2019). As noted above, the San Pascual site has experienced several fires in recent years, and palm trees were among the trees adversely affected. The dead fronds on many of the palms were subsequently trimmed to reduce the fuel load. The proposed Project would reduce the existing fire hazard on the sites by removing areas of unmanaged and primarily non-native vegetation and implementing intentionally landscaped and maintained, locally appropriate, native vegetation. Thus, the restoration of the landscape on the sites as part of the Project would have a beneficial effect related to long-term wildfire hazards.

In light of the above, the Project would not impair an adopted emergency response plan or emergency evacuation plan. No adverse impact would occur, and no mitigation is required.

Threshold 3.11b: Due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?

Less than Significant Impact. A project can exacerbate wildfire risks by adding fuel in an area subject to wildfires; adding ignition sources such as roads, powerlines, and/or powered equipment; adding resources to an area (e.g., people or structures); or exacerbating the effects of wildfire on affected resources.

Construction of the Project would add ignition sources to the Project site including trucks and powered equipment. As these sources would only be present during Project construction, it is not considered a long-term permanent ignition source beyond the Project construction period. Moreover, to reduce wildfire risks and to protect workers during Project activities, RR WF-1 requires compliance with Article 87 of the California Fire Code and National Fire Protection Association Standard No. 1. The contractor will prepare a Fire

Protection Plan to include emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on site; procedures for "hot work" operations; management of hazardous materials and removal of combustible debris; identification of exit routes and assembly areas; and identification of fire apparatus. Implementation of RR WF-1 would ensure that impacts would be less than significant. Project implementation would not add fuel, such as wildland vegetation or structures, to the Project site that would result in a significant impact. The Project does not propose development of structures for human occupancy, and construction workers would only be onsite during standard working hours. However, the Project would expand public recreation opportunities in the Lower Arroyo Seco. While the Project is not anticipated to directly increase use of the Lower Arroyo Seco area as a destination, there may be an increased presence on the two sites compared to the existing condition. As discussed under Threshold 3.11a, the Project's removal of unmanaged and primarily non-native vegetation and replacement with intentionally landscaped and maintained, locally appropriate, native vegetation would reduce the fire hazard compared to the existing conditions. Therefore, Project implementation would not exacerbate wildfire risks on or near the site. Thus, impacts would be less than significant, and no mitigation is required.

Threshold 3.11c: Would the Project require the installation or maintenance of associated infrastructure (such as road, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than Significant Impact. The Project would not require the installation or maintenance of associated infrastructure such as road, fuel breaks, emergency water sources, power lines or other utilities. The Project would minimally increase demand for water associated with use of the proposed irrigation system to support the new landscaping, and a nominal amount of water may be used during construction for dust suppression. Additionally, the Project would not result in wastewater generation and would not, therefore, result in the need for new or expanded wastewater treatment facilities. While operation of the water treatment infrastructure and irrigation system would generate demand for electricity, this demand would not result in the need for new or expanded electric power facilities outside the Project site. Therefore, in the absence of need for installation or maintenance of infrastructure and utilities that would exacerbate fire risk or result in temporary or ongoing impacts to the environment, impacts would be less than significant, and no mitigation is required.

Threshold 3.11d: Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less than Significant Impact. Construction of the Project could substantially exacerbate wildfire hazards on and near the site by temporarily introducing new ignition sources to the site (see the explanation above under the analysis of Threshold 3.11-3). However, wildfire risks due to Project construction would be less than significant through regulatory compliance (RR W-1), which requires preparation of a Fire Protection Plan. Additionally, as

discussed under Threshold 3.11a, the Project's removal of unmanaged and primarily non-native vegetation and replacement with intentionally landscaped and maintained, locally appropriate, native vegetation would reduce the fire hazard compared to the existing conditions. Therefore, Project implementation would not expose people to significant risks including downstream flooding or landslides due to post-fire slope instability or drainage changes.

3.11.7 CUMULATIVE IMPACTS

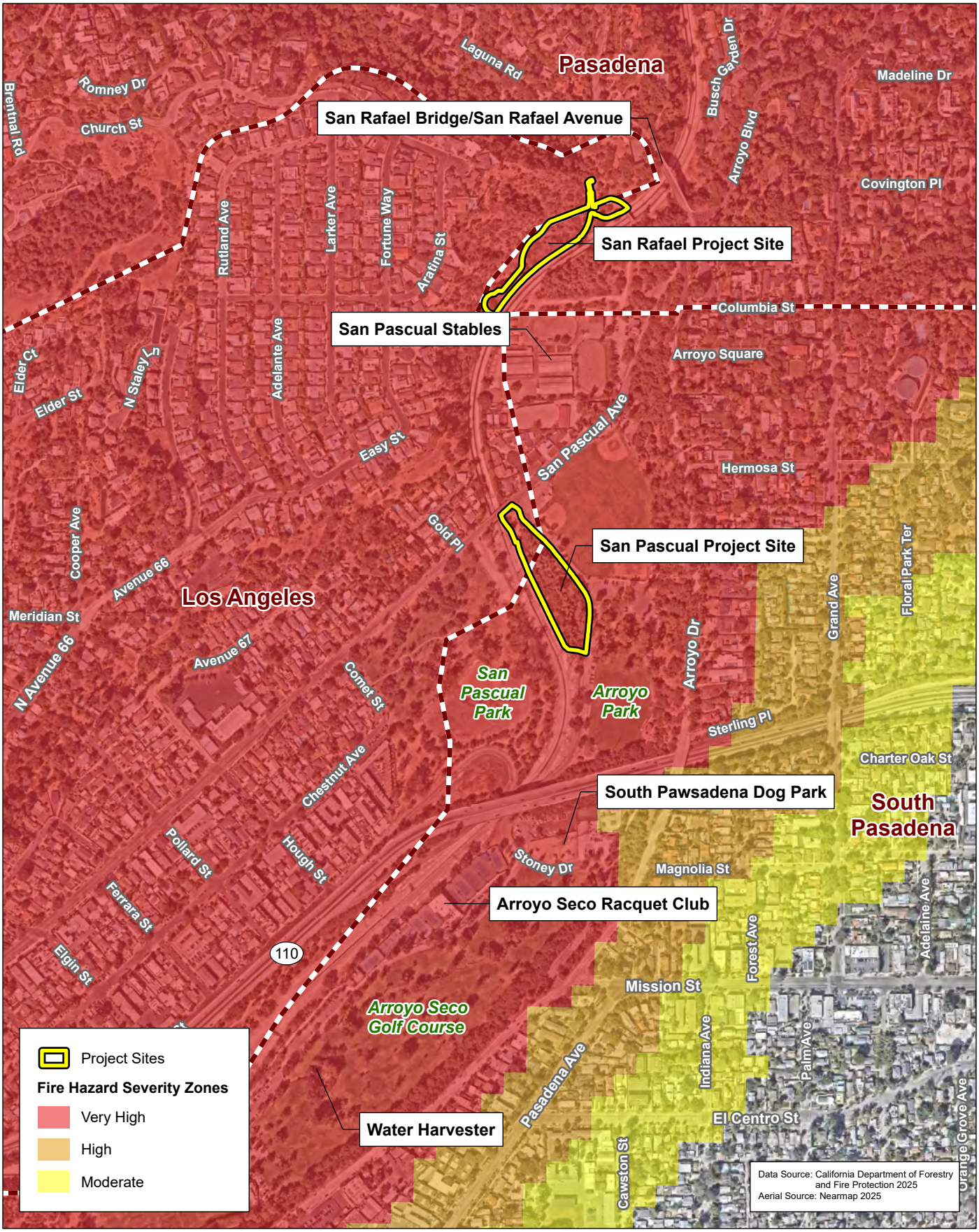
The geographic context for cumulative wildfire impacts includes the fire hazard severity zones (refer to Exhibit 3.11-1) within an approximately one-half mile radius of the Project sites. Compliance with State and local regulations pertaining to development in VHFHSZs and/or on hillsides in the cities of Los Angeles and Pasadena would be required of all development in the cumulative area for wildfires. Individual projects would be designed and built in accordance with applicable standards in the CBC and the city's respective municipal codes as well as all requirements pertaining to emergency access and evacuation. Site-specific geotechnical hazards related to slope and/or landslide risk would be addressed by the geotechnical investigations required by individual cities and the County for each development proposal. Notably, as discussed above, the Project would not involve construction of structures or a change in land use that would exacerbate wildfire risk. Additionally, the Project's removal of unmanaged and primarily non-native vegetation and replacement with intentionally landscaped and maintained, locally appropriate, native vegetation would reduce the fire hazard compared to the existing conditions. Compliance with applicable State and local regulations would prevent significant adverse cumulative impacts associated with wildfire hazards. Impacts associated with Project implementation would not be cumulatively considerable, and no mitigation is required.

3.11.8 MITIGATION MEASURES

No significant impacts related to Wildfire would occur, and no mitigation is required.

3.11.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project's potential impacts associated with Wildfire would be less than significant through incorporation of RR WF-1.



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Fire Hazard Severity Zones in Project Area

Exhibit 3.11-1

Arroyo Seco Water Reuse Project

N W E S

0 300 600 Feet

PSOMAS

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4.0 ALTERNATIVES

4.1 INTRODUCTION

Sections 15126.6(a)–15126.6(b) of the State of California Environmental Quality Act (CEQA) Guidelines (14 *California Code of Regulations* [CCR]) provides guidance on the range of alternatives to a proposed project that must be evaluated. The State CEQA Guidelines state the following:

> (a) Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The Lead Agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.
>
> (b) Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

Pursuant to the State CEQA Guidelines, a range of alternatives to the proposed Project is considered and evaluated in this Environmental Impact Report (EIR). These alternatives were developed in the course of Project planning and environmental review.

4.2 CRITERIA FOR SELECTING ALTERNATIVES

Several criteria were used to select alternatives to the proposed Project. These criteria include the alternative's ability to achieve project objectives; feasibility; and ability to eliminate or reduce significant impacts. Each of these are described below.

4.2.1 ABILITY TO ACHIEVE PROJECT OBJECTIVES

The ability of an alternative to meet most of a project's objectives is an important component when evaluating alternatives. When developing alternatives for detailed analysis in an EIR, not only are the environmental impacts considered but so is the alternative's ability to meet a project's intended objectives. Section 15126.6(f) of the State CEQA Guidelines states the following:

> The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project.

Section 15124 of the State CEQA Guidelines requires an EIR to include a statement of a proposed project's objectives. The Arroyo Seco Water Reuse Project seeks to achieve the following key objectives:

1. Improve water quality in the Arroyo Seco Channel and support the goals described in the Enhanced Watershed Management Program and the Load Reduction Strategy plan.
2. Rehabilitate San Rafael Creek by providing a natural creek bed for low flow events. The proposed project will remove trash, metals, and nutrients that would otherwise flow to the Arroyo Seco Channel. Project will capture dry weather flows to treat the bacteria as required in the bacteria Total Maximum Daily Load (TMDL) issued by the Regional Water Quality Control Board to meet compliance requirements. Also, eliminate diversion to the sewer system, in complying with the TMDL.
3. Enhance the existing sites by installing nature based, natural treatment wetlands and infiltration basins to recharge groundwater.
4. Provide for treated dry-weather flow to offset the potable water demand required to irrigate the golf course at the San Pascual site.
5. Provide for native habitat, educational opportunities, and diverse vegetation to the existing spaces encouraging habitat for wildlife. Different plant life emphasizing native vegetation can be planted in the drier infiltration basin sections than the treatment wetlands. These will protect, enhance, and restore habitat, green space, and usable space.
6. At San Rafael site, create passive recreation space that is currently inaccessible and unusable.
7. At San Pascual site, remove invasive Mexican Fan Palms, which are a fire hazard, and unauthorized recreational uses (i.e., BMX bike trail, undefined trails). Reestablish inoperable wetlands and address ponding issue at south end of site where trash accumulates, algae grows and creates an unhealthy vector issue.

8. Educate the public on integrated systems and sustainable resources practices.
9. Improve public access and use.
10. Rehabilitate the existing trail along the Arroyo Seco.
11. Plant additional native plants and trees for both sites to increase existing tree count to reduce heat island effect. Native trees that are part of the post-construction landscape plan will contribute to increased tree count and shade for the area.
12. Contribute towards flood retention capabilities of the whole storm drain system by enhancing the detention capabilities of the system. The volume detention contributes to flood management, and because this project site is in the upland areas of the greater watershed, it offers distributed volume control that is needed across the watershed to mitigate flooding from the largest rain events.

4.2.2 FEASIBILITY

When developing alternatives for evaluation in an EIR, the feasibility of implementing the alternative must be considered. If a range of alternatives is developed but, due to regulatory restrictions, cannot be implemented, the analysis would not meet the CEQA intent to provide a reasonable range of feasible alternatives. Section 15126.6(f)(1) of the State CEQA Guidelines states the following:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives (*Citizens of Goleta Valley v. Board of Supervisors* [1990] 52 Cal.3d 553; see *Save Our Residential Environment v. City of West Hollywood* [1992] 9 Cal.App.4th 1745, 1753, fn. 1).

It has been recognized that, for purposes of CEQA, "feasibility" encompasses "desirability" to the extent that the latter is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors (*California Native Plant Society v. City of Santa Cruz* [2009] 177 Cal.App.4th 957, 1001). This balancing is harmonized with CEQA's fundamental recognition that policy considerations may render alternatives impractical or undesirable (Ibid; see also *California Public Resources Code,* Section 21081; 14 CCR 15126.6[c] and 15364).

4.2.3 ELIMINATION/REDUCTION OF SIGNIFICANT IMPACTS

Section 15126.6(b) of the State CEQA Guidelines states that "[b]ecause an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially

lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly".

The proposed Project, evaluated in Section 3.1 through 3.11 of this EIR, would result in a range of impacts. The Alternatives evaluated in this section have been developed in an effort to reduce and/or eliminate one or more significant impacts, albeit mitigable, associated with the proposed Project. The Project would result in potentially significant impacts in the following categories: Air Quality, Biological Resources, Cultural and Paleontological Resources, Greenhouse Gas Emissions, Noise, and Tribal Cultural Resources. As described in this EIR, through mitigation measures, the potentially significant impacts are reduced to less than significant levels, and no significant and unavoidable impacts would result. However, despite the lack of unavoidable significant impacts, the alternatives selected should still reduce the degree of significant impacts identified under the proposed Project.

4.3 ALTERNATIVE SITE

Section 15126.6(f)(2) of the State CEQA Guidelines sets forth the following criteria for determining whether to identify an alternative site because "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative" (14 CCR 15126.6[f][3]). Section 15126.6(f)(2) of the State CEQA Guidelines (14 CCR) states the following:

> (A) Key question. The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
>
> (B) None feasible. If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in proximity to natural resources at a given location.
>
> (C) Limited new analysis required. Where a previous document has sufficiently analyzed a range of reasonable alternative locations and environmental impacts for projects with the same basic purpose, the lead agency should review the previous document. The EIR may rely on the previous document to help it assess the feasibility of potential project alternatives to the extent the circumstances remain substantially the same as they relate to the alternative (*Citizens of Goleta Valley v. Board of Supervisors* [1990] 52 Cal.3d 553, 573).

Development of the Project on an alternative site was not carried forward for detailed consideration due to the lack of available alternate sites and the inability to meet many of the objectives established for the proposed Project. Potential alternative sites were researched and reviewed to determine whether any locations other than the San Pascual and San Rafael sites could feasibly support the Arroyo Seco Water Reuse Project. No additional sites within the service area provide the necessary combination of available land, proximity

to existing wastewater and recycled water infrastructure, operational compatibility, and ability to meet the Project's objectives. Other potential locations are either too distant from required conveyance systems, lack sufficient space for treatment and storage facilities, conflict with existing land uses, or would result in greater environmental impacts. Because no other sites would reasonably achieve the Project's purpose and objectives, no additional alternative sites are considered feasible, and therefore no alternative site is carried forward for further evaluation.

Therefore, due to lack of viable and comparable sites in the general area that would allow for implementation of the Project in a manner that would avoid or substantially lessen the Project's potentially significant impacts and provide the improvements and benefits that are achieved at the proposed Project site, an alternative site has been eliminated from consideration. See Section 4.4, below, for details regarding specific alternative sites considered but dismissed from detailed evaluation.

4.4 ALTERNATIVES ELIMINATED FROM DETAILED CONSIDERATION

Section 15126.6(c) of the CEQA Guidelines specifies that an EIR should (1) identify alternatives that were considered by the lead agency but were eliminated from detailed consideration because they were determined to be infeasible during the scoping process and (2) briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (1) failure to meet most of the basic project objectives; (2) infeasibility; or (3) inability to avoid significant environmental impacts.

The following alternatives have been considered and eliminated from detailed consideration for the reasons identified below:

- Alternative Site – Initial San Rafael Site
- Alternative Site – Casting Pond
- Alternative Site – San Pascual Park Parking Lot
- Alternative Site – Bridewell Island
- Arroyo Seco Channel Naturalization

4.4.1 ALTERNATIVE SITE – INITIAL SAN RAFAEL SITE

The Initial San Rafael Site was originally proposed on the east side of the San Rafael Creek. However, a significant portion of the site extended onto private property, and securing the necessary easements for these areas proved infeasible. As a result, only the land within the City of Pasadena's jurisdiction remained available for consideration. This reduced acreage was insufficient to design a site that could accommodate the proposed regional stormwater capture and treatment facility and the public recreation amenities, trails, and native landscaping in an aesthetically pleasing manner. This would conflict with Project Objective

6, which aims to create passive recreation space that is currently inaccessible and unusable at the San Rafael Site. As such, the Initial San Rafael Site is dismissed from further consideration in the EIR.

Therefore, it is noted that there were no other viable alternative sites for the San Rafael portion of the Project due to the compliance point[1] being defined by the requirements of the Load Reduction Strategy. The compliance point is at the confluence of the San Rafael Creek and the Arroyo Seco Channel and cannot be modified.

4.4.2 ALTERNATIVE SITE – CASTING POND

The Casting Pond Alternative was initially considered based on reports that an existing water diversion system was located within the casting pond site at 415 South Arroyo Boulevard in Lower Arroyo Seco Park. The presence of such a diversion system suggested that the site could potentially be used to divert water from the Arroyo Seco Channel and the wetland BMP for stormwater capture and treatment. This would have allowed for the removal of contaminants within the area, aligning with Project Objectives for water quality improvement.

However, upon further investigation and site inspection, it was determined that no actual diversion system exists at the casting pond site. The absence of this critical infrastructure means that water cannot be diverted as originally anticipated, and the site cannot function as a BMP for stormwater treatment. Without the ability to divert water, the site fails to meet the basic technical requirements necessary for the Project Objectives, including the capture and treatment of dry weather flows and the reduction of pollutants as mandated by regulatory agencies. Additionally, the lack of a diversion system would require substantial new construction and permitting to establish the necessary infrastructure, which would likely result in increased costs, extended timelines, and additional environmental impacts. These factors further diminish the feasibility of the alternative.

Given these findings, the Casting Pond Alternative does not meet the fundamental criteria for feasibility under CEQA, including the ability to achieve most of the Project Objectives and avoid or substantially lessen significant environmental impacts. As such, this alternative was dismissed from further consideration in the EIR.

4.4.3 ALTERNATIVE SITE – SAN PASCUAL PARKING LOT

The San Pascual Parking Lot Alternative would utilize the existing concrete parking lot at the San Pascual site west of the Arroyo Seco Channel for the development of the proposed wetland BMPs, which include stormwater capture and treatment facilities. This alternative would also incorporate significant upgrades to the existing diversion system at the San Pascual site to facilitate the new wetland infrastructure. While the parking lot is currently underutilized, it is less than 0.5 acre in size, which is not sufficient for meaningful

[1] A specific location or geographic point in a watershed where compliance with pollutant load-reduction requirements must be demonstrated. It is the point at which regulators evaluate whether the implemented Load Reduction Strategy is achieving the required pollutant reductions.

development. Even if the adjacent grass area were incorporated—doubling the total area to roughly 1 acre—it would still be less than half the size of the proposed Project site. A site of this scale would not meet water supply objectives currently envisioned for that location. Additionally, there are significant jurisdictional and legal constraints that limit the feasibility of this alternative. Notably, the entire parking lot area falls within the boundaries of the City of Los Angeles. The City of Pasadena, which is the lead agency for the project, does not have ownership or legal control over this parcel. As a result, Pasadena has not been granted the necessary land rights or easements to proceed with development on this site.

This jurisdictional issue presents several challenges including Pasadena, as the lead agency, cannot approve or implement Project actions on land outside its jurisdiction without formal agreements or land transfers, which have not been currently secured and are not anticipated. Additionally, even if an agreement or land transfer were pursued, it would require complex negotiations and legal review, which would not be feasible in terms of timing to achieve the Project Objectives, as well as meet the State mandated compliance timeline to reduce bacteria TMDL. Additionally, the San Pascual Parking Lot Alternative could result in the loss of off-street parking and impact public access at the entrance to the park. As such, the San Pascual Parking Lot Alternative is dismissed from further consideration in the EIR.

4.4.4 ALTERNATIVE SITE – BRIDEWELL ISLAND

The Bridewell Island Alternative would use an approximately 5-acre site across the Arroyo Seco Channel from the golf course currently utilized by unsheltered populations. While the space is currently underutilized and offers an area suitable for construction, there are no actual diversion system at the Bridewell Island area. Absence of this critical infrastructure means that water cannot be diverted as originally anticipated, and the site cannot function as a BMP for stormwater treatment. Without the ability to divert water, the site does not meet the basic technical requirements necessary for the Project Objectives, including the capture and treatment of dry weather flows and the reduction of pollutants as mandated by regulatory agencies. Additionally, the lack of a diversion system would require substantial new construction and permitting to establish the necessary infrastructure, which would likely result in increased costs, extended timelines, and additional environmental impacts. These factors further diminish the feasibility of the alternative. As such, the Bridewell Island Alternative is dismissed from further consideration in the EIR.

4.4.5 ARROYO SECO CHANNEL NATURALIZATION

The Arroyo Seco Channel Naturalization Alternative was considered based on longstanding community and agency interest in restoring the Arroyo Seco to a more naturalized state. This concept was reflected in an adopted plan for the L.A. River, which envisioned removing the concrete channel, implementing hydro controls, and creating riverside features to support habitat and recreation. The U.S. Army Corps of Engineers previously conducted a feasibility study for naturalizing the Arroyo Seco Channel, and although that effort stalled, it was revived in recent years through public advocacy and direction from local leadership.

Despite widespread interest, the naturalization alternative faces significant constraints. Key issues include the risk of flooding hazards and the high cost and lengthy timeline required for a full channel restoration. The State has issued a mandate to improve water quality, requiring immediate action to reduce pollutants such as the bacteria TMDL. Implementing the naturalization alternative would not meet the urgent regulatory deadlines, as the process is expensive and would take years to complete. Additionally, it is important to note that the channel falls under the jurisdiction of the Los Angeles County Flood Control District (LACFCD). LACFCD has made it clear that removing the channel is highly unlikely due to flooding constraints, cost considerations, and the complex coordination required among federal, State, and local agencies for such a project. The City of Pasadena has no jurisdiction over the removal of the concrete-lined channel. Moreover, even if naturalization were undertaken now, portions of the channel would still require engineered infrastructure to treat water and comply with public health and water quality standards, which means that the system would not be entirely naturalized.

In summary, while the naturalization of the Arroyo Seco Channel remains a long-term community goal, it was rejected as a feasible alternative under CEQA for this Project. The alternative does not satisfy the immediate water quality mandates, would not be achievable within the necessary timeframe, and would require substantial resources. Importantly, implementation of the proposed Project would not preclude future naturalization efforts should funding and feasibility improve. As such, the Arroyo Seco Channel Naturalization Alternative is dismissed from further consideration in the EIR.

4.5 ALTERNATIVES TO THE PROPOSED PROJECT

In accordance with Section 15126.6(a) of the State CEQA Guidelines, the discussion in this section of the EIR focuses on a reasonable range of alternatives. Other than the No Project Alternative, which is required by CEQA, each alternative must be capable of avoiding or substantially lessening potentially significant effects of the Project. Qualifying alternatives can be considered even if the alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The following alternatives are analyzed in this EIR:

- Alternative 1 – No Project Alternative
- Alternative 2 – San Pascual Park Tree Conservation Alternative
- Alternative 3 – San Pascual Park Baseball Field Conservation Alternative

In accordance with Section 15126.6(a) of the State CEQA Guidelines, this EIR provides a comparison of the environmental effects and their merits and/or disadvantages of each alternative in relation to the proposed Project, as well as each alternative's ability to achieve the Project Objectives. The level of environmental impact and ability to meet Project Objectives is considered in identifying the environmentally superior alternative.

The Project site's existing environmental setting would be the same for the proposed Project and all alternatives. Additionally, unless specifically identified, it is assumed that the Mitigation Program identified for the Project would also be applicable for the alternatives.

4.6 ALTERNATIVES CARRIED FORWARD FOR DETAILED CONSIDERATION

The analysis of each of the project alternatives identified below includes the following:

- A description of the alternative.
- An analysis of environmental impacts and a comparison to the possible impacts of the proposed project. Pursuant to the State CEQA Guidelines, if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.
- An assessment of the alternative's ability to meet the Project objectives.

The comparison of impacts between each alternative and the proposed Project assumes that the general nature and types of (1) existing regulations; (2) regulatory requirements (RRs); and (3) the mitigation measures (MMs) identified in Section 3.0, Environmental Analysis, of this EIR would also be applicable to each of the alternatives, where appropriate. No RRs or MMs are applied to the No Project Alternative, which basically assumes that the existing conditions on the Project site would remain unchanged.

4.6.1 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

Section 15126.6(e) of the State CEQA Guidelines requires than an EIR evaluate a "no project" alternative in order to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving that project. Section 15126.6(e)(3) of the State CEQA Guidelines describes the two general types of no project alternative: (1) when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the no project alternative would be the continuation of that plan and (2) when the project is not a land use/regulatory plan, such as a specific development on an identifiable property, the no project alternative is the circumstance under which that project is not processed (i.e., no development occurs). In addition, Section 15126.6(e)(2) of the State CEQA Guidelines specifies that the "No Project analysis shall discuss the existing conditions at the time the Notice of Preparation (NOP) is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services".

Description of the Alternative

The "No Project" alternative is defined as the circumstance under which the Project does not proceed and a comparison of the environmental effects of the property not being development with any water and treatment infrastructure or recreational improvements

against the environmental effects associated with the Project. Accordingly, the No Project Alternative assumes that the Project would not be adopted and no improvements to the Lower Arroyo Seco and the San Pascual and San Rafael sites would occur.

Comparative Analysis of Environmental Impacts

Aesthetics

As discussed in Section 3.1, Aesthetics, the Project would result in either less than significant or no aesthetic impacts. The No Project Alternative would not result in any visual changes or aesthetic impacts at the Project site during construction activities or operation of the proposed Project. There would be no addition of the water and treatment infrastructure, trail expansions, or additional landscape and hardscape elements at either the San Rafael or San Pascual sites. Therefore, no changes to the scenic and visual resources present on the Project site, which primarily includes areas within the Lower Arroyo Seco, would occur. No scenic vistas would be impacted and no changes to the visual character or quality of public views of the site would occur. Additionally, no new sources of light or glare would be added to the Project site. As such, the No Project Alternative would avoid any changes in visual character or views of the site and avoid any increase in light and glare at each of the sites that could occur during short-term construction activities and long-term operation of the Project. However, it is noted that unlike the proposed Project, the No Project Alternative would not result in any visual improvements, including planting additional trees among others. Under the No Project Alternative, existing sparse vegetation in the San Rafael area would remain, and no visual improvements associated with the proposed Project's increase in native trees, plants, and shrubs would occur. Likewise, no improvements would be made to the area on the west side of the creek, which is currently fenced off, overgrown, and visually unappealing. Moreover, existing conditions at the San Pascual site—including the BMX bike track, undesignated trails, unsheltered populations, trash, and ponded water with algae growth at the south end—would also remain unchanged. Therefore, unlike the proposed Project, the No Project Alternative would not enhance the visual quality of these areas. Aesthetic impacts under this alternative would be greater compared to those of the Project.

Air Quality

As discussed in Section 3.2, Air Quality, air quality impacts associated with the Project would be less than significant. Under the No Project Alternative, no grading and construction activities would occur and therefore no air quality emissions associated with operation of grading and construction equipment would be generated, which is a reduced impact compared to the Project at both sites. In addition, the negligible operational emissions associated with the Project's mobile emissions from routine maintenance and energy source emissions from the small flow pump would not result under the No Project Alternative. Furthermore, under this alternative, emissions due to the net difference between tree removals and replacements would not occur, resulting in lower impacts compared to the proposed Project. In light of the above, this alternative would not expose sensitive receptors to pollutant concentrations. Therefore, overall, no air quality impacts would occur under the No Project Alternative, which would be less than the proposed Project.

Biological Resources

Section 3.3, Biological Resources, identifies the proposed Project's significant direct and indirect impacts, including impacts to special-status species, jurisdictional drainages, and sensitive vegetation communities. The Project's impacts related to biological resources would be reduced to less-than-significant levels with implementation of mitigation measures MM BIO-1 through MM BIO-4, including biological monitoring during construction, tree preservation measures, nesting bird/raptor and bat pre-construction surveys and protection protocols.

Unlike the Project, under the No Project Alternative, there would be no new grading or construction, and therefore no direct removal of habitat, and no disturbance of jurisdictional waters. The No Project Alternative would therefore have no impact on biological resources and would avoid the Project's direct and indirect impacts pertaining to biological resources.

Cultural and Paleontological Resources

As discussed in Section 3.4, Cultural and Paleontological Resources, implementation of the Project would not result in significant impacts to historic, archaeological, and paleontological resources, or human remains with incorporation of MM CUL-1, which requires archaeological monitoring on-site during earthmoving activities. Under the No Project Alternative, there would be no grading, construction, and thus no ground disturbance activities. As such, the No Project Alternative would have no impact on cultural and paleontological resources and would avoid the Project's direct cultural and paleontological resources impacts.

Greenhouse Gas Emissions

As discussed in Section 3.5 Greenhouse Gas Emissions, greenhouse gas impacts associated with the Project would be less than significant. Under the No Project Alternative, no grading and construction activities and thus no associated traffic would occur. In the absence of those activities and construction traffic no greenhouse gas emissions would be generated, which is a reduced impact compared to the Project at both sites. Additionally, emissions due to the net difference between tree removals and replacements would not occur. Overall, greenhouse gas impacts associated with the No Project Alternative would be reduced compared to the Project.

Hydrology and Water Quality

As discussed in Section 3.6, Hydrology and Water Quality, the Project would result in either less than significant or no hydrology and water quality impacts. Under the No Project Alternative, no construction activities would occur that could result in hydrology and drainage impacts, such as erosion or sedimentation, at the Project site. However, under the No Project Alternative no improvements to the site and no community benefits, including water quality improvements, enhanced habitat and park space, improved flood protection, improved waterway access, recreational opportunities, reduced heat island effects, and increased shade and trees, would result.

Additionally, no compliance with the State-mandated water quality standards would occur. The Project was designed to address zinc concentrations as the primary pollutant and copper concentrations as the secondary pollutant, which meet the State-mandated (i.e., TMDL) water quality requirements for both the metals and bacteria. The Project would capture and treat 100 percent of the dry-weather flows in accordance with the LRS and Bacteria TMDL, as required by a State mandate for the City of Pasadena within the San Rafael Creek Outfall. The No Project Alternative would fail to meet the L.A. County Safe, Clean Water Program (SCWP) Objectives or the State mandate for Pasadena to lower bacteria TDMLs within the San Rafael Creek Outfall, and as such, impacts related to hydrology and water quality associated with the No Project Alternative would be increased compared to the Project. Therefore, while the No Project Alternative would avoid any physical changes, the Project's water quality benefits would not be achieved and TMDLs would not be met. Therefore, while no potential impacts pertaining to hydrology would occur in light of this alternative, water quality impacts would be greater under the No Project Alternative.

Land Use and Planning

As discussed in Section 3.7, Land Use and Planning, the Project would result in less than significant impacts related to land use. Likewise, the No Project Alternative would not result in any changes in land use, including amendments to zoning or General Plan designation that would result in impacts. Additionally, similar to the Project, the No Project Alternative would not conflict with any local or regional planning programs. Therefore, land use impacts associated with the No Project Alternative would be similar to those of the proposed Project.

Noise

As described in Section 3.8, Noise, the Project would result in less than significant noise impacts with MM NOI-1, which requires a temporary noise barrier prior to construction activities. The No Project Alternative would not involve any demolition or construction activities, and it would not introduce new stationary or mobile noise sources in the vicinity of existing noise-sensitive land uses. The existing operational noise conditions on the Project site would continue and there would be no new noise sources at the site that could potentially impact off-site uses. Overall, noise impacts associated with the No Project Alternative would be reduced compared to the Project.

Public Services and Recreation

As described in Section 3.9, Public Services and Recreation, the Project would result in less than significant parks and recreation impacts with implementation of mitigation measures. Under the No Project Alternative, there would be no grading or construction activities, and no change in the existing conditions at the Project site. Although the No Project Alternative would not involve any physical site impacts, it would not result in any improved passive recreational enhancements, such as improved trails and pathways.

Additionally, the Project's provision of additional recreational amenities would serve to improve the existing user experience in the Lower Arroyo Seco by enhancing public access and regional connectivity on the Project site, and potentially reduce demand on the nearby

open space and recreation facilities relative to the existing condition. The No Project Alternative would avoid any physical changes or impacts compared to the proposed Project, and it would not result in any impacts, albeit temporary, related to trails and equestrian access (e.g., temporary trail closure during construction). Therefore, while the No Project Alternative would not result in impacts, no additional trails or seating benefits would result under this alternative in comparison with the proposed Project.

Tribal Cultural Resources

As described in Section 3.10, Tribal Cultural Resources, implementation of the Project would not result in significant impacts to tribal cultural resources, with incorporation of MMs TCR-1 through TCR-3, which include retaining a Native American monitor prior to ground disturbance activities, and establishing protocol for discovery of unanticipated tribal cultural resources. Under the No Project Alternative, there would be no new grading or construction, and therefore no ground disturbance activities. The No Project Alternative would therefore have no impacts on tribal cultural resources and would avoid the Project's potential impacts related to tribal cultural resources.

Wildfire

As described in Section 3.11, Wildfire, implementation of the Project would not result in significant impacts related to wildfire even though the area is designated as Very High Fire Hazard Severity Zone (VHFHSZ). This is due to the fact that the Project proposes removing a large number of Mexican Fan Palms, which increase the risk of fire in VHFHSZs and replacing them with native trees, plants, and shrubs. Under the No Project Alternative, there would be no change in the existing conditions that would reduce the risk of fire, and the existing trees and vegetation that trigger wildfire would remain. Consequently, the risk of wildfire and associated impacts under the No Project Alternative would be greater compared to the Project.

Ability to Meet Project Objectives

The No Project Alternative assumes that the Project would not occur and thus no improvements to the Lower Arroyo Seco would result. In the absence of such improvements none of the Project objectives would be achieved. Table 4-1, Implementation of Project Objectives – Alternative 1, No Project, provides the Project Objectives and an evaluation of the No Project Alternative's consistency with each objective.

TABLE 4-1
IMPLEMENTATION OF PROJECT OBJECTIVES – ALTERNATIVE 1, NO PROJECT

Project Objective	Consistency Analysis
1. Improve water quality in the Arroyo Seco Channel and support the goals described in the Enhanced Watershed Management Program and the Load Reduction Strategy plan.	The No Project Alternative would not fulfill any of the outlined Project Objectives, as it would leave existing conditions unchanged and forego any improvements or enhancements proposed for the Lower Arroyo Seco. Without addition of the man-made wetland BMPs and infiltration basins to improve water quality, this alternative would fail to improve water quality, recharge groundwater, treat stormwater, expand native habitats, or enhance public access and educational opportunities in the area. Additionally, flood retention capabilities and sustainable resource practices would not be advanced, and the current trail and open space features would not be rehabilitated. Overall, the No Project Alternative is inconsistent with all the goals presented to improve and enhance areas within the Lower Arroyo Seco, and it does not achieve Project Objectives. It should also be emphasized that the City is operating under a regulatory mandate from the Los Angeles Regional Water Quality Control Board (RWQCB) to achieve compliance with the Bacteria TMDL. Failure to implement measures that move the City toward compliance—such as under the No Project Alternative—would leave the City in violation of these requirements. Continued non-compliance could expose the City to enforcement actions, including monetary penalties imposed by the Board, and would undermine the City's ability to meet its established water-quality objectives (reflected in Objectives 1 and 2). Given these regulatory obligations and the potential financial and legal consequences, the risk from remaining out of compliance is high under the No Project Alternative.
2. Rehabilitate San Rafael Creek by providing a natural creek bed for low flow events; remove trash, metals, and nutrients; capture dry weather flows to treat bacteria as required by TMDL; eliminate sewer diversion in complying with TMDL.	
3. Enhance the existing sites by installing nature-based, natural treatment wetlands and infiltration basins to recharge groundwater.	
4. Provide for treated dry-weather flow to offset potable water demand required to irrigate the golf course at the San Pascual site.	
5. Provide for native habitat, educational opportunities, and diverse vegetation to the existing spaces encouraging habitat for wildlife. Different plant life emphasizing native vegetation can be planted in drier infiltration basin sections than the treatment wetlands.	
6. At San Rafael site, create passive recreation space that is currently inaccessible and unusable.	
7. At San Pascual site, remove invasive Mexican Fan Palms (fire hazard) and unauthorized recreational uses; reestablish inoperable wetlands and address ponding issue at south end of site.	
8. Educate the public on integrated systems and sustainable resource practices.	
9. Improve public access and use.	
10. Rehabilitate the existing trail along the Arroyo Seco.	
11. Plant additional native plants and trees for both sites to increase existing tree count and reduce heat island effect; contribute to increased tree count and shade for the area.	
12. Contribute towards flood retention capabilities of the whole storm drain system by enhancing the detention capabilities of the system; distributed volume control to mitigate flooding from the largest rain events.	

Conclusion

Overall, the No Project Alternative would avoid all potential impacts from the Project, which are less than significant with compliance to regulatory requirements and implementation of mitigation measures for each environmental topic addressed in this EIR. However, in the absence of the Project, no aesthetics, water quality, recreational or wildfire benefits would result and none of the Project Objectives listed in Table 4-1 above would be achieved.

4.6.2 ALTERNATIVE 2: SAN PASCUAL PARK TREE CONSERVATION ALTERNATIVE

Description of the Alternative

Alternative 2 assumes the San Pascual site is developed with the same man-made wetland BMPs as the Project, but in a configuration that conserves a majority of the mature trees—albeit the majority being invasive Mexican Fan Palm species—located along the eastern and western Project site boundary and maintains some of the recreational amenities on-site, such as the pedestrian path located around the perimeter of the proposed wetland area. This site would be located on the east side of the Arroyo Seco Channel, in San Pascual Park in the area of the existing baseball field and surrounding areas, as shown on Exhibit 4-1, San Pascual Park Tree Conservation Alternative.

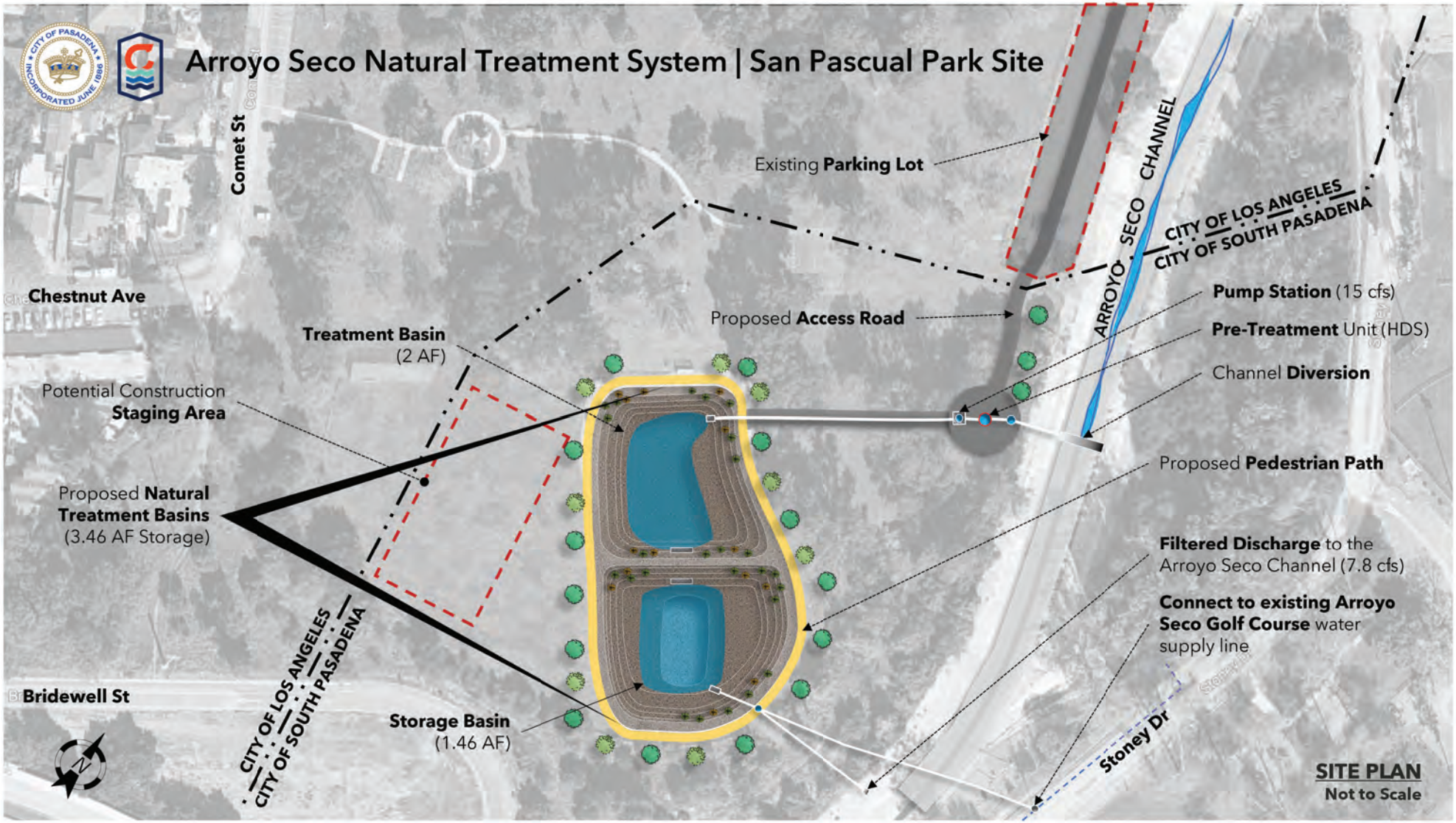
Alternative 2 would construct a new diversion structure in the Channel with a maximum diversion rate of 15 cfs, which would divert water from the Arroyo Seco Channel, funnel through the pre-treatment device with a hydrodynamic separator, and pump the water via a pump station to the two sequential natural treatment wetlands with 3.46 AF of storage capacity. Water not infiltrated will be filtered, channeled via underground pipes, and discharged to the Arroyo Seco Channel (7.8 cfs). A dry-weather overflow would be installed at the south end of the second basin to provide water to the existing golf course water supply line located south of the Alternative 2 site. Alternative 2 would meet the L. A. County Safe, Clean Water Program (SCWP) objectives.

This alternative also proposes removing the existing baseball field to accommodate the features of the proposed system. The field is heavily used by community members, and given the limited number of baseball fields in the area and the high demand for recreation fields, it represents an important recreational asset for the community.

Comparative Analysis of Environmental Impacts

Aesthetics

As discussed in Section 3.1, Aesthetics, the Project would result in either less than significant or no aesthetic impacts. Alternative 2 would not result in impacts to scenic resources along designated scenic highways, even though a segment of SR-110 passes south of the San Pascual site at a distance of approximately 500 feet. The San Pascual site is not visible to drivers on SR-110 due to the dense evergreen vegetation present on either side of the



Source: Craftwater Engineering, Inc 2025

Alternative 1: Alternative Site Tree Conservation Option

Exhibit 4-1

Arroyo Seco Water Reuse Project

PSOMAS

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highway. Alternative 2 would visually present similar to the proposed Project with two man-made treatment wetlands, a pretreatment device with a hydrodynamic separator, pump station, infrastructure elements including pipelines, valves, meters, and manholes, and landscape and hardscape elements. Alternative 2 components would be the same as the Project's but configured slightly differently to avoid impacting as many mature trees as possible.

The San Pascual site is a former treatment wetland location, and the Alternative 2 footprint and infrastructure would be similar to the past use of the Project site. Views of and through the San Pascual site would be naturalized with no tall or otherwise view-obstructing features, similar to the Project. Views of the slopes immediately to the northwest along the Arroyo Seco Channel and of the San Gabriel Mountains further in the distance would not be impacted with implementation of Alternative 2. Alternative 2 would be largely consistent with the existing setting and would provide natural wetland and stream features, which would not impact the visual character or public views of the Lower Arroyo Seco. Although overall, aesthetics impacts associated with Alternative 2 would be comparable to the Project, it should be noted that fewer trees would be planted post-construction, which would affect the visual character of the site around the new basins. Additionally, unlike the proposed Project, Alternative 2 site lacks trail connectivity, which presents an issue with visitors seeking recreational activities. In summary, the Alternative 2 site would be less attractive visually, as it is less conducive to creating a more naturalized setting since it would be placed in the middle of an existing park. Therefore, potential aesthetics and visual impacts would be greater than those of the proposed Project's.

Air Quality

As discussed in Section 3.2, Air Quality, air quality impacts associated with the Project would be less than significant. Alternative 2 would result in a broader scope of construction and operational activities compared to the proposed Project. While some of the components—such as pretreatment device, pump station, and two treatment wetlands—remain essentially the same, this alternative would introduce modification to the site configuration and require construction directly within the Channel, which presents a more intensive and complex construction scenario than that of the proposed Project.

In addition, Alternative 2 would require construction of a new diversion structure within the Channel, which would result in a greater construction-related impact than the improvements proposed under the Project. This alternative also necessitates new piping across the Channel to convey flows to the golf course water supply inlet. These additional in-Channel construction activities and infrastructure requirements would increase the overall construction intensity and associated environmental impacts compared to the proposed Project.

Construction activities under both scenarios (Project and Alternative 2) would generate stationary criteria air pollutant emissions (e.g., dust, particulate matter, and equipment exhaust); however, given the broader scope of construction under Alternative 2 and installation of the diversion structure in the Channel, this alternative would result in a higher level of emissions compared to the proposed Project. Once operational, Alternative 2, similar

to the Project, would involve routine maintenance and operation of pumps and other equipment. The emissions from these sources (such as mobile maintenance vehicles and energy use for pumps) would be similar, as the infrastructure and operational requirements do not substantially differ between Alternative 2 and the Project. While Alternative 2 would conserve more mature trees than the Project, which can provide minor localized air quality benefits including particulate capture, shade reducing heat-related emissions, these benefits would not measurably change the overarching air quality emissions, which would still remain below thresholds. Alternative 2, like the Project, would be consistent with the 2022 SCAQMD Air Quality Management Plan (AQMP), ensuring that emissions remain below thresholds and impacts are less than significant. However, based on the discussion above, the air quality impacts associated with Alternative 2 would be greater compared to the Project.

Biological Resources

As discussed in Section 3.3, Biological Resources, Project impacts related to biological resources would be reduced to less-than-significant levels with implementation of MM BIO-1 through MM BIO-4, including biological monitoring during construction, tree preservation measures, nesting bird/raptor and bat pre-construction surveys and protection protocols. Alternative 2 would involve similar construction activities and site modifications, albeit at a much broader scale, as a new diversion structure would be constructed in the Channel and new piping installed across the Channel to convey flows to the golf course water supply inlet. These additional in-Channel construction activities and infrastructure requirements would increase the overall construction intensity and associated environmental impacts compared to the proposed Project.

As a result, the types and extent of impacts to biological resources including sensitive vegetation communities, special-status species, among others would be essentially the same. Alternative 2 would also require implementation of MMs BIO-1 through MM BIO-4 to reduce impacts to less-than-significant levels.

Additionally, Alternative 2 is designed to conserve a greater number of mature trees along the site boundaries than the Project. However, although Alternative 2 would impact fewer trees, both the Project and Alternative 2 would be required to comply with tree preservation measures, resulting in similar impact conclusions of less than significant with mitigation.

Furthermore, Alternative 2 would create a new diversion to take water directly from the Arroyo Seco Channel, which would introduce further jurisdictional water considerations beyond those associated with the Project. The Project would divert only dry weather flows from the Arroyo Seco Channel at an existing diversion structure that already directs flows into the San Pascual site and is an authorized diversion (see letter from State Water Resources Control Board located on the City of Pasadena's Project webpage). This new diversion structure under Alternative 2 requires permanent encroachment into jurisdictional waters beyond what was analyzed under the Project. While the existing diversion as part of the proposed Project would not require any additional jurisdictional permits beyond what is already required, the new diversion structure and piping across the Channel would require new regulatory permit from the applicable resource agencies.

Furthermore, it should be noted that if the upstream diversion were closed to allow flows to reach the new diversion, water would no longer be delivered to the existing wetland. This would eliminate the wetland's primary water source. Although the broader watershed hydrology would remain unchanged, the loss of direct inflow to the existing wetland would substantially alter site-specific hydrologic conditions. Over time, the absence of sustained water input would be expected to degrade wetland functions and values. Vegetation communities dependent on regular hydrologic support—including trees, shrubs, and herbaceous species—would likely experience stress, decline, and potential die-off, resulting in significant adverse effects on wetland habitat. Therefore, in light of the above discussion, Alternative 2 would result in greater impacts related to biological resources, compared to the proposed Project.

Cultural and Paleontological Resources

As discussed in Section 3.4, Cultural and Paleontological Resources, implementation of the Project would not result in significant impacts to historic, archaeological, or paleontological resources, or human remains with incorporation of MM CUL-1, which includes archaeological monitoring on-site during earthmoving activities. Alternative 2 would result in a much broader scope of construction activities compared to the proposed Project. The primary components, such as the diversion structure, pretreatment device, pump station, and two treatment wetlands, remain fundamentally the same, with modifications to the Project's site configuration. Although Alternative 2 would result in a much broader scope of construction, these activities would not have the potential to disturb native subsurface soils within the Channel. Because the overall footprint is similar and the scope of construction is broader, the likelihood and nature of encountering cultural and paleontological resources during grading and construction activities would be similar for the Project and Alternative 2, as the additional construction would occur in the non-native soil within the Channel. Therefore, with the implementation of MM CUL-1 and adherence to regulatory requirements, the cultural and paleontological resources impacts associated with Alternative 2 would be less than significant and similar to the Project.

Greenhouse Gas Emissions

As discussed in Section 3.5 Greenhouse Gas Emissions, greenhouse gas (GHG) emissions impacts associated with the Project would be less than significant. Alternative 2 would result in a much broader scope of construction compared to the proposed Project, as a new diversion structure would be constructed in the Channel and new piping installed across the Channel to convey flows to the golf course water supply inlet. These additional in-Channel construction activities and infrastructure requirements would increase the overall construction intensity and associated environmental impacts compared to the proposed Project. Both the proposed Project and Alternative 2 require construction processes, that generate GHG emissions from construction equipment, vehicle trips, and energy use at similar levels, but given the intensity of construction activities for Alternative 2, the impacts would be greater for this alternative compared to the proposed Project. Once operational, Alternative 2, similar to the Project, would involve routine maintenance and operation of pumps and other equipment, resulting in comparable GHG emissions from sources such as

mobile maintenance vehicles and energy consumption. While Alternative 2 would conserve more mature trees than the Project, albeit invasive species, which can provide minor localized GHG benefits through carbon sequestration, these benefits would not measurably alter the overall GHG emissions profile, and emissions would still remain below thresholds. Alternative 2 similar to the Project would be consistent with applicable climate action plans and regulatory requirements, ensuring that GHG emissions impacts are less than significant, even though they would be greater than those of the Project.

Hydrology and Water Quality

As discussed in Section 3.6, Hydrology and Water Quality, the Project would result in less than significant impacts related to hydrology and water quality. Alternative 2 assumes the San Pascual site is developed with the same man-made wetland BMPs as the Project, but in a configuration that conserves a large majority of the mature trees located along the eastern and western Project site boundary. Alternative 2 would divert water from the Arroyo Seco Channel, which would alter hydrologic conditions on-site compared to the proposed Project.

As described above, Alternative 2 would require construction of a new diversion structure within the Channel and installation of new piping across the Channel to convey flows to the golf course water supply inlet. Under this configuration, flows would only reach the new diversion point if the existing upstream diversion were shut down. Otherwise, dry-weather flows would be fully intercepted upstream and would not continue downstream to the new diversion.

If the upstream diversion were closed to allow flows to reach the new diversion, water would no longer be delivered to the existing wetland. This would eliminate the wetland's primary water source. Although the broader watershed hydrology may remain unchanged, the loss of direct inflow to the existing wetland would substantially alter site-specific hydrologic conditions. Over time, the absence of sustained water input would be expected to degrade wetland functions and values. Vegetation communities dependent on regular hydrologic support—including trees, shrubs, and herbaceous species—would likely experience stress, decline, and potential die-off, resulting in significant adverse effects on wetland habitat.

However, both the proposed Project and Alternative 2 are designed to meet State-mandated water quality objectives, including the TMDL requirements for bacteria and metals. The implementation of man-made wetland BMPs would continue to provide water treatment, helping to remove pollutants and improve water quality within the Lower Arroyo Seco. While Alternative 2's configuration may slightly modify the hydrologic footprint, the overall ability to capture and treat runoff, and to comply with regulatory standards, would remain comparable to the Project. As such, impacts related to hydrology and water quality for Alternative 2 would be similar to the Project and less than significant.

Land Use and Planning

As discussed in Section 3.7, Land Use and Planning, the Project would result in less than significant impacts related to land use. The existing San Pascual site has a General Plan land use designation and zoning designation of OS/Open Space, which allows for the proposed

wetland treatment systems and ancillary infrastructure associated with both the Project and Alternative 2. Both the Project and Alternative 2 would be consistent with the existing zoning and General Plan land use designations of the site. Additionally, the Project and Alternative 2 would not conflict with any applicable land use plans, policies, or regulations. As such, impacts related to land use and planning for Alternative 2 would be similar to the Project and less than significant.

Noise

As described in Section 3.8, Noise, the Project would result in less than significant noise impacts with MM NOI-1, which requires a temporary noise barrier prior to construction activities. Alternative 2 would involve a much broader scope of construction compared to the proposed Project by constructing a new diversion structure in the Channel and installing new piping across the Channel to convey flows to the existing golf course water supply inlet. Given the intensified construction scope and activities due to the new diversion structure and new piping under Alternative 2, the noise generated from construction equipment, truck trips during construction, and related activities would be more intense and the related impacts would be greater compared to the proposed Project.

Once operational, Alternative 2, similar to the Project, would involve routine maintenance and operation of pumps and other equipment, resulting in similar noise levels from sources such as mobile maintenance vehicles and mechanical equipment. Potential noise impacts for both the Project and Alternative 2 would require implementation of MM NOI-1 to ensure construction noise levels remain below applicable thresholds. Although less than significant, noise impacts associated with Alternative 2 would be greater compared to those of the proposed Project.

Public Services and Recreation

As described in Section 3.9, Public Services and Recreation, the Project would result in less than significant parks and recreation impacts with implementation of mitigation measures. Alternative 2 would construct a pedestrian path located around the perimeter of the proposed wetland area. However, unlike the proposed Project, the Alternative 2 site lacks connectivity to the trail system, creating challenges for visitors seeking recreational opportunities. Without this connectivity, the equestrian community would not have access to the site, whereas the Project currently provides—and will continue to provide—such access to trails that will be improved as part of the Project. In addition to improved trails, the Project proposes other passive recreational enhancement including new pathways, shaded seating areas, and signage. Furthermore, it is noted that Alternative 2 also proposes removing the existing baseball field to accommodate the features of the proposed system. The field is heavily used by community members, and given the limited number of baseball fields in the area and the high demand for recreation fields, it is an important recreational asset for the community.

However, neither the Project nor Alternative 2 is anticipated to directly increase use of the Lower Arroyo Seco area as a destination. Similar to the Project, any environmental impacts resulting from construction of Alternative 2 facilities would be mitigated where appropriate.

However, while the impacts under Alternative 2 may be mitigated, they would be greater compared to the proposed Project due to lack of trail connectivity for the equestrian community, lack of improvements to the existing trails, and loss of the existing baseball field.

Tribal Cultural Resources

As discussed in Section 3.10, Tribal Cultural Resources, implementation of the Project would not result in significant impacts to tribal cultural resources, with incorporation of MMs TCR-1 through TCR-3, which include retaining a Native American monitor prior to ground disturbance activities, and establishing a protocol for discovery of unanticipated tribal cultural resources. Alternative 2 would result in much broader scope of construction activities than the proposed Project. This alternative proposes construction of a new diversion structure in the Channel and installation of new piping across the Channel to convey flows to the existing golf course water supply inlet. Although Alternative 2 would result in a much broader scope of construction, these activities would not have the potential to disturb native subsurface soils within the Channel. Because the overall footprint is similar and the scope of construction is broader, the likelihood and nature of encountering tribal cultural resources during grading and construction activities would be similar for the Project and Alternative 2, as the additional construction would occur in the non-native soil within the Channel. With the implementation of MM TCR-1 through MM TCR-3 and adherence to regulatory requirements, tribal cultural resources impacts associated with Alternative 2 would be less than significant and similar to the Project.

Wildfire

As described in Section 3.11, Wildfire, implementation of the Project would not result in significant impacts related to wildfire, with compliance to regulatory requirements (RR WF-1), even though the area is designated as Very High Fire Hazard Severity Zone (VHFHSZ). The Alternative 2 site is on the west side of the Channel while the proposed Project site is on the east site. Past incidents of fires have only occurred at the Project site on the east side of the Channel. This may have been due to the presence of a large number of invasive Mexican Fan Palms, which increase the risk of fire hazard. While the proposed Project would reduce the existing fire hazard on the sites by removing areas of unmanaged and primarily non-native vegetation—invasive Mexican Fan Palms—and implementing intentionally landscaped and maintained, locally appropriate, native vegetation, Alternative 2 would keep the potential wildfire risk, as more mature trees such as the Mexican Fan Palms would be retained. Given the location within a VHFHSZ, these species would likely increase the potential risk of wildfire, resulting in greater impacts compared to the proposed Project.

Additionally, both the Project and Alternative 2 would be required to comply with applicable fire safety regulations and implement best management practices to minimize wildfire risk during construction and operation. In addition, a Fire Protection Plan would be required for both to include emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on site; procedures for "hot work" operations; management of hazardous materials and removal of combustible debris; maintenance of emergency access roads; identification of exit routes and assembly areas; and identification of fire apparatus. Although Alternative 2 may result in more wildfire fuels at the site with the

retained trees, overall, impacts would be less than significant with regulatory compliance. As such, while Alternative 2 would have less wildfire fuel reduction benefit than the Project, impacts associated with risk of wildfire under Alternative 2 would be greater comparable to those of the proposed .

Ability to Meet Project Objectives

The Alternative 2 site would be developed with the same man-made wetland BMPs as the Project, but in a configuration that conserves a large majority of the mature trees located along the eastern and western Project site boundary and maintains some of the recreational amenities on-site, such as the pedestrian path located around the perimeter of the wetland area. However, it is noted that Alternative 2 proposes removing the existing baseball field to accommodate the features of the proposed system. The field is heavily used by community members, and given the limited number of baseball fields in the area and the high demand for recreational fields, it represents an important recreational asset for the community.

Table 4-2, Implementation of Project Objectives - Alternative 2, San Pascual Park Tree Conservation Alternative, provides the Project Objectives and an evaluation of Alternative 2's consistency with each objective.

As shown in Table 4-2, while Alternative 2 would meet most of the Project Objectives, it would require the construction of a new diversion in the Arroyo Seco Channel, which would introduce further jurisdictional water considerations beyond those associated with the Project. This new diversion structure under Alternative 2 requires permanent encroachment into jurisdictional waters beyond what was analyzed under the Project, resulting in additional time associated with obtaining permits from the resource agencies. Additionally, under this alternative the existing baseball field that is heavily used by the community members will be removed. Given the limited availability of fields in the area and the high demand for recreational fields, this facility is considered an asset to the community.

TABLE 4-2
COMPARISON OF PROJECT OBJECTIVES – ALTERNATIVE 2,
SAN PASCUAL PARK TREE CONSERVATION ALTERNATIVE

Project Objective	Consistency Analysis
1. Improve water quality in the Arroyo Seco Channel and support the goals described in the Enhanced Watershed Management Program and the Load Reduction Strategy plan.	Alternative 2 includes man-made wetland BMPs and infiltration basins to improve water quality in the Arroyo Seco Channel and support all applicable goals for the Enhanced Watershed Management Program and the Load Reduction Strategy plan. Alternative 2 meets and achieves this Project Objective.
2. Rehabilitate San Rafael Creek by providing a natural creek bed for low flow events; remove trash, metals, and nutrients; capture dry weather flows to treat bacteria as required by TMDL; eliminate sewer diversion in complying with TMDL.	San Rafael Creek is located north of Alternative 2 site and not part of this Alternative, as such Alternative 2 does not meet and achieve this Project Objective.
3. Enhance the existing sites by installing nature-based, natural treatment wetlands and infiltration basins to recharge groundwater.	Alternative 2 includes man-made wetland BMPs and infiltration basins as part of the design to recharge groundwater. Alternative 2 meets and achieves this Project Objective.
4. Provide for treated dry-weather flow to offset potable water demand required to irrigate the golf course at the San Pascual site.	Alternative 2 includes man-made wetland BMPs designed to treat dry-weather flow and offset potable water demand. Alternative 2 meets and achieves this Project Objective.
5. Provide for native habitat, educational opportunities, and diverse vegetation to the existing spaces encouraging habitat for wildlife. Different plant life emphasizing native vegetation can be planted in drier infiltration basin sections than the treatment wetlands.	Alternative 2 was designed to conserve mature trees on-site and maintain open space areas, providing opportunities for native habitat, and diverse vegetation. Alternative 2 meets and achieves this Project Objective.
6. At San Rafael site, create passive recreation space that is currently inaccessible and unusable.	Alternative 2 is not located on the San Rafael site, and as such does not meet and achieve this Project Objective.
7. At San Pascual site, remove invasive Mexican Fan Palms (fire hazard) and unauthorized recreational uses; reestablish inoperable wetlands and address ponding issue at south end of site.	Alternative 2 was designed to conserve a large majority of the mature trees located along the eastern and western Project site boundaries and would not remove the Mexican Fan Palms on-site. If Alternative 2 were to be implemented, none of the enhancements to the Project site would occur. The undesignated trails would not be improved, the Mexican Fan Palms would not be removed, the BMX bike track would not be removed, and ponding would eventually dry up, as diversion would have to be closed and no water would enter the site. Alternative 2 does not meet this Objective.
8. Educate the public on integrated systems and sustainable resource practices.	Alternative 2, like the proposed Project would provide educational features such as signage, and would therefore provide educational materials related to integrated systems and sustainable resource practices. Alternative 2 meets and achieves this Project Objective.

TABLE 4-2
COMPARISON OF PROJECT OBJECTIVES – ALTERNATIVE 2,
SAN PASCUAL PARK TREE CONSERVATION ALTERNATIVE

Project Objective	Consistency Analysis
9. Improve public access and use.	Alternative 2 site lacks connectivity to the trail system, creating challenges for visitors seeking recreational opportunities. Without this connectivity, the equestrian community would not have access to the site. Additionally, this alternative would result in removing the existing baseball field that is heavily used by the community members. Given the limited availability of fields in the area and the high demand for recreational fields, this facility is considered an asset to the community and its loss will be of significant concern. Alternative 2 does not meet and achieve this Project Objective.
10. Rehabilitate the existing trail along the Arroyo Seco.	Alternative 2 would not rehabilitate the existing trail along the Arroyo Seco. Alternative 2 does not meet and achieve this Project Objective.
11. Plant additional native plants and trees for both sites to increase existing tree count and reduce heat island effect; contribute to increased tree count and shade for the area.	Alternative 2 would plant additional native vegetation and trees as part of its landscaping efforts to assist the heat island effect and provide shade for the area. Alternative 2 meets and achieves this Project Objective.
12. Contribute towards flood retention capabilities of the whole storm drain system by enhancing the detention capabilities of the system; distributed volume control to mitigate flooding from the largest rain events.	Alternative 2 would develop regional stormwater capture and treatment facilities that have capacity (3.46 AF of storage capacity) to provide flood retention and would divert the water south once treated to distribute volume control at the site. Alternative 2 meets and achieves this Project Objective.

Conclusion

Alternative 2 would introduce new diversion and piping components in the Arroyo Seco Channel, which would require additional infrastructure and permitting support compared to the proposed Project; however, this alternative would result in the loss of the existing baseball field that is heavily used by the community and is considered a recreational asset.

Alternative 2 would result in comparatively similar impacts related to Hydrology and Water Quality providing the same regional stormwater capture and treatment facilities to meet SCWP objectives and the State mandate. This alternative would also have similar Land Use and Planning impacts with consistency to the existing Zoning and General Plan land use designations of the site and not conflicting with any applicable land use plans, policies, or regulations. Potential impacts pertaining to Cultural, Paleontological, and Tribal Cultural Resources would be similar to those of the proposed Project as additional construction activities would occur in non-native soil within the Channel.

However, Alternative 2 would result in increased impacts than those of the proposed Project associated with Aesthetics (fewer trees planted and the site less conducive to creating a

naturalized setting); Air Quality (greater construction impacts with new diversion structure in the Channel and installation of new piping across the Channel); Biological Resources (new diversion structure in the Channel requiring new regulatory permit and loss of direct inflow to existing wetland altering hydrologic conditions); Greenhouse Gas Emissions (intensified construction activities generating increased levels of emissions); Noise (intensified construction activities due to construction of diversion structure and installation of new piping across the Channel resulting in greater noise impacts); Public Services and Recreation (lack of trail connectivity for the equestrian community, lack of improvements to the existing trails, and loss of the existing baseball field resulting in greater impacts); and Wildfire (retaining invasive species of Mexican Fan Palms resulting in increased risk of wildfire within a HFHSZ).

Based on the preceding analysis, Alternative 2 would not substantially reduce the majority of the significant but mitigable effects of the Project, and it would meet and achieve 7 of the 12 Project Objectives listed in Table 4-2, above.

4.6.3 ALTERNATIVE 3: SAN PASCUAL PARK BASEBALL FIELD CONSERVATION ALTERNATIVE

Description of the Alternative

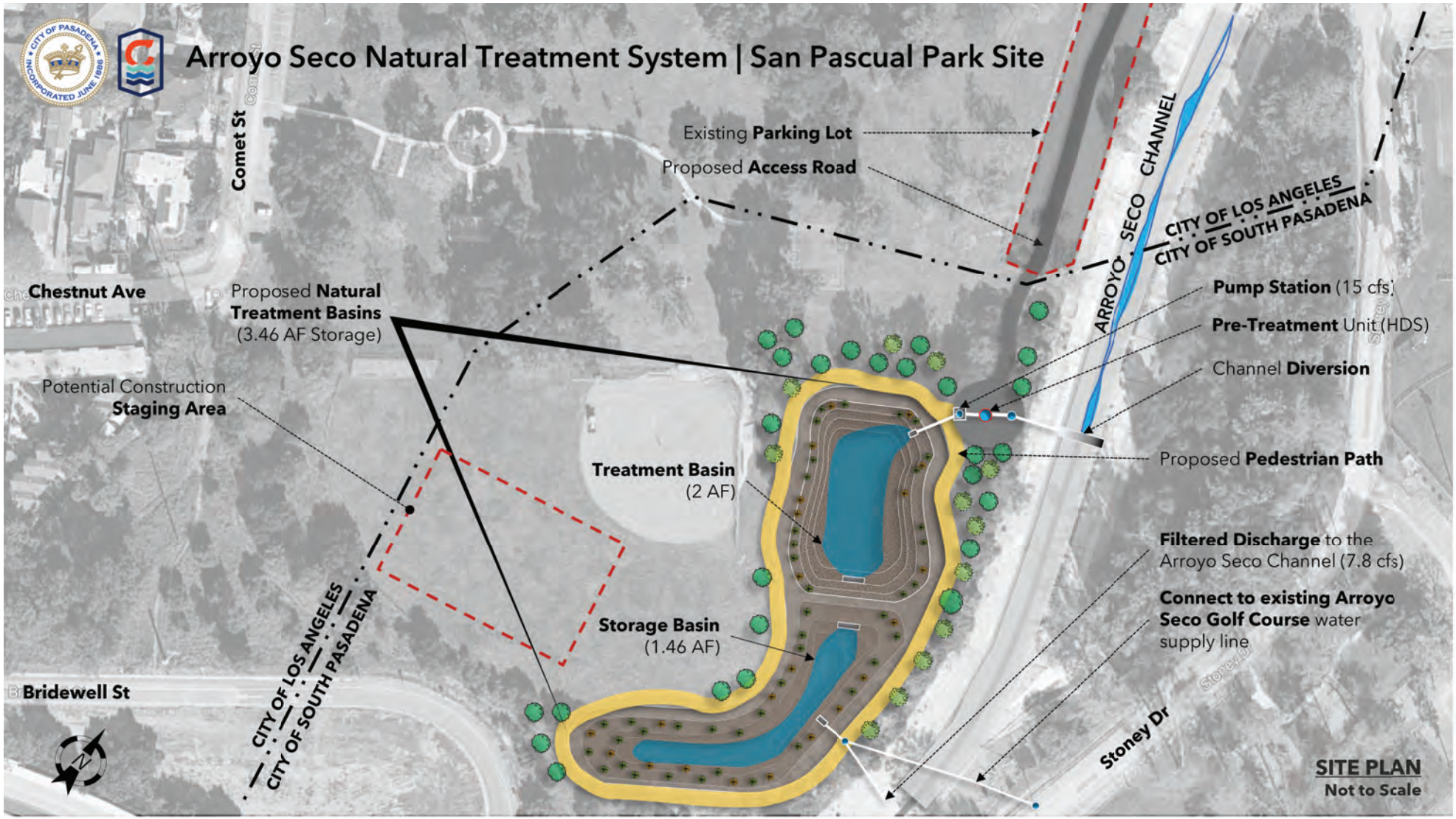
Alternative 3 assumes the San Pascual site is developed with the same man-made wetland BMPs as the Project, but in a configuration that conserves the existing baseball field located in San Pascual Park on the east side of the Arroyo Seco Channel. Alternative 3 maintains some of the recreational amenities on-site, such as the pedestrian path located around the perimeter of the proposed wetland area, as shown on Exhibit 4-2, San Pascual Park Baseball Field Conservation Alternative.

Alternative 3 would have a new diversion structure with a maximum diversion rate of 15 cfs, which would divert water from the Arroyo Seco Channel, funnel through the pre-treatment device with a hydrodynamic separator, and pump the water via a pump station to the two sequential natural treatment wetlands with 3.46 AF of storage capacity. Water not infiltrated will be filtered, channeled via underground pipes, and discharged to the Arroyo Seco Channel (7.8 cfs). A dry-weather overflow would be installed at the south end of the second basin to provide water to the existing golf course water supply line located south of the Alternative 3 site. Alternative 3 would meet the SCWP objectives.

Comparative Analysis of Environmental Impacts

Aesthetics

As discussed in Section 3.1, Aesthetics, the Project would result in either less than significant or no aesthetic impacts. Alternative 3 would not result in impacts to scenic resources along designated scenic highways, even though a segment of SR-110 passes south of the San Pascual site at a distance of approximately 500 feet. The San Pascual site is not visible to drivers on SR-110 due to the dense evergreen vegetation present on either side of the



Source: Craftwater Engineering, Inc 2025

Alternative 2: Alternative Site Baseball Field Conservation Option

Exhibit 4-2

Arroyo Seco Water Reuse Project

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highway. Alternative 3 would visually present similar to the proposed Project with two man-made treatment wetlands, a pretreatment device with a hydrodynamic separator, pump station, infrastructure elements including pipelines, valves, meters, and manholes, and landscape and hardscape elements. Alternative 3 components would be the same as the Project's but configured slightly differently to avoid impacting the existing baseball field on-site.

The San Pascual site is a former treatment wetland location, and the Alternative 3 footprint and infrastructure would be similar to the past use of the Project site. Views of the San Pascual site would be naturalized with no tall or otherwise view-obstructing features, similar to the Project. Views of the slopes immediately to the northwest along the Arroyo Seco Channel and of the San Gabriel Mountains further in the distance would not be impacted with implementation of Alternative 3. Alternative 3 would be largely consistent with the existing setting and would provide natural wetland and stream features, which would not impact the visual character or public views of the Lower Arroyo Seco. Removal of trees would also result in aesthetic impact comparable to the Project. Overall, aesthetics impacts associated with Alternative 3 would be less than significant and similar to the Project.

Air Quality

As discussed in Section 3.2, Air Quality, air quality impacts associated with the Project would be less than significant. Alternative 3 would result in a broader scope of construction and operational activities than the proposed Project. Some of the components, such as pretreatment device, pump station, and two treatment wetlands, remain essentially the same; however, Alternative 3 would introduce modification to the site configuration and require construction directly within the Channel, which presents a more intensive and complex construction scenario than that of the proposed Project.

In addition, Alternative 3 would require construction of a new diversion structure within the Channel, which would result in a greater construction-related impact than the diversion improvements proposed under the proposed Project. This alternative also necessitates new piping across the Channel to convey flows to the existing golf course water supply inlet. These additional in-Channel construction activities and infrastructure requirements would increase the overall construction intensity and associated environmental impacts compared to the Project.

Construction activities under both scenarios (Project and Alternative 3) would generate criteria air pollutant emissions (e.g., dust, particulate matter, and equipment exhaust); however, given the broader scope of construction under Alternative 3 and installation of the new diversion structure in the Channel, this alternative would result in a higher level of emissions compared to the proposed Project. Once operational, Alternative 3, similar to the Project, would involve routine maintenance and operation of pumps and other equipment. The emissions from these sources (such as mobile maintenance vehicles and energy use for pumps) would be similar, as the infrastructure and operational requirements do not substantially differ between Alternative 3 and the Project. Alternative 3, like the Project, would be consistent with the 2022 SCAQMD AQMP, ensuring that emissions remain below thresholds and impacts are considered less than significant. However, based on the

discussion above, the air quality impacts associated with Alternative 3 would be greater compared to the Project.

Biological Resources

As discussed in Section 3.3, Biological Resources, Project impacts related to biological resources would be reduced to less-than-significant levels with implementation of MM BIO-1 through MM BIO-4, including biological monitoring during construction, tree preservation measures, nesting bird/raptor and bat pre-construction surveys and protection protocols. Alternative 3 would involve similar construction activities and site modifications, albeit at a much broader scale, as a new diversion structure would be constructed in the Channel and new piping installed across the Channel to convey flows to the existing golf course water supply inlet. These additional in-Channel construction activities and infrastructure requirements would increase the overall construction intensity and associated environmental impacts compared to the proposed Project. As a result, the types and extent of impacts to biological resources including sensitive vegetation communities, special-status species, among others would be essentially the same. Alternative 3 would also require implementation of MMs BIO-1 through MM BIO-4 to reduce impacts to less-than-significant levels.

Alternative 3 would result in removal of 48 trees and encroachment on 10 additional trees out of the 181 trees surveyed. However, because of site constraints, this alternative would not allow for replacement of the large number of trees that the proposed Project would replace. As a result, Alternative 3 would not provide the same increase in tree canopy coverage as the Project. Nevertheless, both the proposed Project and Alternative 3 would be required to comply with applicable tree preservation measures, and therefore both would result in similar impact conclusions of less than significant with mitigation.

Alternative 3 would create a new diversion to take water directly from the Arroyo Seco Channel, which would introduce further jurisdictional water considerations beyond those associated with the Project. The Project would divert only dry weather flows from the Arroyo Seco Channel at an existing diversion structure that already directs flows into the San Pascual site and is an authorized diversion (see letter from State Water Resources Control Board located on the City of Pasadena's Project webpage). This new diversion structure under Alternative 3 requires permanent encroachment into jurisdictional waters beyond what was analyzed under the Project. While the existing diversion as part of the proposed Project would not require any additional jurisdictional permits beyond what is already required, the new diversion and piping under Alternative 3 would require new regulatory permit from the applicable resource agencies.

Furthermore, it should be noted that if the upstream diversion were closed to allow flows to reach the new diversion, water would no longer be delivered to the existing wetland. This would eliminate the wetland's primary water source. Although the broader watershed hydrology would remain unchanged, the loss of direct inflow to the existing wetland would substantially alter site-specific hydrologic conditions. Over time, the absence of sustained water input would be expected to degrade wetland functions and values. Vegetation communities dependent on regular hydrologic support—including trees, shrubs, and

herbaceous species—would likely experience stress, decline, and potential die-off, resulting in significant adverse effects on wetland habitat.

Therefore, in light of the above discussion, Alternative 3 would result in greater impacts to biological resources, compared to the proposed Project.

Cultural and Paleontological Resources

As discussed in Section 3.4, Cultural and Paleontological Resources, implementation of the Project would not result in significant impacts to historic, archaeological, or Paleontological resources, or human remains with incorporation of MM CUL-1, which includes archaeological monitoring on-site during earthmoving activities. Alternative 3 would result in a much broader scope of construction activities compared to the proposed Project. The primary components, such as the diversion structure, pretreatment device, pump station, and two treatment wetlands, remain fundamentally the same, with modifications to the Project's site configuration. Although Alternative 3 would result in a much broader scope of construction, these activities would not have the potential to disturb native subsurface soils within the Channel. Because the overall footprint is similar and the scope of construction is broader, the likelihood and nature of encountering cultural and paleontological resources during earthmoving activities would be similar for the Project and Alternative 3, as the additional construction would occur in the non-native soil within the Channel. Therefore, with the implementation of MM CUL-1 and adherence to regulatory requirements, the cultural and paleontological resources impacts associated with Alternative 3 would be less than significant and similar to the Project.

Greenhouse Gas Emissions

As discussed in Section 3.5 Greenhouse Gas Emissions, GHG emissions associated with the Project would be less than significant. Alternative 3 would result in a much broader scope of construction compared to the proposed Project, as a new diversion structure would be constructed in the Channel and new piping installed across the Channel to convey flows to the existing golf course water supply inlet. These additional in-Channel construction activities and infrastructure requirements would increase the overall construction intensity and associated environmental impacts compared to the proposed Project. Both the proposed Project and Alternative 3 require construction processes that generate GHG emissions from construction equipment, vehicle trips, and energy use at similar levels, but given the intensity of construction activities for Alternative 3, the impacts would be greater for this alternative compared to the proposed Project. Once operational, Alternative 3, like the Project, would involve routine maintenance and operation of pumps and other equipment, resulting in comparable GHG emissions from sources such as mobile maintenance vehicles and energy consumption. While Alternative 3 would result in removal of trees, albeit invasive species, which can provide minor localized GHG benefits through carbon sequestration, these benefits would not measurably alter the overall GHG emissions profile, and emissions would still remain below thresholds. Alternative 3 similar to the Project would be consistent with applicable climate action plans and regulatory requirements, ensuring that GHG emissions impacts are less than significant even though they would be greater than those of the Project.

Hydrology and Water Quality

As discussed in Section 3.6, Hydrology and Water Quality, the Project would result in less than significant impacts related to hydrology and water quality. Alternative 3 assumes the San Pascual site is developed with the same man-made wetland BMPs as the Project, but in a configuration that conserves the baseball field in San Pascual Park. Alternative 3 would divert water from the Arroyo Seco Channel, which would alter hydrologic conditions on-site compared to the proposed Project.

Alternative 3 would involve construction of a new diversion and installation of new piping across the Channel to convey flows to the existing golf course water supply inlet. Under this configuration, flows would only reach the new diversion point if the existing upstream diversion were shut down. Otherwise, dry-weather flows would be fully intercepted upstream and would not continue downstream to the new diversion.

If the upstream diversion were closed to allow flows to reach the new diversion, water would no longer be delivered to the existing wetland. This would eliminate the wetland's primary water source. Although the broader watershed hydrology may remain unchanged, the loss of direct inflow to the existing wetland would substantially alter site-specific hydrologic conditions. Over time, the absence of sustained water input would be expected to degrade wetland functions and values. Vegetation communities dependent on regular hydrologic support—including trees, shrubs, and herbaceous species—would likely experience stress, decline, and potential die-off, resulting in significant adverse effects on wetland habitat.

However, both the proposed Project and Alternative 3 are designed to meet State-mandated water quality objectives, including the TMDL requirements for bacteria and metals. The implementation of man-made wetland BMPs would continue to provide water treatment, helping to remove pollutants and improve water quality within the Lower Arroyo Seco. While Alternative 3's configuration may slightly modify the hydrologic footprint, the overall ability to capture and treat runoff, and to comply with regulatory standards, would remain comparable to the Project. As such, impacts related to hydrology and water quality for Alternative 3 would be similar to the Project and less than significant.

Land Use and Planning

As discussed in Section 3.7, Land Use and Planning, the Project would result in less than significant impacts related to land use. The existing San Pascual site has a General Plan land use designation and zoning designation of OS/Open Space, which allows for the proposed wetland treatment systems and ancillary infrastructure associated with both the Project and Alternative 3. Both the Project and Alternative 3 would be consistent with the existing zoning and General Plan land use designations of the site. Additionally, the Project and Alternative 3 would not conflict with any applicable land use plans, policies, or regulations. As such, impacts related to land use and planning for Alternative 3 would be similar to the Project and less than significant.

Noise

As described in Section 3.8, Noise, the Project would result in less than significant noise impacts with MM NOI-1, which requires a temporary noise barrier prior to construction activities. Alternative 3 would involve a much broader scope of construction activities compared to the proposed Project by constructing a new diversion structure in the Channel and installing new piping across the Channel to convey flows to the existing golf course water supply inlet. Given the intensified construction scope and activities due to the new diversion structure and new piping under Alternative 3, the noise generated from construction equipment, truck trips during construction, and related activities would be more intense and the related impacts would be greater compared to the proposed Project.

Once operational, Alternative 3, similar to the Project, would involve routine maintenance and operation of pumps and other equipment, resulting in similar noise levels from sources such as mobile maintenance vehicles and mechanical equipment. Potential noise impacts for both the Project and Alternative 3 would require implementation of MM NOI-1 to ensure construction noise levels remain below applicable thresholds. Although less than significant, noise impacts associated with Alternative 3 would be greater compared to those of the proposed Project.

Public Services and Recreation

As described in Section 3.9, Public Services and Recreation, the Project would result in less than significant parks and recreation impacts with implementation of mitigation measures. Alternative 3 was designed to conserve the existing baseball field on-site and allow for continued use of an existing recreation facility. Alternative 3 would also construct a pedestrian path located around the perimeter of the proposed wetland area, which is similar but slightly smaller in scale to the proposed Project's improvements, which include passive recreational enhancements, such as improved trails and new pathways, shaded seating areas, and signage. However, similar to Alternative 2 but unlike the Project, this alternative's site lacks connectivity to the trail system, creating challenges for visitors seeking recreational opportunities. Without this connectivity, the equestrian community would not have access to the site, whereas the Project currently provides—and will continue to provide—such access to trails that will be improved as part of the Project. In addition to improved trails, the Project proposes other passive recreational enhancement including new pathways, shaded seating areas, and signage. However, similar to the Project, Alternative 3 would maintain the existing baseball field, which is highly used by the community members, and given the limited number of baseball fields in the area and the high demand for recreation fields, it is an important an asset to the community.

However, neither the Project nor Alternative 3 is anticipated to directly increase use of the Lower Arroyo Seco area as a destination, as the baseball field is located on-site. Similar to the Project, any environmental impacts resulting from construction of Alternative 3 facilities would be mitigated where appropriate. However, while the impacts under Alternative 3 may be mitigated, they would be greater compared to the proposed Project due to lack of trail connectivity for the equestrian community and lack of improvements to the existing trails.

Tribal Cultural Resources

As discussed in Section 3.10, Tribal Cultural Resources, implementation of the Project would not result in significant impacts to tribal cultural resources, with incorporation of MMs TCR-1 through TCR-3, which include retaining a Native American monitor prior to ground disturbance activities, and establishing a protocol for discovery of unanticipated tribal cultural resources. Alternative 3 would result in much broader scope of construction activities as the proposed Project. This alternative proposes construction of a new diversion structure in the Channel and installation of new piping across the Channel to convey flows to the existing golf course water supply inlet. Although Alternative 3 would result in a much broader scope of construction, these activities would not have the potential to disturb native subsurface soils within the Channel. Because the overall footprint is similar and the scope of construction is broader, the likelihood and nature of encountering tribal cultural resources during grading and construction activities would be similar for the Project and Alternative 3, as the additional construction would occur in the non-native soil within the Channel. With the implementation of MM TCR-1 through MM TCR-3 and adherence to regulatory requirements, tribal cultural resources impacts associated with Alternative 3 would be less than significant and similar to the Project.

Wildfire

As described in Section 3.11, Wildfire, implementation of the Project would not result in significant impacts related to wildfire, with compliance to regulatory requirements (RR WF-1) even though the area is designated as VHFHSZ. Alternative 3 and the Project are not located on the same site; the Alternative 3 site is on the west side of the Channel while the proposed Project site is on the east side. Past incidents of fires have only occurred at the Project site on the east side of the Channel. This may have been due to the presence of a large number of invasive Mexican Fan Palms, which increase the risk of fire hazard.

While the proposed Project would reduce the existing fire hazard by removing areas of unmanaged and primarily non-native vegetation—invasive Mexican Fan Palms—and implementing intentionally landscaped and maintained, locally appropriate, native vegetation, Alternative 3 would keep the potential wildfire risk, as more mature trees such as the Mexican Fan Palms would be retained. Even though this alternative would also result in removal of trees, only 1 Mexican Fan Palm as opposed to 82 under the proposed Project would be removed. Given the location within a VHFHSZ, these species would likely increase the potential risk of wildfire, resulting in greater impacts compared to the proposed Project.

Both the Project and Alternative 3 would be required to comply with applicable fire safety regulations and implement best management practices to minimize wildfire risk during construction and operation. In addition, a Fire Protection Plan would be required for both to include emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on site; procedures for "hot work" operations; management of hazardous materials and removal of combustible debris; maintenance of emergency access roads; identification of exit routes and assembly areas; and identification of fire apparatus. Although Alternative 3 may result in more wildfire fuels at the site with the retained trees, overall impacts would be less than significant with regulatory compliance. However, wildfire

impact associated with Alternative 3 would be greater than those of the proposed Project, as the removal of the existing Mexican Fan Palms under the proposed Project site would reduce the risk of wildfire.

Ability to Meet Project Objectives

The Alternative 3 site would be developed with the same man-made wetland BMPs as the Project, but in a configuration that conserves the baseball field located in San Pascual Park. The Alternative site maintains some of the recreational amenities on-site, such as the pedestrian path located around the perimeter of the proposed wetland area. Table 4-3, Implementation of Project Objectives - Alternative 3, San Pascual Park Baseball Field Conservation Alternative, provides the Project objectives and an evaluation of Alternative 3's consistency with each objective.

As shown in Table 4-3, while the Alternative 3 site would meet most of the Project objectives, it would require the need for a new diversion from the Arroyo Seco Channel, which would introduce further jurisdictional water considerations beyond those associated with the Project. This new diversion structure under Alternative 3 requires permanent encroachment into jurisdictional waters beyond what was analyzed under the Project, resulting in additional time associated with obtaining permits from the resource agencies.

TABLE 4-3
IMPLEMENTATION OF PROJECT OBJECTIVES – ALTERNATIVE 3,
SAN PASCUAL PARK BASEBALL FIELD CONSERVATION ALTERNATIVE

Project Objective	Consistency Analysis
1. Improve water quality in the Arroyo Seco Channel and support the goals described in the Enhanced Watershed Management Program and the Load Reduction Strategy plan.	Alternative 3 includes man-made wetland BMPs and infiltration basins to improve water quality in the Arroyo Seco Channel and support all applicable goals for the Enhanced Watershed Management Program and the Load Reduction Strategy plan. Alternative 3 meets and achieves this Project Objective.
2. Rehabilitate San Rafael Creek by providing a natural creek bed for low flow events; remove trash, metals, and nutrients; capture dry weather flows to treat bacteria as required by TMDL; eliminate sewer diversion in complying with TMDL.	San Rafael Creek is located north of Alternative 3 site and not part of this Alternative, as such Alternative 3 does not meet and achieve this Project Objective.
3. Enhance the existing sites by installing nature-based, natural treatment wetlands and infiltration basins to recharge groundwater.	Alternative 3 includes man-made wetland BMPs and infiltration basins as part of the Project design to recharge groundwater. Alternative 3 meets and achieves this Project Objective.
4. Provide for treated dry-weather flow to offset potable water demand required to irrigate the golf course at the San Pascual site.	Alternative 3 includes man-made wetland BMPs designed to treat dry-weather flow and offset potable water demand. Alternative 3 meets and achieves this Project Objective.

TABLE 4-3
IMPLEMENTATION OF PROJECT OBJECTIVES – ALTERNATIVE 3,
SAN PASCUAL PARK BASEBALL FIELD CONSERVATION ALTERNATIVE

Project Objective	Consistency Analysis
5. Provide for native habitat, educational opportunities, and diverse vegetation to the existing spaces encouraging habitat for wildlife. Different plant life emphasizing native vegetation can be planted in drier infiltration basin sections than the treatment wetlands.	Alternative 3 was designed to maintain open space areas, providing opportunities for native habitat, and diverse vegetation. Alternative 3 meets and achieves this Project Objective.
6. At San Rafael site, create passive recreation space that is currently inaccessible and unusable.	Alternative 3 is not located on the San Rafael site, and as such does not meet and achieve this Project Objective.
7. At San Pascual site, remove invasive Mexican Fan Palms (fire hazard) and unauthorized recreational uses; reestablish inoperable wetlands and address ponding issue at south end of site.	Alternative 3 would not remove the 82 Mexican Fan Palms, which are considered a high fire risk, from a very high fire hazard zone. Although this alternative also results in removal of trees, only 1 Mexican Fan Palm will be removed. Additionally, unauthorized recreational uses would not be removed. Ponding would eventually dry up, as diversion would have to be closed and no water would enter the site. Alternative 3 does not meet this Objective.
8. Educate the public on integrated systems and sustainable resource practices.	Alternative 3, similar to proposed Project would provide educational features such as signage, and would therefore provide educational materials related to integrated systems and sustainable resource practices. Alternative 3 meets and achieves this Project Objective.
9. Improve public access and use.	Alternative 3 site lacks connectivity to the trail system, creating challenges for visitors seeking recreational opportunities. Without this connectivity, the equestrian community would not have access to the site. Alternative 3 does not meet this Project Objective.
10. Rehabilitate the existing trail along the Arroyo Seco.	Alternative 3 would not rehabilitate the existing trail along the Arroyo Seco. Alternative 3 does not meet and achieve this Project Objective.
11. Plant additional native plants and trees for both sites to increase existing tree count and reduce heat island effect; contribute to increased tree count and shade for the area.	Alternative 3 would plant additional native vegetation and trees as part of its landscaping efforts to assist the heat island effect and provide shade for the area. Alternative 3 meets and achieves this Project Objective.
12. Contribute towards flood retention capabilities of the whole storm drain system by enhancing the detention capabilities of the system; distributed volume control to mitigate flooding from the largest rain events.	Alternative 3 would develop regional stormwater capture and treatment facilities that have capacity (3.46 AF of storage capacity) to provide flood retention and would divert the water south once treated to distribute volume control at the site. Alternative 3 meets and achieves this Project Objective.

Conclusion

Alternative 3 would result in comparatively similar impacts related to Hydrology and Water Quality by providing the same regional stormwater capture and treatment facilities to meet SCWP objectives and the State mandate. This alternative would also have similar Land Use and Planning impacts with consistency with the existing Zoning and General Plan land use designations of the site and not conflicting with any applicable land use plans, policies, or regulations. Also, potential impacts pertaining to Cultural, Paleontological, and Tribal Cultural Resources would be similar to those of the proposed Project as additional construction activities would occur in non-native soil within the Channel.

However, Alternative 3 would result in increased impacts compared to the proposed Project, related to Aesthetics (fewer trees planted); Air Quality (greater construction impacts with broader scope of construction—installing new diversion structure and new piping across the Channel); Biological Resources (new diversion structure in the Channel requiring new regulatory permit and loss of direct inflow to existing wetland altering hydrologic conditions); Greenhouse Gas Emissions (intensified construction activities related to construction of diversion structure and installation of new piping generating increased levels of emissions); Noise (intensified construction activities due to construction of diversion structure and installation of new piping across the Channel resulting in greater noise impacts); Public Services and Recreation (by not providing for trail connectivity or access by the equestrian community; and Wildfire (due to retaining the 82 Mexican Fan Palms, considered a high fire risk tree in a very high fire hazard zone [i.e., VHFHSZ]). Based on the preceding analysis, Alternative 3 would not substantially reduce the significant but mitigable effects of the Project but would meet and achieve 7 of the 12 Project Objectives listed in Table 4-3, above.

4.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of an environmentally superior alternative. Section 15126.6(e)(2) of the State CEQA Guidelines states that, if the No Project Alternative is the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other alternatives. Table 4-4, Comparison of Alternative Impacts, provides a summary comparison of impacts resulting from all alternatives to the Project. Table 4-5, Ability of Project Alternatives to Meet Objectives provides a summary of each alternative's relative ability to meet the Project Objectives.

TABLE 4-4
COMPARISON OF IMPACTS FOR PROJECT ALTERNATIVES

Draft EIR Section & Environmental Topic	Comparison of Each Alternative to Project Impacts		
	Alternative 1 (No Project)	**Alternative 2 (San Pascual Park Tree Conservation)**	**Alternative 3 (San Pascual Park Baseball Field Conservation)**
3.1 Aesthetics	>	>	=
3.2 Air Quality	<	>	>
3.3 Biological Resources	<	>	>
3.4 Cultural and Paleontological Resources	<	=	=
3.5 Greenhouse Gas Emissions	<	>	>
3.6 Hydrology and Water Quality	>	=	=
3.7 Land Use and Planning	=	=	=
3.8 Noise	<	>	>
3.9 Public Services and Recreation	<	>	>
3.10 Tribal Cultural Resources	<	=	=
3.11 Wildfire	>	>	>

Legend:
> – Impact Greater than Project
< – Impact Less than Project
= – Impact Same as Project (with mitigation if applicable)

TABLE 4-5
ABILITY OF PROJECT ALTERNATIVES TO MEET OBJECTIVES

Project Objectives	Comparison of Each Alternative to Project Objectives		
	Alternative 1 (No Project)	**Alternative 2 (San Pascual Park Tree Conservation)**	**Alternative 3 (San Pascual Park Baseball Field Conservation)**
1. Improve water quality in the Arroyo Seco Channel and support the goals described in the Enhanced Watershed Management Program and the Load Reduction Strategy plan.	○	●	●
2. Rehabilitate San Rafael Creek by providing a natural creek bed for low flow events. The proposed project will remove trash, metals, and nutrients that would otherwise flow to the Arroyo Seco Channel. Project will capture dry weather flows to treat the bacteria as required in the bacteria Total Maximum Daily Load (TMDL) issued by the Regional Water Quality Control Board to meet compliance requirements. Also, eliminate diversion to the sewer system, which results in losing water permanently to the ocean, in complying with the TMDL.	○	○	○
3. Enhance the existing sites by installing nature based, natural treatment wetlands and infiltration basins to recharge groundwater.	○	●	●
4. Provide for treated dry-weather flow to offset the potable water demand required to irrigate the golf course at the San Pascual site.	○	●	●
5. Provide for native habitat, educational opportunities, and diverse vegetation to the existing spaces encouraging habitat for wildlife. Different plant life emphasizing native vegetation can be planted in the drier infiltration basin sections than the treatment wetlands. These will protect, enhance, and restore habitat, green space, and usable space.	○	●	●
6. At San Rafael site, create passive recreation space that is currently inaccessible and unusable.	○	○	○
7. At San Pascual site, remove invasive Mexican Fan Palms, which are a fire hazard, and unauthorized recreational uses (i.e., BMX bike trail, undefined trails). Reestablish inoperable wetlands and address ponding issue at south end of site where trash accumulates, algae grows and creates an unhealthy vector issue.	○	○	○

TABLE 4-5
ABILITY OF PROJECT ALTERNATIVES TO MEET OBJECTIVES

Project Objectives	Comparison of Each Alternative to Project Objectives		
	Alternative 1 (No Project)	**Alternative 2 (San Pascual Park Tree Conservation)**	**Alternative 3 (San Pascual Park Baseball Field Conservation)**
8. Educate the public on integrated systems and sustainable resources practices.	○	●	●
9. Improve public access and use.	○	○	○
10. Rehabilitate the existing trail along the Arroyo Seco.	○	○	○
11. Plant additional native plants and trees for both sites to increase existing tree count to reduce heat island effect. Native trees that are part of the post-construction landscape plan will contribute to increased tree count and shade for the area.	○	●	●
12. Contribute towards flood retention capabilities of the whole storm drain system by enhancing the detention capabilities of the system. The volume detention contributes to flood management, and because this Project site is in the upland areas of the greater watershed, it offers distributed volume control that is needed across the watershed to mitigate flooding from the largest rain events.	○	●	●

Legend:
● – Fully Meets
○ – Does Not Meet

The No Project Alternative may avoid the majority of potential impacts from implementation of the proposed Project, even though the Project's impacts would be less than significant with mitigation, and no significant and unavoidable impact would result. However, no water quality and none of the recreational benefits would occur under Alternative 1, No Project Alternative. Consistent with Safe, Clean Water Program requirements, the proposed Project would provide the following community benefits, in addition to meeting the State mandated water quality standards: enhanced habitat and park space, improved flood protection, improved waterway access, recreational opportunities, reduced heat island effects, and increased shade and trees. Furthermore, Alternative 1, No Project Alternative, would not meet and achieve any of the Project Objectives, as the existing conditions at the site would remain as they are and no changes and improvements would occur, as discussed in Table 4-1, Implementation of Project Objectives – Alternative 1, No Project.

Per the discussion and analysis under Alternative 2, San Pascual Park Tree Conservation Alternative and Alternative 3, San Pascual Park Baseball Field Conservation Alternative, most of the impacts under Alternative 2 and 3 would be comparable to those of the proposed Project impacts. However, Alternative 2 would result in increased impacts related to Biological Resources due to the loss of direct inflow to the existing wetland that would substantially alter site-specific hydrologic conditions. Over time, the absence of sustained water input would be expected to degrade wetland functions and values. Aesthetically, Alternative 2 would be less attractive, as it is less conducive to creating a more naturalized setting since it would be placed in the middle of an existing park. Alternative 2 would have increased impacts related to Public Services and Recreation due to the loss of the baseball field, considered an important community asset, and lack of connectivity to existing trails, and finally, increased impacts for risk of wildfire due to the non-removal of the invasive 82 Mexican Fan Palms and lack of vegetation management.

Alternative 3 would result in increased impacts related to Biological Resources for the same reasons described above for the Alternative 2 site. Also, a reduced impact to Public Service and Recreation due to conserving the existing baseball field for the community but increased impacts due to the lack of improving the existing trails and providing connectivity to the equestrian community. It is noted that while Alternative 3 would result in tree removals, only 1 compared to 82 Mexican Fan Palms—removed under the proposed Project—would be removed. Retaining invasive Mexican Fan Palms would increase the risk of wildfire.

However, both Alternatives 2 and 3 would result in greater impacts pertaining to Air Quality, Greenhouse Gas Emissions, and Noise due to a substantially larger scope of construction. Under these alternatives, a new diversion structure would be constructed and new piping would be installed across the Channel, extending both the duration and intensity of construction activities, resulting in more impact compared to the proposed Project.

In terms of meeting Project Objectives, Alternative 2 would meet and achieve 7 of the 12 Project Objectives listed in Table 4-2, above. Alternative 3 would meet and achieve 7 of the 12 Project Objectives listed in Table 4-3, above.

Based on the analysis contained under environmental topics and conclusions, above, overall, Alternatives 2 and 3 would generally result in greater impacts than those of the proposed

Project, for most topical areas. The most notable increases in impacts occur in Air Quality, Greenhouse Gas Emissions, and Noise primarily due to broader construction scope required under these alternatives. Additionally, potential impacts related to Biological Resources, Public Services and Recreation, and Wildfire are also significantly higher under Alternatives 2 and 3 due to the elimination of a water source to the existing wetland, lack of trail connectivity or access by the equestrian community in addition to lack of beneficial improvements to the existing trails and other passive recreational enhancement including new pathways and shaded seating areas, and non-removal of invasive Mexican Fan Palms, respectively. Lastly, Alternative 2 proposes removing the existing baseball field to accommodate the features of the proposed system. The field is heavily used by community members, and given the limited number of baseball fields in the area and the high demand for recreation fields, it is an important recreational asset for the community.

In light of the above, the proposed Project is considered Environmentally Superior as it presents a holistic approach to implementing the Project that results in less impacts compared to Alternatives 2 and 3 and meets all Project Objectives. In addition to compliance with the State mandated water quality standards, implementation of the proposed Project would result in benefits including improvements in water quality, new and enhanced habitat and park space, improved flood protection, increased recreational and educational opportunities, reduced heat island effects, and increased shade and trees.

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5.0 OTHER REQUIRED CEQA CONSIDERATIONS

Section 15126 of the State CEQA Guidelines requires that all aspects of a project be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. An EIR must identify the following for the project being analyzed; the location of the required information in this EIR is presented in parentheses:

a) Significant environmental effects of the proposed Project (see Table ES-1 and Sections 3.1 through 3.11);

b) Significant environmental effects which cannot be avoided if the proposed Project is implemented (see Table ES-1 and Sections 3.1 through 3.11);

c) Significant irreversible environmental changes which would be involved in the proposed Project should it be implemented (see Section 5.1);

d) Growth-inducing impacts of the proposed Project (see Section 5.2);

e) The mitigation measures proposed to minimize significant effects (see Table ES-1 and Sections 3.1 through 3.11); and,

f) Alternatives to the proposed Project (see Section 4.0).

5.1 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the State CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the Project. Section 15126.2(c) states:

> "Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impact and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current compensation is justified."

As such, a project would generally result in significant irreversible environmental changes if:

- The proposed consumption of resources is not justified (e.g., the project involved the wasteful or inefficient use of energy);
- The project would involve a large commitment of nonrenewable resources; or
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project.

The environmental effects related to the implementation of the proposed Project are analyzed in Sections 3.1 through 3.11 of this Draft EIR. Implementation of the Project would develop two regional stormwater capture and treatment facilities (man-made treatment wetlands and infiltration basins) located within existing open space-zoned areas near the Arroyo Seco Channel. Additionally, as part of the Project, an off-site water harvester and related infrastructure would be installed within the existing, gated maintenance yard at the public Arroyo Seco Golf Course in South Pasadena. The Project would provide water quality benefits for multiple jurisdictions within the 5,005-acre drainage area in which the two sites are located. For both sites, the Project would include native landscaping; hardscape elements including reclaimed wood log benches, post-and-rail fencing, and concrete seat walls faced with natural stone; informational signs as a watershed education opportunity; and would expand the existing trail network to enhance regional trail connectivity through the Lower Arroyo Seco.

Construction activities would result in the irretrievable commitment of and would consume limited, slowly renewable, and non-renewable resources, primarily in the form of fossil fuels (including fuel oil and gasoline/diesel for automobiles and construction equipment) as well as lumber, sand/gravel, metals, and water (for dust suppression). Over the long term, operation and maintenance of the Project would require the commitment and reduction of non-renewable and slowly renewable resources, including consumption of petroleum fuels for maintenance vehicle emissions; consumption of electricity, which in turn generates greenhouse gas (GHG) emissions; and consumption of irrigation water.

However, the Project would provide the following long-term environmental benefits:

1) improve water quality in the Arroyo Seco Channel and Los Angeles River downstream of the sites by capturing and treating 534 acre-feet (af) per year of runoff;
2) increase water supplies by providing an estimated 320 af of annual stormwater capture through infiltration for future reuse as potable water supply and an estimated annual 30 af of treated dry weather runoff diverted to the South Pasadena Golf Course for reuse as non-potable irrigation water supply; and
3) integrates improved and expanded public recreation features and native landscaping, including non-native plant and tree removal and replacements that would improve the habitat values of both Project sites.

Increasing the local groundwater supply and reducing potable water use at the Golf Course would reduce the demand for power (electricity and natural gas) associated with transport of an equivalent amount of water to Pasadena and South Pasadena. This is because transport of potable water, particularly imported water, is quite energy-intensive and, accordingly, uses fossil fuels and generates GHG emissions. Additionally, the water conservation and recreation land uses proposed are not unusually wasteful or excessive in terms of fossil fuel use. Long-term maintenance is expected to involve, on average, a single visit to both sites and the water harvester per month by a two- to four- person crew during a one-day (e.g., up to eight-hour) visit. It is expected that maintenance personnel would travel to and from the sites in one to two vehicles – such as a pickup truck, or pickup truck and a vacuum truck, for instance. Occasional visits for more intensive maintenance activity or to respond to

equipment issues may occur. Additionally, trips would be made to the sites periodically for landscape maintenance. As such, maintenance activity would overall result in a minimal use of fossil fuels or other limited, slowly renewable, and non-renewable resources.

Regarding the potential for irreversible damage caused by environmental accidents, as described in Section 1.0, Introduction, while construction and operation of the Project would result in the use, transport, storage, and disposal of hazardous materials and/or wastes typical of construction activity and water-related infrastructure maintenance, all activities would comply with applicable State and federal laws related to hazardous materials handlings as well as applicable zoning and fire regulations. This would substantially reduce the likelihood and severity of accidents that could result in irreversible environmental damage, and such an accident resulting in irreversible damage is not considered reasonably foreseeable.

In summary, construction, operation, and maintenance of the Project would result in the irretrievable commitment of limited, slowly renewable, and nonrenewable resources, which would reduce the availability of these particular resource quantities for future generations or for other future uses. However, the use of such resources is justified for the Project because there would not be a wasteful or inefficient use of energy such resources and the commitment of non-renewable resources would not be large, particularly in light of the water conservation benefits of the Project, and irreversible damage from a potential environmental accident is not considered reasonably foreseeable. Therefore, although irreversible changes would result from implementation of the Project, such changes would not be considered significant, and no mitigation is required.

5.2 GROWTH INDUCING IMPACTS

Pursuant to Section 15126.2(d) of the State CEQA Guidelines, this analysis examines ways in which the Project could foster economic or population growth or the construction of additional development, either directly or indirectly, in the surrounding environment.

Also, this section discusses whether the Project could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth. Although growth inducement itself is not considered an environmental effect, it could potentially lead to environmental effects.

Accordingly, a project may foster spatial, economic, or population growth in a geographic area if it meets one or more of the following criteria:

1. Removal of an obstacle to growth (e.g., construction or extension of major infrastructure, providing new access to an area);
2. Foster population growth (e.g., construction of additional housing), either directly or indirectly;

3. Foster economic effects that could result in other activities that could significantly affect the environment (e.g., changes in revenue base, employment expansion);
4. Establish a precedent-setting action that could result in other activities that could significantly affect the environment (e.g., an innovation, a change in zoning, general plan amendment); and/or
5. Development of or encroachment on an isolated or adjacent area of open space (being distinct from an in-fill project).

The potential growth-inducing impacts associated with the Arroyo Seco Water Reuse Project are evaluated below against these criteria. It should be noted that growth-inducing effects are not necessarily beneficial, detrimental, or of little significance to the environment (Section 15126.2[d]) of the State CEQA Guidelines). This issue is presented to provide additional information on ways in which this Project could contribute to significant changes in the environment, beyond the direct consequences of implementing the Project.

1) Would this Project remove obstacles to growth (e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area or through changes in existing regulations pertaining to land development)?

The Project would not extend any infrastructure facilities that would serve any land uses beyond the Project itself. The water diversion, treatment, conveyance, and electric infrastructure is sized expressly to support only the Project. There are existing roadways that serve the sites and no new roadways or extension of existing roadways would be necessary. The 16-foot-wide cap/bridge over San Rafael Creek proposed at the San Rafael site is traffic-rated and wider than the existing bridge, which was constructed between 1948 and 1952 based on review of historical aerial photographs. As such, the proposed bridge would be constructed for the purposes of supporting the types of maintenance vehicles required to access and maintain the site as well as providing safe access for all visitors to the San Rafael site. Because of existing topography, there is limited accessible land to the north or south of the San Rafael site and no areas that would accommodate any growth-inducing uses. No zone changes, zoning variants, General Plan amendments or other regulations pertaining to land development would require changes to implement the Project. As discussed in Section 3.63.7, Land Use and Planning, the Project would be consistent with all applicable land use plans and regulations.

2) Would this Project result in the need to expand one or more public services to maintain desired levels of service?

As discussed in Section 1.0, Introduction, and Section 3.9, Public Services and Recreation, the Project would not result in direct or indirect population growth, including increase in school-age children, that would demand public services. The proposed water conservation and recreation facilities would not directly or indirectly alter demand such in a manner that would necessitate the immediate expansion of their existing resources–whose construction could in turn cause adverse

environmental impacts (such as building new police or fire stations)–to maintain desired levels of service. Implementation of the Project may reduce the demand for fire and police protection services on or near the Project sites, given the unauthorized activities that can occur on the Arroyo Seco's open space areas not formally developed and maintained as parks and recreation facilities. The Project would not, therefore, have significant growth-inducing consequences with respect to public services.

3) Would this Project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

During construction of the Project, a number of technical- and construction-related jobs would be created at the sites. This would be a temporary situation, lasting until construction is completed. The construction crew would obtain commercial goods and services from existing businesses in the area. This would provide economic stimulus; however, these jobs are typically filled by existing residents of the region and would not be substantial enough to foster other activities (e.g., new real estate development) that would have significant effects on the environment.

As discussed in Section 2.0, Environmental Setting and Project Description, the proposed Project would provide expanded and improved physical facilities and open space resources to existing users of the Lower Arroyo Seco. However, the Project is not anticipated to directly increase use of the Lower Arroyo Seco area as a destination. It is expected that existing users of the Arroyo Seco area would use the proposed Project features, as they are similar to passive and active recreation features existing in the area. Therefore, implementation of the Project would not generate an increased demand for economic goods and services in the Project area that could encourage other activities that could significantly affect the environment. The Project would not result in significant impacts with regards to indirect growth due to encouragement of economic effects.

4) Would approval of this Project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

The Project would not require a General Plan amendment or zone change. As discussed in Section 3.7, Land Use and Planning, the Project would be consistent with all applicable land use plans and regulations.

No changes to any applicable building safety standards (i.e., building, grading, plumbing, mechanical, electrical, fire codes) are proposed or required to implement this Project. Mitigation Measures and Regulatory Requirements have been identified in Sections 3.1 through 3.11 to require ensure that Project implementation complies with all applicable federal, State, regional, and local standards and ordinances and to ensure that there are no conflicts with applicable land development regulations and that potentially significant environmental impacts are reduced to a less than significant level and/or minimized. Finally, creation of water conservation and

recreation facilities is not unique, such that its implementation would set a precedent, and or facilitate other activities and result in significant impacts to the environment.

5. Development of or encroachment on an isolated or adjacent area of open space (being distinct from an in-fill project)

An area west of San Rafael Creek that is currently inaccessible is being developed as part of the Project. Although this area is not presently open to the public, the surrounding area already supports established passive recreational uses. Implementation of the proposed Project would not substantially increase visitation to the Lower Arroyo Seco as a destination. Instead, existing users of the Arroyo Seco area are expected to incorporate the new Project features into their regular use patterns, as these features are consistent with the passive and active recreation opportunities that already exist in the area.

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