FINAL EIR APPENDIX C
NATURAL ENVIRONMENTAL STUDY REPORT

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Los Angeles State Historic Park

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1.0 Project Introduction

1.1 Project Location

Los Angeles State Historic Park (LASHP) is located in downtown Los Angeles. The LASHP is surrounded by the historic and ethnically diverse communities of Lincoln Heights, Elysian Park, Solano Canyon, Chinatown, Chavez Ravine, and William Mead Homes. The project site is situated in the Los Angeles U.S. Geological Survey (USGS) 7.5 minute quadrangle T-16S, R-5E, S-29 (**Figure 1**).

Viewed from above, the site appears as an oblong parcel of abandoned industrial land on the west bank of the Los Angeles River in downtown Los Angeles. Only the northern-most portion of the site is near the Los Angeles River, which is located ≈46 m (≈150 ft.) to the northwest.

The site is at an elevation of 300 to 325 feet above mean sea level (msl). The site is located within the alluvial plain of the Los Angeles River, which used to meander across the area before being channelized, starting in the late 1930s. The site is bordered on the northwest by the Elysian Park Hills, rising to elevations over 700 feet above msl. The project site, however, is on mostly level topography.

1.2 Project Description

This project will provide the essential infrastructure and amenities to move forward with the phased development of a unique urban park built on the core principles of connectivity, culture, adaptability and sustainability. Due to the unique nature of State Parks in an urban setting, the project will provide opportunities for the people of Los Angeles to connect to their history, the river, nature and each other.

The project represents significant open space within the City of Los Angeles - Cornfield Arroyo Seco Area Specific Plan. It will provide infrastructure and features to enlighten and engage the public about the history and culture of Los Angeles, its region and its people – a theme that is not adequately covered in other units of the State Park System.

The project scope based on the recently completed master plan by the design team includes: utility infrastructure (water, electricity, sewer, telephone, data), landscaping, irrigation systems, site drainage improvements, multi-use plaza, flexible outdoor spaces to accommodate a variety and size of public events, a “great lawn” featuring an amphitheater/stage space for special events or performances for up to 15,000 people and for unstructured activities, interpretive paths and portals for engaging historic themes and content using traditional and new technologies, site lighting, site furnishings and signage, permanent restrooms, operations yard with access road, a “Welcome Station” structure, an interpretive and administration center, shade structures, pedestrian and vehicle circulation systems, an interactive fountain/water feature(s), a children’s play area and cultural gardens. However, due to the current economic climate, the project will have to be built in phases. The first phase will include scope that would allow the LASHP to become fully functional and lay the foundation for work deferred to future phases.

The existing Interim Public Use (IPU) Park built over a portion of the site will be modified to accept and expand the development over the entire 32 acres. Many elements and materials shall be retained and or recycled during all phases of the project. Most importantly will be the

existing trees planted as part of the IPU. By the time of the first phase construction, those trees will have been in the ground for approximately 10 years and shall be relocated as necessary to fit the phases of construction required to accomplish the master plan design.

The Master Development Plan is the vision for the Park's complete build-out over the next 20-30 years, with phases of development depending on funding availability. Build-out will likely proceed in at least three phases. However, due to the long-term nature of the Master Development Plan, future phases of the project may change over time or as a result of funding availability. Therefore, subsequent CEQA review may be required for projects implemented after Phase I.

Phase I of the Plan is considered a "project" under CEQA Guidelines Section 21065 and includes the following components:

- Amphitheatre for open air concerts that includes an "archeological reveal space" showing some of the structures used when the site was a railroad yard; (how many people does it hold?)
- Stormwater basins that will also function as constructed/demonstration wetlands;
- Three event spaces with the following capacities: 1,000 to 1,500 people; 4,000 to 5,000 people; and 10,000 to 12,000 people. These areas are basically landscaped lawn that are not expected to change much from existing conditions;
- Jogging and interpretive trail loop (XX miles) that will run throughout and around the entire Park;
- Interpretive areas, such as the Zanja Madre view node;
- Playground and work-out areas;
- Campfire area,
- Picnic tables, benches, restrooms, and gathering areas;
- Landscaping (i.e., turf, native trees, shrubs and herbaceous plants);
- Grasscrete paved area for event vehicle access and farmer's market; and
- Infrastructure such as gabion walls with lights, welcome plaza with paving stripes, concrete or steel stripes added to the existing parking area, cobblestone paving, concrete paving, decomposed granite pathways, a wooden boardwalk, and irrigation.

1.3 Consultation and Survey Dates

Surveys were conducted in 2008 (Table 1.) by Department Environmental Scientists to assess existing natural resources at all proposed project locations. Field studies also included reconnaissance surveys of the proposed alternative sites. Prior to conducting field surveys, a list of species and habitats potentially occurring within the LASHP was developed based on information compiled from the California Department of Fish and Game (CDFG), California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS), U.S. Geological Survey (USGS), U.S. Fish and Wildlife Service (USFWS), and LASHP records.

During all site visits, the project sites were field reviewed to identify:

- Vegetation communities;

- Potential wetlands;
- Factors indicating the potential for rare species;
- Rare species (plant/wildlife) presence/absence.

2.0 Environmental Setting

2.1 Existing Environment/Environmental Baseline

The project site is in a highly metropolitan setting located in the California Floristic Province, Southwestern California Region, South Coast Subregion (Hickman 1993). The climate fluctuates with the seasons with hot dry summers and warm damp winters. Average annual rainfall in the project area is approximately 35.6 cm (14.0 in), which falls as rain, primarily in the winter. Elevation in the project area is ≈78 m (≈256 ft). The growing season (frost free) varies from 300 to 350 days (Miles and Goudy 1997).

2.2 Geology

The following section was obtained from the "Los Angeles State Historic Park General Plan and Final Environmental Impact Report" (CDPR 2005). It has been unchanged except for edits to update scientific names and measurement units (addition of metric units).

The site is located within the Peninsular Range Geomorphic Province of California, an area of predominantly northwest-trending mountain ranges and intervening basins. The Park is located within the former floodplain of the Los Angeles River and bordered to the north by the Elysian Park Hills.

The surficial site geology consists of Quaternary alluvium, a mixture of sand, silt, clay, and gravels deposited by the Los Angeles River prior to being channelized (Lamar, 1970). Based on soil sampling results during the hazardous waste investigation, the upper three feet of soil contains artificial fill material (Greenwood and Associates, 2003). The Elysian Park Hills are composed of Upper Miocene (approximately 5-11 million years old) marine siltstone and sandstone of the Puente Formation (Lamar, 1970). These sedimentary rocks were deposited in a deep (greater than 2000 feet) water environment by turbidity currents (undersea flows or avalanches of water and sediment). The Puente Formation dips underneath the site, having been uplifted from depth by movement on the Elysian Park Fault.

The diatomaceous shales of the Puente Formation contain several species of marine fossil diatoms (single-celled algae with cell walls composed of silica), and a terrestrial fossil plant assemblage that includes trees and shrubs of several genera, including oak, magnolia, bald cypress, laurel, holly, maple and gum (*Nyssa*). The composition of the Puente Formation fossils suggests three climatic elements: subtropical coastal lowland (including a swamp and associated swamp-border group); a subtropical protected upland canyon; and an exposed arid or semiarid upland. The terrestrial fossils were likely derived from the ancestral San Gabriel Mountains and deposited into the marine environment at depths of at least 1,800 feet less than four miles from the shoreline (Mount, 1970).

The project site is located in a seismically active area of California and is subject to strong earthquakes and associated seismically induced hazards, such as strong ground shaking, liquefaction, and settlement. The closest fault to the project site is the Elysian Park blind thrust

fault, a type of fault whose existence under the Los Angeles Basin was only recently discovered in the last 15 years.

2.3 Hydrology

The following section was obtained from the "Los Angeles State Historic Park General Plan and Final Environmental Impact Report" (CDPR 2005). It has been unchanged except for edits to update scientific names and measurement units (addition of metric units).

The Park site is within the Los Angeles River watershed. The watershed covers an area of approximately ≈834 mi^2 (216,103 ha) from the Santa Susana Mountains to the west, the San Gabriel Mountains to the north and east, and the Santa Monica Mountains and the Los Angeles coastal plain to the south (The River Project, 2004). The L.A. River watershed has diverse land uses, ranging from forest or open space in the upper reaches to highly developed commercial, industrial, and residential uses in the lower reaches (Los Angeles Department of Public Works, 2004). The L.A. River once flowed freely over the coastal plain after exiting from the Whittier Narrows but was channelized between 1914 and 1970 to control runoff and reduce flood impacts. There are three stretches where the channel is still soft bottomed: at the Sepulveda Flood Control Basin; through the Glendale Narrows; and south of Willow Street in Long Beach to the outlet (Los Angeles Department of Public Works, 2004).

The sub-watershed boundaries for the project area are from Glendale Boulevard just west of Stadium Way, and down into South Central Los Angeles. In areas to the west of the watershed, including the Park site, the water flows eastward towards the Los Angeles River.

The L.A. River is a designated Flood Control Channel that collects runoff from most of the City's storm drains and smaller open channels and funnels the water out to sea. In the course of this flow, water from Solano Canyon, Chinatown, and downtown may traverse through the project site before depositing into the L.A. River. This raises concerns for potential contaminants entering the river from neighboring properties.

The project site is located in the Los Angeles Forebay, an area of generally unconfined groundwater that underlies the Los Angeles metropolitan area. The Los Angeles Forebay is located within the northern portion of the Central Groundwater Basin. The Central Groundwater Basin is a rectangular northwest-southeast-trending groundwater basin bounded to the west by the Baldwin, Rosecrans, and Dominguez Hills, which are uplifted features along the Newport-Inglewood fault zone. This faulted and folded structural zone forms an effective barrier to lateral groundwater movement from the Central Basin to the West Coast Basin to the west. The Los Angeles Forebay is an important recharge area for the underlying aquifers in the Central Basin, since there are few aquitards (non-water-bearing layers) to impede the downward percolation. The main surface and subsurface inflow historically occurred in the Los Angeles Narrows[1] and the Whittier Narrows areas; but subsequent urbanization has increased the areas of impermeable surface and reduced the infiltration of water. (DWR, 1961, 1988).

The groundwater at the project site occurs at approximately 9-11 m (30-35 ft.) below grade within the recent alluvium and the Puente Formation bedrock. The direction of groundwater

[1] The Los Angeles Narrows is the area northwest of the site where the L.A. River flows between the Elysian and Repetto Hills.

flow is to the south towards the Los Angeles River. Groundwater beneath the site is contaminated due to past land practices.

2.4 Jurisdictional Waters of the United States Including Wetlands

There are no jusrisdictional waters and/or wetlands located within the Park.

2.5 Soils

The following section was obtained from the "Los Angeles State Historic Park General Plan and Final Environmental Impact Report" (CDPR 2005). It has been unchanged except for edits to update scientific names and measurement units (addition of metric units).

The site lies within the alluvial plain with soils consisting of silts and silty sand underlain with intermixed sand, gravel, and cobble layers. Implementing the transfer of property from the Trust for Public Land to State Parks required an excavation to test and remove possibly contaminated soil identified in various locations throughout the site (Greenwood and Associates, 2003).

The soil profile is characterized as surface to 46-61 cm (18-24 in) being comprised of fill, a medium brown loamy soil with occasional pockets of gravelly ballast (Greenwood and Associates, 2003). The loam varies from loose and friable to hardened clay-like soil. Below the uppermost fill cap is another fill layer, a disturbed stratum containing a mix of soil and construction debris, reaching to almost 102 cm (40 in) below surface. Very dark brown/black pockets suggestive of soil contamination are observed within the layer. A grey/green, relatively sterile coarse sand fill was also observed between 76 cm (30 in) and almost 1.5 m (5 ft) below surface. The native alluvium is exposed at approximately 102 cm (40 in) below surface and comprised of light brown to medium brown/orange colored sand with intermediate gravel and cobble layers. Borings drilled from 1989 to 2000 by various consultants encountered gravelly sand fill, underlain by mixtures of clay, silt, sand, and sandy gravels (IT Corporation, 2001). Most borings showed gravels and sands with rounded particles, indicative of stream channel deposits, at the total depth of the borings, usually around 4.6-5.5 m (15-18 ft) below grade. Some borings met refusal in weathered sandstone bedrock (Puente Formation) at depths ranging from 3-6.7 m (10-22 ft), or deeper based on location.

2.6 Vegetation Communities

The Park site is surrounded by intensely developed and densely populated areas. Naturally occurring vegetation is sparse and limited to weedy growth dominated by plants that are able to exist in an urban environment. Recently a small area of the Park was landscaped with California sycamores, a lawn area, and a picnic area. Overall, the existing vegetation on-site can be classified as ruderal (**Figure 2**). Ruderal is generally defined as plants growing in waste places but that are not necessarily non-native species. Most species found on-site are windborne, but some are carried by animals and humans, and the close proximity to the vegetated portions of the Los Angeles River naturally increases native seed recruitment into the area.

2.7 Biocorridors

Biocorridors or linkages are interconnected tracts of land through which native species can disperse. Corridors are characterized by significant natural resource value and provide pathways for gene flow, seed dispersal, daily movement between habitats (home range

movements), migration (seasonal or altitudinal), and dispersal habitat for juveniles. Corridors can function at various temporal and spatial scales. Temporally, it allows for both daily and seasonal movements, as well as movements over many generations. Spatially, corridors function on a landscape/ecosystem scale (with there being no absolute size for a landscape) or at smaller spatial scales, such as home range.

Though natural landscapes have an inherent degree of connectivity, over the past 50 years habitat alteration has greatly reduced this connectivity (Penrod et al. 2005). Establishing connections between isolated or fragmented habitat patches is essential for sustaining natural ecological processes, population viability, and biological diversity (Noss and Cooperrider 1994). According to the Science and Collaboration for Connected Wildlands (formally known as South Coast Wildlands), the LASHP is juxtaposed to the Griffith Park-Verdugo Hills linkage (Penrod et al 2001). This linkage is rated as a low conservation priority, but the opportunity to protect/restore connectivity exists with restoration activities along the Los Angeles River.

3.0 Biological Resources

3.1 Botanical Resources

Research was conducted prior to field surveys to determine the vegetation communities in the project area and associated specific plant species. This research involved querying the CDFG CNDDB Rarefind database Version 3.1.0 (CDFG 2003) and CNPS (CNPS 2003) database for sensitive plants and natural communities, reviewing published and unpublished material, and contacting knowledgeable individuals. Emphasis was placed on special status species that may occur in the project vicinity.

Field surveys followed the floristic survey protocol recommended by CDFG (CDFG 2000) to locate and identify plant species within the project study area (Table 2). Field surveys were accomplished by walking parallel transects within the project study area. Some of the plants which were considered, though not formally listed as rare or endangered under the California Endangered Species Act, meet the definitions of Section 1901, Chapter 10 (Native Plant Protection) of the California Fish and Game Code, and are eligible for State listing. These plant species were given equal consideration during the project assessment as if they were already listed species.

3.1.1 Sensitive Botanical Resources

There are 10 special status plant species and one vegetation community (CDFG 2003) known to occur within the Los Angeles USGS 7.5 minute quadrangle (Table 3) (**Figure 3**). However, no special status plant species or vegetation communitieis were observed or identified during any survey or site visit.

3.2 Wildlife Resources

Research was conducted prior to field surveys to determine the vegetation communities in the project area and their potential as habitat for wildlife species. Emphasis was placed on special status species that may occur in the general vicinity. A California Wildlife Habitat Relationships query (CDFG 2008), identified 275 species (Table 4) as potentially occurring in urban and barren habitats in Los Angeles County, CA. This includes 206 avian species, 46 mammals, 19 reptiles, and 4 amphibians.

3.2.1 Sensitive Wildlife Resources

The CNDDB Version 3.1.0 (CDFG 2003) was queried to compile a list of known special-status wildlife and invertebrate species present in the project vicinity. A total of seven special-status wildlife species were identified as occurring in the Los Angeles USGS 7.5-minute quadrangles (Table 5) (**Figure 3**).

Department Environmental Scientists compared specific habitat requirements, life history notes, elevation, species distribution, and species lists to determine if any special-status species may be present in the project vicinity. An expanded discussion is provided for those sensitive or protected species where habitat may exist within the LASHP and for any species with a known occurrence within the Park's boundary.

The following account was obtained from CWHR (Zeiner et al. 1990) unless otherwise cited and includes generalized habitat associations, food habits, cover, and reproduction requirements, seasonal movements, and any known locations in the project area. All known occurrences for any special-status wildlife species were obtained from the CNDDB Rarefind Database and State Park personnel.

Though only three bat species are known to occur in the project vicinity, it is most likely that other bats species could potentially be present at the Park. According to Erickson et. al. (2002), 22 bat species are known to occur in Los Angeles County. It is most likely that, LASHP would be used primarily for foraging due to lack of suitable roosting (hibernation, night, maternity) sites.

Burrowing owl

The burrowing owl (*Athene cunicularia*) is a CDFG Species of Special Concern. It is a year-round resident in southern California and can be found from sea level up to 1600 m (5,300 ft) in open dry grasslands, deserts, open stages of pinyon-juniper and ponderosa pine vegetation communities. It is associated with open grasslands and shrublands with perches and burrows.

Diet consists primarily of insects, but also small mammals, reptiles, birds, and carrion. The species uses rodent and other burrows for roosting and nesting. Breeding occurs from March to August with the peak in April and May. Clutch size is 2–10 with an average of 5-6 eggs.

Conversion of grassland to agriculture, urbanization, and poisoning of ground squirrels has reduced burrowing owl numbers in recent decades.

Potential Presence in Project Site:

There are no documented occurrences of burrowing owl within LASHP but low quality breeding, foraging, and overwintering habitat may exist within the Park. There is one known occurrence outside Park boundaries but the precise location is unknown. However, one individual was observed in spring 2007 by Department Environmental Scientists at Rio de Los Angeles (Taylor Yard) State Park, approximately 4 km (2.5 mi) north of LASHP. This individual was observed near a culvert under a walkway by a soccer field. This owl remained in the area for approximately two weeks and was assumed to be a transient.

Mastiff bat

The western mastiff bat (*Eumops perotis*) is a CDFG Species of Special Concern. It is an uncommon year-round resident in southeastern San Joaquin Valley and coastal ranges into southern California, and can be found in open semi-arid to arid habitats, including urban, desert scrub, palm oasis, conifer and deciduious woodlands, coastal scrub, and grasslands. The species is associated with open areas with abundant roosts.

Diet consists of insects caught in flight, primarily night-flying hymenopterous insects. Roosting sites include cliff faces, high buildings, trees, and tunnels. Copulation occurs in early spring with subsequent gestation believed to be 80-90 days. The parturition probably extends from April to August or September with one young produced per pregnancy.

Potential Presence in Project Site:

There are no documented occurrences within LASHP, but low quality breeding, foraging, and overwintering habitat may exist within the Park.

4.0 Regulatory Setting and Special Laws or Conditions

The following section summarizes the Department's consultation with various resource agencies to insure that the proposed project is not in conflict with any adopted habitat conservation plan, natural community conservation plan, regional or state habitat conservation plan, any local or regional ordinance or policy, or any State or Federal laws.

4.1 Critical Habitat

Section 4(a) (3) (A) of the Endangered Species Act (ESA) requires that, to the extent prudent and determinable, critical habitat be designated concurrently with the listing of a species. Section 3(5) of the ESA defines critical habitat, in part, as areas within the geographical area occupied by the species "on which are found those physical and biological features (I) essential to the conservation of the species and (II) which may require special management considerations and protection." and (III) specific areas outside the geographical area occupied by a species at the time it is listed, upon determination that such areas are essential for the conservation of the species." The ESA requires the USFWS to designate critical habitat to the maximum extent prudent and determinable concurrently with listing a species as endangered or threatened. Therefore, critical habitat is the geographic area and habitat functions necessary for the recovery of the species. No critical habitat for any sensitive wildlife or plant species is located within LASHP boundaries.

4.2 Federal Endangered Species Act

Pursuant to the Federal ESA, USFWS has regulatory authority over projects that may affect the continued existence of a federally-listed terrestrial species. Under the ESA, a permit to "take" a listed species is required for any project that may harm or harass an individual of that species. Section 10 of the ESA governs the process for take permits with strictly non-Federal projects.

Take is defined under Section 9 of the ESA as killing, harming, or harassment. Under Federal regulation, take is further defined to include habitat modification or degradation where it would be expected to result in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

The Department has made the determination that there will be no "take" of any federally listed species (threatened or endangered), and furthermore, that the proposed project will not negatively affect the continued existence of any federally-listed species.

4.3 California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA), a permit from CDFG is required for projects that could result in the take of a State-listed threatened or endangered species. A take of a species, under the CESA, is defined as an activity that would directly or indirectly kill an individual of a species, but does not include "harm" or "harass" as included in the Federal act. As a result, the threshold for a take under CESA is higher than under ESA (i.e., habitat modification is not necessarily considered take under CESA). The State has the authority to issue an incidental take permit under Section 2081 of the Fish and Game Code.

For species that are listed under both the ESA and CESA, a Federal Section 7 "take" authorization can potentially also suffice for a CESA incidental take permit, if CDFG finds that the Section 7 consultation is consistent with the requirements of CESA. If CDFG determines that additional protective measures are needed, those conditions would be specified under a separate State take permit. CDFG recommends that the project applicant consult with them during the Federal permit process to ensure that the concerns of both CDFG and the Federal agency are included in the permit.

CDFG is also concerned with the protection of species listed as California Species of Special Concern and plants considered rare, threatened, or endangered by the California Native Plant Society (CNPS). Though these species are not legally protected by the CESA, impacts to them are generally considered significant under the California Environmental Quality Act (CEQA).

The Department has made the determination that there will be no "take" of any State listed species (threatened or endangered). Furthermore, the proposed project will not negatively affect the continued existance of any State-listed species (including plant species).

4.4 California Environmental Quality Act

According to CEQA, impacts to biological resources (*e.g.,* native habitats, sensitive plants, sensitive wildlife species) must be analyzed to determine whether impacts are significant. CEQA Guidelines section 15064(b) states that an absolute definition of "significant" effect is not possible because the significance of an activity may vary with the setting. Appendix G of the Guidelines, provides "examples of consequences which may be deemed to be a significant effect on the environment" (Guidelines section 15064(e)). Examples of these effects are substantial effects on rare or endangered species of animals or plants or the habitat of the species. Guidelines section 15065(a) can be used to determine whether or not "a significant effect on the environment" is likely to occur. According to the guidelines section 15065(a), a project may have a significant effect on the natural environment if it has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of a rare or endangered plant or animal.

4.5 Significance Criteria

The following criteria were considered in determining whether an impact on biological and water quality resources would be considered "significant" under CEQA.

- Long-term degradation of a sensitive plant community because of substantial alteration of landform or site conditions;
- Substantial loss of a native plant community and associated wildlife habitat;
- Fragmentation or isolation of wildlife habitats, especially riparian and wetland communities;
- Substantial effects to jurisdictional waters including wetlands;
- Substantial disturbance of wildlife resulting from human activities;
- Permanent disruption of natural wildlife movement corridors;
- Substantial reduction in local population size attributable to direct mortality or habitat loss, lowered reproductive success, or habitat fragmentation;
- Any take of species qualifying as rare and endangered under CEQA;
- Any take of species that are State-listed or federally-listed as threatened or endangered;
- Results in the destruction or significant modification of critical habitat as defined by USFWS;
- Substantial reduction or elimination of species diversity or abundance of any species of animal;
- Conflict with any adopted General Plan, Habitat Conservation Plan, Natural Community Conservation Plan, or any other regional or state habitat conservation plan, local ordinance, or policy;
- Violation of any water quality standards or waste discharge requirements;
- Substantial depletion of groundwater supplies or interference with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table;
- Substantial alteration of the existing drainage pattern of a site or area in a manner which would result in substantial erosion or siltation on or off site;
- Substantial alteration of the existing drainage pattern of a site or area in a manner which would result in substantial flooding on or off site;
- Creation of, or contribution to, runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or otherwise substantially degrade water quality.

5.0 Impact Analysis

Soils

Due to the fact that approximately 102 cm (40 in) of fill soil has been imported onto the site over the years for both flood protection (Southern Pacific Railroad Yard) and protection of cultural resources (Department), construction of the various facilities and associated structures (comfort stations, shade ramadas, parking areas, etc.) would result in local, long-term, minor impacts to soil resources through soil loss, erosion, compaction, profile mixing, and removal, in the absence of the mitigation measures presented in this report and included in this project proposal.

Soil excavation could result in the disturbance of the soil profile, interrupting natural chemical, physical, and biological processes of the soil. The localized removal of vegetation and use of heavy equipment could increase soil erosion and result in soil compaction in these areas.

Construction impacts could be mitigated by minimizing the area disturbed; salvaging the existing soils for use as backfill; and implementing Best Management Practices (BMPs), such as the use of silt fences, soil mats, and other soil retention devices, which would reduce impacts. The application of avoidance and minimization measures, with special attention to erosion control measures during construction would reduce impacts to soil resources to a minor intensity.

Cumulative Impacts

The impacts above take into consideration all phases of the proposed project. There are no future proposed projects in LASHP. The project, in combination with cumulative future projects, would result in a local, long-term, minor cumulative impact on soil resources since the top 102 cm (40 in) are imported fill. Reasonably foreseeable future actions within LASHP are considered to have no overall net effect on soil resources.

Hydrology, Floodplains, and Water Quality

Construction activities could have the potential to increase erosion and sediment discharge into local stormwater systems. The use of heavy equipment presents a potential for accidental releases of fuels or other hazardous substances that could affect local surface water or groundwater quality.

Removal of existing vegetation and construction of the new amenities, roadways, and parking areas would involve grading, trenching, and soil compaction, which could increase erosion and sediment discharge. New underground utility connections serving the restrooms could impede groundwater movement perpendicular to the infrastructure and create the potential for wastewater leaks.

The addition of new trails would not increase the amount of impervious surface in the area, but new buildings (comfort stations, restaurants, etc.) would increase impervious surfaces, increasing the potential for non point-source pollution, which could result in local, long-term, minor impacts to water quality.

Prior to application of mitigation measures such as silt fences, sedimentation basins, bio-swales, and other erosion control measures, the preferred alternative would have a local, long-term, minor impact on water quality. Construction impacts could be mitigated by minimizing the area disturbed, using pervious material's in parking areas and trails, salvaging existing soils for use as fill, and implementing BMPs during construction to reduce the potential for water quality impacts associated with soil erosion and construction equipment activities.

With implementation of avoidance and minimization measures mentioned above water quality impacts would be reduced to being local, long-term, and minor in nature.

Cumulative Impacts

The impacts above take into consideration all phases of the proposed project. There are no future proposed projects in LASHP. Reasonably foreseeable future actions within LASHP are considered to have no overall net effect on hydrologic processes and water quality.

Vegetation

Approximately 13 ha (32 ac) of non-native vegetation (lawn primarily) and landscape plantings would be permanently disturbed due to construction of the various amenities at the Park. Some native plantings such as the sycamore would be retained. Potential construction impacts to vegetation associated with grading and excavation include the spread of dust and debris into areas adjacent to construction sites.

Loss of vegetation associated with development of the Park would result in a local, long-term, negligible impact, given the habitat (ruderal and landscape plantings) and the fact that this area had been disturbed in the past. Post construction plantings and seeding will be conducted using native species appropriate for the area. With implementation of measures such as native plant revegetation, dust abatement, preservation fencing, and salvaging of existing soil among others, vegetation impacts would be local, long-term, and negligible in extent.

Cumulative Impacts

The impacts above take into consideration all phases of the proposed project. There are no future proposed projects in LASHP. Reasonably foreseeable future actions within LASHP are considered to have no overall net effect to vegetation since the primary vegetation at the Park will be grass lawn and demonstration gardens.

Wildlife

Development of new park amenities would have an effect on wildlife resources, primarily as a result of habitat loss and disturbance. Construction activities would introduce heavy equipment and personnel, which would generate noise, visual, and vibratory disturbance within project areas and potentially within several hundred feet of the construction limits, thus decreasing the amount of available habitat for most wildlife species. Ground-disturbing activities, including trenching, excavating, and grading, would have the potential to bury and trap organisms such as invertebrates, amphibians, reptiles, and small mammals.

The above mentioned construction activities would result in local, short-term, minor impacts to wildlife, in the absence of the mitigation and minimization measures presented in this report and included in the project proposal. Construction impacts would be mitigated by the incorporation of measures, such as conducting preconstruction surveys, timing construction to avoid disruption of breeding, and covering excavation areas. With the application of mitigation measures described above, it is expected that impacts would be short term, local, and minor.

Permanent impacts, including increased foot traffic around the park, would create noise and sight disturbance, impeding wildlife use of those areas. However, areas in the project vicinity presently receive a moderate/high level of disturbance due to visitor use and nearby businesses. Therefore, a noticeable increase in human/wildlife conflicts and conditioning of wildlife to human food sources are not anticipated. Additionally, lighting at bathrooms, buildings, and parking lots could impact nocturnal foraging species and night roosting bats.

With implementation of measures including, monitoring, avoidance, use of downward directional sodium lighting, signage, and native plant revegetation among others, impacts to wildlife would be reduced to being local, long-term, and minor.

Cumulative Impacts

The impacts above take into consideration all phases of the proposed project. There are no future proposed projects in LASHP. Reasonably foreseeable future actions within LASHP are considered to have no overall net effect on wildlife.

Special-Status Species

Impacts to special-status species would be similar to those discussed for wildlife species. No impact to any special-status plant or animal species is expected.

Cumulative Impacts

The impacts above take into consideration all phases of the proposed project. There are no future proposed projects in LASHP. Reasonably foreseeable future actions within LASHP are considered to have no overall net effect on sensitive wildlife species.

Noise

The project would result in minor to moderate changes to existing noise levels including changes caused by additional park users, as well as temporary construction-related noise.

Construction equipment and transport vehicles could temporarily generate substantial noise. Noise caused by construction crews also has the potential to affect existing noise levels. Construction activities would introduce heavy equipment and personnel, which would create noise, visual, and vibratory disturbance within construction areas and potentially within several hundred feet of construction limits, thus decreasing the availablity of habitat for most species of birds and mammals during construction. These activities would result in a local, short-term, minor impact to wildlife based on existing noise levels.

Noise in the area of construction activities would vary depending upon a number of factors, such as the amount and type of equipment in operation on any given day, usage rates, the level of background noise in the area, and the distance between sensitive uses and the construction site. Construction noise would be loudest immediately adjacent to the construction area.

Construction noise would be mitigated by measures such as noise abatement techniques, use of noise screening materials, and by outfitting vehicles and equipment with noise-reducing technology. Construction activities would not occur during weekends, holidays, or evenings.

New park amenities would increase sensitive receptors in the project area and overall would result in a local, long-term, minor to moderate impact on the noise environment due to increases in visitor use related noise levels. Vehicle-related noise levels from additional traffic along N. Spring Street and from vehicle parking would increase slightly, resulting in a local, long-term, minor impact on the noise environment.

Cumulative Impacts

The impacts above take into consideration all phases of the proposed project. Increases in overall, general sound levels associated with traffic along N. Spring Street would result in a local, long-term, minor cumulative impact according to the traffic analysis conducted for this EIR.

6.0 Avoidance, Minimization, and Conservation Measures

- Construction area boundaries, including staging areas, will be clearly marked to ensure that project related activities do not affect resources outside of the construction footprint. All construction activity and storage of construction materials will occur within these marked areas. Construction and staging areas will be confined to the smallest area necessary.
- All materials and procedures required to execute the installation and maintenance of BMPs for erosion and sediment control, and for spill prevention, containment, and cleanup of any non-sediment pollutants shall meet the minimum criteria defined in the *California Stormwater Best Management Practices Handbook*, 2004 (the handbook). This handbook is available at the following website: www.cabmphandbooks.com/development.asp
- If rain is forecast during construction, Contractor shall, at a minimum, stabilize all active (disturbed) soil areas (secure all soil stockpiles by covering and/or installing a perimeter silt barrier) to prevent erosion prior to the onset of precipitation and throughout each day for which precipitation is forecasted.
- All non-active soil disturbed areas (defined as disturbed site areas that will be idle for 21 days) shall be stabilized, in accordance with an approved erosion control plan, within 14 days of exposure or one day prior to the onset of precipitation, whichever occurs first;
- A dust abatement program will be implemented during construction. Clearing of vegetation will be minimized to the greatest extent possible. Water will be applied to reduce dust during construction; trucks hauling soil will be required to cover the soils during transport; and disturbed areas will be revegetated with native species after construction. Excavated soils will be stockpiled and covered.
- Construction noise will be minimized through the use of best-available noise control techniques, wherever feasible. Standard noise abatement measures could include the following elements: a schedule that minimizes impacts to adjacent noise-sensitive uses, use of the best-available noise control techniques wherever feasible, use of hydraulically or electrically powered impact tools when feasible, and location of stationary noise sources as far from sensitive uses as possible.
- All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment shall have an unmuffled exhaust.
- An Oil and Hazardous Substances Spill Prevention, Control, and Countermeasures Plan will be implemented. The program will emphasize proper materials storage and handling procedures, and will outline measures intended to prevent pollution associated with the spillage of fuels, lubricants, coolants, and other potentially hazardous materials. This plan will address spill containment, cleanup, and reporting procedures; and will limit refueling and other hazardous activities to designated upland areas. Equipment will be inspected prior to use each day to ensure that hydraulic hoses are tight and in good condition.
- Develop and implement a stormwater pollution prevention plan and acquire to control erosion and sedimentation, both during and after construction, thereby reducing water pollution.
- Inspect equipment for hydraulic and oil leaks prior to use on construction sites, and implement inspection schedules to prevent contamination of soil and water.

- Equipment storage, fueling, and staging areas shall be located on sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. All necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. All project related spills of hazardous materials shall be cleaned up immediately and contaminated soils removed to approved disposal areas.
- The Department and its contractors must meet the standards and objectives to minimize water pollution impacts set forth in section 7-1.01G of the Caltran's Standard Specifications and all material removed during excavation shall be placed in locations where it cannot enter surface waters.
- The Department and its contractor will be required to construct the project in compliance with all applicable water quality standards.
- Use semi permeable materials as much as possible to allow for water infiltration through the soil column and aeration of any compacted soils at the completion of construction.
- New lighting shall be limited and all lighting shall be low sodium and directed downward.
- Maintain routes of escape from excavated pits and trenches for animals that might fall in. Cover post holes and other pits and trenches with boards. During construction, maintain vigilance for animals caught in excavations and take appropriate actions to free them.
- Bird species protected by the Migratory Bird Treaty Act have the potential to nest within the project vicinity between February 15th and September 15th. Therefore, a qualified biologist shall perform a bird survey, no sooner than 3 days, prior to the start of construction activities if construction activities occur during the breeding season. If nesting birds or an active nest is present in the project vicinity, Department Environmental Scientists will be notified prior to start of any construction activity. Appropriate measures may include (but are not limited to) monitoring nest site to insure no impacts to nesting avian species, designation of the location as an ESA, and delaying/restricting activities until nesting is complete so that nesting activities are not interrupted.

7.0 Conclusions

With appropriate avoidance, minimization, and conservation measures implemented into the proposed project, no listed (State or Federal) endangered or threatened species, or other biological resources considered as sensitive are expected to be significantly affected. The proposed project will be designed with appropriate features to reduce potential impacts and will not result in impacts considered "significant" under CEQA. The proposed project is not expected to encounter impacts that would result in a trend towards State or Federal listing or loss of viability for any species or other biological resource.

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9.0 Tables

Table 1. List of surveys, dates, conditions, and personnel for the Master Plan Project at the Los Angeles State Historic Park, Los Angeles County, California.

SURVEY DATE	SURVEY TIME	SURVEY FOCUS	SURVEY CONDITIONS	PERSONNEL
11/06/2008	1030-1330	Initial site visit	Clear, light wind, 80º	Richard Burg
11/10/2008	0915-1245	Floristic surveys	Clear, light wind 78 º	Richard Burg Debbie Waldecker
12/03/2008	0930-1210	General site surveys	Clear, light wind 78 º	Richard Burg Debbie Waldecker

Table 2. Plant species identified at the Los Angeles State Historic Park, Los Angeles County, California.

Common Name	Scientific Name
yarrow	*Achillea millefolium*
amaranth	*Amaranthus* sp.
Australian saltbush	*Atriplex semibaccata*
oats	*Avena sp.*
mule fat	*Baccharis salicifolia*
broom baccharis	*Baccharis sarothroides*
black mustard	*Brassica nigra*
ripgut grass	*Bromus diandrus*
Canadian horseweed	*Conyza canadensis*
bristly ox-tongue	*Picris echiodes*
soft chess	*Bromus hordeaceus*
prostrate spurge	*Chamaesyce prostrata*
pineapple weed	*Chamomilla suaveolens*
Bermuda grass	*Cynodon dactylon*
California encelia	*Encelia californica*
California poppy	*Eschscholzia californica*
telegraph weed	*Heterotheca grandilora*
sunflower	*Helianthus* sp.
peppergrass	*Lepidium* sp.
sweet alyssum	*Lobularia maritima*
deergrass	*Muhlenbergia rigens*
tree tobacco	*Nicotiana glauca*
smilo grass	*Piptatherum miliaceum*
annual beard grass	*Polypogon monspeliensis*
Fremont cottonwood	*Populus fremontii*
western sycamore	*Platanus racemosa*
arroyo willow	*Salix lasiolepis*
Russian thistle	*Salsola tragus*
white sage	*Salvia apiana*
common sow thistle	*Sonchus oleraceus*
clover	*Trifolium* sp.
corn	*Zea mays*

Table 3. Known occurrences of special status plant species and their status known to occur in the Los Angeles USGS 7.5 minute quadrangle queried from the CNDDB and CNPS databases.

Scientific Name	Common Name	Federal Status	State Status	CNPS Status	General Habitat	Micro Habitat
Atriplex serenana var. *Davidsonii*	Davidson's saltscale			1B	Coastal bluff scrub, coastal scrub.	Alkaline soil. 3-250m.
California macrophylla	round-leaved filaree			1B	Cismontane woodland, valley and foothill grassland.	Clay soils. 15-1200m.
Calochortus plummerae	Plummer's mariposa-lily			1B	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest.	Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 90-1610m.
Helianthus nuttallii ssp. *Parishii*	Los Angeles sunflower			1A	Marshes and swamps (coastal salt and freshwater). Historical from southern California.	5-1675m.
Horkelia cuneata ssp. *Puberula*	mesa horkelia			1B	Chaparral, cismontane woodland, coastal scrub.	Sandy or gravelly sites. 70-810m.
Hordeum intercedens	Vernal barley			3.2	Valley and foothill grassland, vernal pools.	Vernal pools, dry, saline streambeds, alkaline flats. 10-1000m.
Linanthus orcuttii	Orcutt's linanthus			1B	Chaparral, lower montane coniferous forest.	Sometimes in disturbed areas; often in gravelly clearings. 1060-2000m.
Navarretia prostrata	prostrate vernal pool navarretia			1B	Coastal scrub, valley and foothill grassland, vernal pools.	Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 15-700m.
Ribes divaricatum var. *Parishii*	Parish's gooseberry			1A	Riparian woodland.	Salix swales in riparian habitats. 65-100m.
Symphyotrichum greatae	Greata's aster			1B	Chaparral, cismontane woodland.	Mesic canyons. 800-1500m.
walnut forest	walnut forest					

1A	CNPS List 1A: Plants presumed extinct in California
1B	CNPS List 1B: Plants rare, threatened or endangered in California and elsewhere
3.2	CNPS List 3: Plants about which more information is needed (fairly threatened in California).

Table 4. List of species potentially occurring in urban and barren habitats in Los Angeles County, CA from the California Wildlife Habitat Relationships Program.

SCIENTIFIC NAME	COMMON NAME
Bufo boreas	western toad
Pseudacris regilla	pacific chorus frog
Rana catesbeiana	bullfrog
Batrachoseps gabrieli	San Gabriel slender salamander
Pelecanus erythrorhynchos	American white pelican
Pelecanus occidentalis	brown pelican
Phalacrocorax auritus	double-crested cormorant
Phalacrocorax penicillatus	Brandt's cormorant
Phalacrocorax pelagicus	pelagic cormorant
Ardea herodias	great blue heron
Ardea alba	great egret
Egretta thula	snowy egret
Bubulcus ibis	cattle egret
Butorides virescens	green heron
Nycticorax nycticorax	black-crowned night heron
Branta canadensis	Canada goose
Aix sponsa	wood duck
Anas crecca	green-winged teal
Anas platyrhynchos	mallard
Anas acuta	northern pintail
Anas penelope	Eurasian wigeon
Anas americana	American wigeon
Lophodytes cucullatus	hooded merganser
Mergus merganser	common merganser
Cathartes aura	turkey vulture
Gymnogyps californianus	California condor
Pandion haliaetus	osprey
Elanus leucurus	white-tailed kite
Haliaeetus leucocephalus	bald eagle
Circus cyaneus	northern harrier
Accipiter striatus	sharp-shinned hawk
Accipiter cooperii	Cooper's hawk
Buteo lineatus	red-shouldered hawk
Buteo jamaicensis	red-tailed hawk
Buteo regalis	ferruginous hawk

SCIENTIFIC NAME	COMMON NAME
Buteo lagopus	rough-legged hawk
Aquila chrysaetos	golden eagle
Falco sparverius	American kestrel
Falco columbarius	merlin
Falco peregrinus	peregrine falcon
Falco mexicanus	prairie falcon
Phasianus colchicus	ring-necked pheasant
Callipepla californica	California quail
Gallinula chloropus	common moorhen
Fulica americana	American coot
Pluvialis squatarola	black-bellied plover
Charadrius alexandrinus	snowy plover
Charadrius semipalmatus	semipalmated plover
Charadrius vociferus	killdeer
Charadrius montanus	mountain plover
Haematopus bachmani	black oystercatcher
Himantopus mexicanus	black-necked stilt
Recurvirostra americana	American avocet
Actitis macularia	spotted sandpiper
Numenius phaeopus	whimbrel
Numenius americanus	long-billed curlew
Limosa fedoa	marbled godwit
Arenaria interpres	ruddy turnstone
Arenaria melanocephala	black turnstone
Aphriza virgata	surfbird
Calidris mauri	western sandpiper
Calidris minutilla	least sandpiper
Calidris alpina	dunlin
Limnodromus griseus	short-billed dowitcher
Limnodromus scolopaceus	long-billed dowitcher
Larus canus	mew gull
Larus delawarensis	ring-billed gull
Larus californicus	California gull
Larus argentatus	Herring gull
Larus thayeri	Thayer's gull
Larus occidentalis	western gull
Larus glaucescens	glaucous-winged gull

SCIENTIFIC NAME	COMMON NAME
Sterna caspia	caspian tern
Sterna maxima	royal tern
Sterna elegans	elegant tern
Sterna hirundo	common tern
Sterna forsteri	forster's tern
Sterna antillarum	least tern
Rynchops niger	black skimmer
Uria aalge	common murre
Cepphus columba	pigeon guillemot
Columba fasciata	band-tailed pigeon
Streptopelia risoria	ringed turtle-dove
Streptopelia chinensis	spotted dove
Zenaida macroura	mourning dove
Columbina passerina	common ground-dove
Geococcyx californianus	greater roadrunner
Tyto alba	barn owl
Otus kennicottii	western screech owl
Bubo virginianus	great horned owl
Glaucidium gnoma	northern pygmy owl
Athene cunicularia	burrowing owl
Asio flammeus	short-eared owl
Aegolius acadicus	northern saw-whet owl
Chordeiles acutipennis	lesser nighthawk
Phalaenoptilus nuttallii	common poorwill
Cypseloides niger	black swift
Aeronautes saxatalis	white-throated swift
Archilochus alexandri	black-chinned hummingbird
Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
Stellula calliope	calliope hummingbird
Selasphorus sasin	Allen's hummingbird
Ceryle alcyon	belted kingfisher
Melanerpes formicivorus	acorn woodpecker
Sphyrapicus nuchalis	red-naped sapsucker
Sphyrapicus ruber	red-breasted sapsucker
Sphyrapicus thyroideus	Williamson's sapsucker
Picoides scalaris	ladder-backed woodpecker

SCIENTIFIC NAME	COMMON NAME
Picoides nuttallii	nuttall's woodpecker
Picoides pubescens	downy woodpecker
Colaptes auratus	northern flicker
Contopus sordidulus	western wood-pewee
Empidonax difficilis	pacific-slope flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus verticalis	western kingbird
Eremophila alpestris	horned lark
Progne subis	purple martin
Tachycineta bicolor	tree swallow
Tachycineta thalassina	violet-green swallow
Stelgidopteryx serripennis	northern rough-winged swallow
Riparia riparia	bank swallow
Petrochelidon pyrrhonota	cliff swallow
Hirundo rustica	barn swallow
Cyanocitta stelleri	Steller's jay
Aphelocoma californica	western scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Poecile gambeli	mountain chickadee
Baeolophus inornatus	oak titmouse
Auriparus flaviceps	verdin
Psaltriparus minimus	bushtit
Sitta canadensis	red-breasted nuthatch
Sitta carolinensis	white-breasted nuthatch
Sitta pygmaea	pygmy nuthatch
Certhia americana	brown creeper
Campylorhynchus brunneicapillus	cactus wren
Salpinctes obsoletus	rock wren
Catherpes mexicanus	canyon wren
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Troglodytes troglodytes	winter wren
Cinclus mexicanus	American dipper
Regulus satrapa	golden-crowned kinglet
Regulus calendula	ruby-crowned kinglet

SCIENTIFIC NAME	COMMON NAME
Sialia mexicana	western bluebird
Catharus ustulatus	Swainson's thrush
Catharus guttatus	hermit thrush
Turdus migratorius	American robin
Ixoreus naevius	varied thrush
Chamaea fasciata	wrentit
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
Anthus rubrescens	American pipit
Bombycilla cedrorum	cedar waxwing
Phainopepla nitens	phainopepla
Lanius ludovicianus	loggerhead shrike
Sturnus vulgaris	European starling
Vireo cassinii	Cassin's vireo
Vireo huttoni	Hutton's vireo
Vireo gilvus	warbling vireo
Vermivora celata	orange-crowned warbler
Vermivora ruficapilla	Nashville warbler
Dendroica petechia	yellow warbler
Dendroica coronata	yellow-rumped warbler
Dendroica nigrescens	black-throated gray warbler
Dendroica townsendi	Townsend's warbler
Dendroica occidentalis	hermit warbler
Oporornis tolmiei	Macgillivray's warbler
Wilsonia pusilla	Wilson's warbler
Piranga ludoviciana	western tanager
Pheucticus melanocephalus	black-headed grosbeak
Pipilo maculatus	spotted towhee
Pipilo crissalis	California towhee
Passerella iliaca	fox sparrow
Melospiza melodia	song sparrow
Melospiza lincolnii	Lincoln's sparrow
Zonotrichia atricapilla	golden-crowned sparrow
Zonotrichia leucophrys	white-crowned sparrow
Junco hyemalis	dark-eyed junco
Agelaius phoeniceus	red-winged blackbird
Agelaius tricolor	tricolored blackbird

SCIENTIFIC NAME	COMMON NAME
Sturnella neglecta	western meadowlark
Euphagus cyanocephalus	brewer's blackbird
Molothrus ater	brown-headed cowbird
Icterus cucullatus	hooded oriole
Icterus bullockii	Bullock's oriole
Carpodacus purpureus	purple finch
Carpodacus mexicanus	house finch
Loxia curvirostra	red crossbill
Carduelis pinus	pine siskin
Carduelis psaltria	lesser goldfinch
Carduelis lawrencei	Lawrence's goldfinch
Carduelis tristis	American goldfinch
Coccothraustes vespertinus	evening grosbeak
Passer domesticus	house sparrow
Vireo plumbeus	plumbeous vireo
Oceanodroma furcata	fork-tailed storm-petrel
Oceanodroma leucorhoa	leach's storm-petrel
Oceanodroma homochroa	ashy storm-petrel
Oceanodroma melania	black storm-petrel
Pluvialis fulva	pacific golden-plover
Haematopus palliatus	American oystercatcher
Calidris bairdii	Baird's sandpiper
Calidris melanotos	pectoral sandpiper
Chaetura pelagica	chimney swift
Setophaga ruticilla	American redstart
Zonotrichia albicollis	white-throated sparrow
Zonotrichia querula	Harris's sparrow
Didelphis virginiana	virginia opossum
Myotis yumanensis	Yuma myotis
Myotis evotis	long-eared myotis
Myotis thysanodes	fringed myotis
Myotis volans	long-legged myotis
Myotis californicus	California myotis
Myotis ciliolabrum	western small-footed myotis
Lasionycteris noctivagans	silver-haired bat
Pipistrellus hesperus	western pipistrelle
Eptesicus fuscus	big brown bat

SCIENTIFIC NAME	COMMON NAME
Lasiurus blossevillii	western red bat
Lasiurus cinereus	hoary bat
Euderma maculatum	spotted bat
Corynorhinus townsendii	Townsend's big-eared bat
Antrozous pallidus	pallid bat
Tadarida brasiliensis	brazilian free-tailed bat
Eumops perotis	western mastiff bat
Sylvilagus bachmani	brush rabbit
Sylvilagus audubonii	desert cottontail
Lepus californicus	black-tailed jackrabbit
Spermophilus beecheyi	California ground squirrel
Sciurus niger	eastern fox squirrel
Thomomys bottae	Botta's pocket gopher
Perognathus inornatus	san joaquin pocket mouse
Dipodomys agilis	pacific kangaroo rat
Peromyscus maniculatus	deer mouse
Microtus californicus	California vole
Rattus rattus	black rat
Rattus norvegicus	Norway rat
Mus musculus	house mouse
Canis latrans	coyote
Vulpes vulpes	red fox
Vulpes macrotis	kit fox
Urocyon cinereoargenteus	gray fox
Urocyon littoralis	island gray fox
Bassariscus astutus	ringtail
Procyon lotor	raccoon
Mustela frenata	long-tailed weasel
Taxidea taxus	American badger
Spilogale gracilis	western spotted skunk
Mephitis mephitis	striped skunk
Arctocephalus townsendi	Guadalupe fur-seal
Zalophus californianus	California sea-lion
Phoca vitulina	harbor seal
Mirounga angustirostris	northern elephant seal
Odocoileus hemionus	mule deer
Clemmys marmorata	western pond turtle

SCIENTIFIC NAME	COMMON NAME
Gopherus agassizii	desert tortoise
Coleonyx variegatus	western banded gecko
Uma scoparia	Mojave fringe-toed lizard
Gambelia wislizenii	long-nosed leopard lizard
Sceloporus magister	desert spiny lizard
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
Phrynosoma platyrhinos	desert horned lizard
Elgaria multicarinata	southern alligator lizard
Leptotyphlops humilis	western blind snake
Charina trivirgata	rosy boa
Diadophis punctatus	ringneck snake
Pituophis melanoleucus	gopher snake
Lampropeltis getula	common kingsnake
Crotalus mitchellii	speckled rattlesnake
Crotalus cerastes	sidewinder
Crotalus viridis	western rattlesnake
Crotalus scutulatus	Mojave rattlesnake

Table 5. Known occurrences of special status wildlife species and their status located in the Los Angeles USGS 7.5 minute quadrangle queried from the CNDDB database. Database queried 09/28/2010.

Scientific name	Common name	Federal Status	State Status	CDFG Status	General Habitat	Micro Habitat
Athene cunicularia	burrowing owl			SC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation.	Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.
Empidonax traillii extimus	southwestern willow flycatcher	FE	SE		Riparian woodlands in southern California.	
Eumops perotis californicus	western mastiff bat			SC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc.	Roosts in crevices in cliff faces, high buildings, trees & tunnels.
Lasiurus cinereus	hoary bat				Prefers open habitats or habitat mosaics, with access to trees for cover & open areas or habitat edges for feeding.	Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
Nyctinomops macrotis	big free-tailed bat			SC	Low-lying arid areas in southern California.	Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.
Phrynosoma coronatum (blainvillii population)	coast horned lizard			SC	Inhabits coastal sage scrub and chaparral in arid and semi-arid climate conditions.	Prefers friable, rocky, or shallow sandy soils.
Taxidea taxus	American badger			SC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Need sufficient food, friable soils & open, uncultivated ground. Prey on burrowing rodents. Dig burrows.

FE	Listed as endangered under the federal Endangered Species Act.
SE	Listed as endangered under the California Endangered Species Act.
SC	CDFG Species of Special Concern.

Figure1. Vicinity map for the proposed Los Angeles State Historic Park Master Plan Project, Los Angeles County, California.

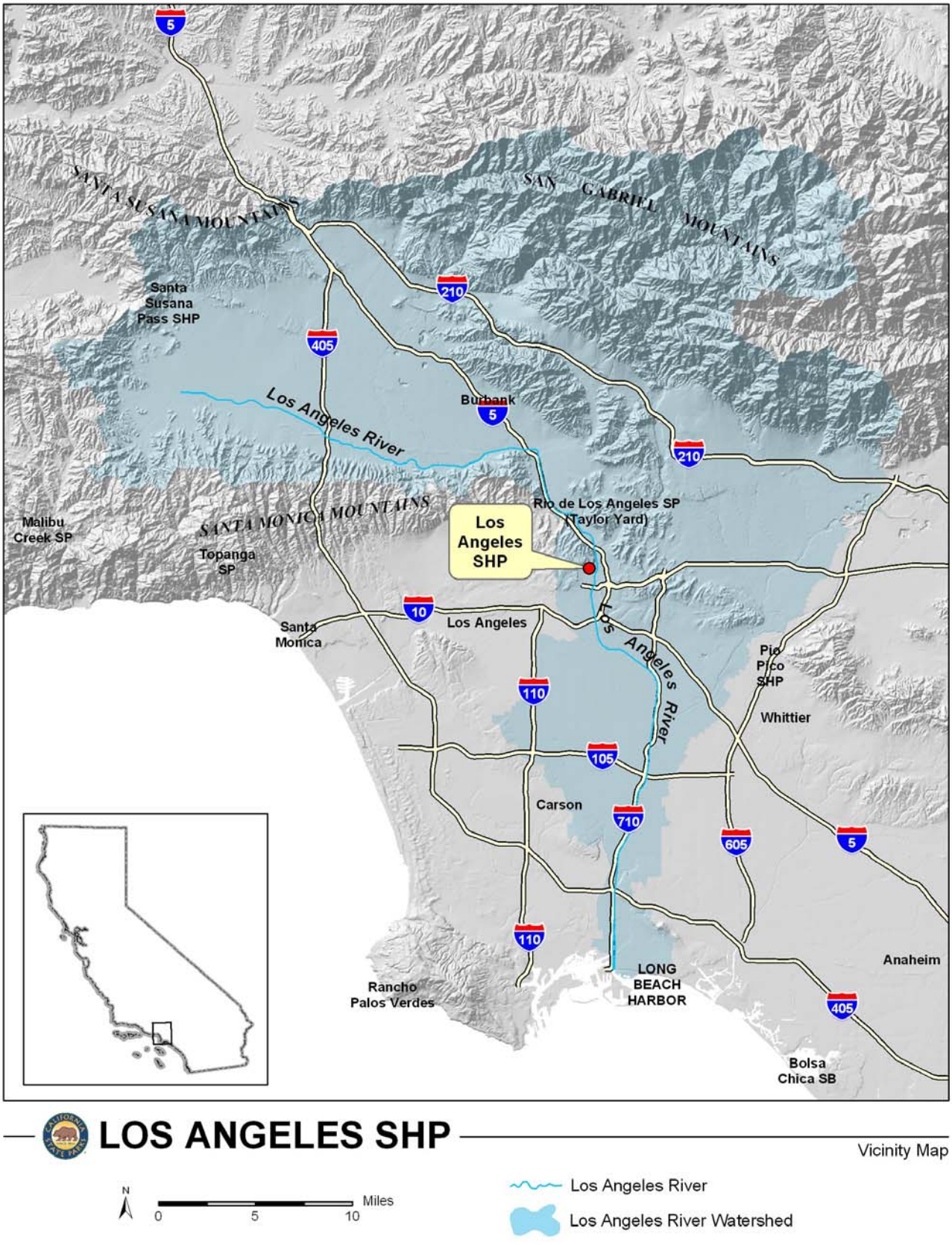

Figure 2. Hydrology for the proposed Los Angeles State Historic Park Master Plan Project, Los Angeles County, California.