Appendix C
Biological Resources and Habitat Assessment

BIOLOGICAL RESOURCES AND HABITAT ASSESSMENT

BENDING THE RIVER BACK INTO THE CITY PROJECT

LOS ANGELES COUNTY, CALIFORNIA

PREPARED FOR:

Metabolic Studio
1745 North Spring Street, Unit 4
Los Angeles, CA 90012
Contact: John Yi
Ph: 323-226-1158

PREPARED BY:

ICF International, in association with Geosyntec Consultants
1 Ada Parkway
Irvine, CA 92618
Contact: Paul Schwartz, Biologist
949-333-6634

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Acronyms and Abbreviations

APNs	assessor's parcel numbers
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
ICF	ICF International
LASHP	Los Angeles State Historic Park
MSL	mean sea level
NRCS	Natural Resources Conservation Service
project	Bending the River Back into the City Project
RWQCB	Regional Water Quality Control Board
SFP	State Fully Protected
SSC	California Species of Special Concern
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey

Chapter 1
Introduction

This report contains the results of a biological resources and habitat assessment conducted for the Bending the River Back into the City Project (project) located in the City of Los Angeles, Los Angeles County, California.

1.1 Project Location

The proposed project is located within and immediately west of the Los Angeles River, between State Route 110 and U.S. 101. The proposed improvements would be located adjacent to the Amtrak/Metrolink railroad right-of-way and immediately south of the North Broadway Bridge (Figure 1). The project site is mapped within an unsectioned portion (Township 1 South, Range 13 West) of the Los Angeles U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map (Figure 2). The project site is identified as occurring within assessor's parcel numbers (APNs) 5409-001-900, 5409-001-901, 5414-016-903, 5414-027-904, and 5447-032-900.

1.2 Project Description

The proposed project is intended to re-establish a connection between the City of Los Angeles and the Los Angeles River. A key element of this connection is a water wheel, which would be situated on the west bank of the river, near the location of a historic water wheel that operated in the 1850s and delivered river water to the Pueblo de Los Angeles.

To provide adequate water pressure to turn the approximate 70-foot-diameter water wheel, an impoundment would be created within the adjacent river channel by installing a 6-foot-tall inflatable dam across the entire width of the channel a short distance downstream of the North Broadway Bridge. The dam would be inflated during non-storm periods (typically April to October), establishing an impoundment that would extend up to approximately 1,220 feet upstream (to just north of the rail bridge) and contain up to approximately 16 acre-feet of water. Pipelines from the water wheel pit would be extended through openings in the river channel side slopes immediately upstream and downstream of the dam to deliver impounded water to the water wheel and return flows to the river channel.

Approximately 99% of diverted flows would be returned to the river immediately upon their passage through the water wheel. Approximately 80 acre-feet per year (equivalent to approximately 0.11 cubic feet per second if averaged over the year) is proposed to be diverted for irrigation of landscaping at the nearby Los Angeles State Historic Park (LASHP) as well as for other irrigation uses. River water diverted for irrigation use would be treated by filtration and ultraviolet disinfection before use.

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Chapter 2
Methods

2.1 Terminology

Within this report, the term "project site" refers to the proposed 6.29-acre area encompassing the proposed construction limits and the maximum impoundment area upstream of the proposed dam. The term "study area" refers to the project site plus an additional 500-foot buffer area surrounding the project site (66.44 acres). Special-status species referred to in this report include those wildlife and plants listed as threatened or endangered under federal or state endangered species acts (CDFG 2011); plant species designated by the California Native Plant Society (CNPS) with a California Rare Plant Rank (CRPR) of 1A, 1B, or 2 or other plants of local concern (CNPS 2012); and wildlife that is designated as a California Species of Special Concern (SSC), as defined by the California Department of Fish and Wildlife (CDFG 2011).

2.2 Literature Review

A literature review was conducted to evaluate the environmental setting of the study area prior to the habitat assessment and identify special-status species or potentially suitable habitat for special-status species. The literature review included a review of the U.S. Fish and Wildlife Service (USFWS) Species Occurrence Database (reviewed July 6, 2012, and June 26, 2013) (USFWS 2013a) and the USFWS mapping of designated critical habitat (reviewed June 13, 2012, and June 26, 2013) (USFWS 2013b). The California Natural Diversity Database (CNDDB) (CDFW 2013a) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2013) were reviewed for the Los Angeles (USGS 1966) and surrounding USGS 7.5-minute quadrangles. In addition, the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey Geographic database (USDA/NRCS 2013) was reviewed.

2.3 Biological Resources

ICF International (ICF) biologist Paul Schwartz and ICF regulatory specialist Daniel Cardoza, in association with Geosyntec Consultants, conducted a habitat assessment for special-status biological resources within the study area on June 18, 2012. The habitat assessment was conducted between 0800 and 1130, and temperatures ranged from 64˚ to 75˚ Fahrenheit. Winds were calm, and cloud cover was overcast but becoming clear. Visibility was good.

The study area at the time of the June 18, 2012, habitat assessment was based on an alternate scheme (which was subsequently determined infeasible) for diversion of water from the Los Angeles River. The project site now extends farther upstream. Inasmuch as the river channel is of uniform character within this added area, characterization of biological resources within the extended limits is based on field observations in the downstream areas and recent aerial photographs. Similar conditions and a similar approach are also applicable to the study area buffer adjoining the upstream extension of the project site.

During the habitat assessment, several areas of the study area were inaccessible. These areas included the Los Angeles River area and all railway lands. Inaccessible areas were viewed with binoculars. The Los Angeles River area was inspected from the North Broadway Bridge, North Spring Street Bridge, and the North Main Street Bridge. All accessible areas within the study area were traversed by walking and/or driving and inspected with binoculars.

During the habitat assessment, photos of the study area were taken (see Appendix A). All plant species observed or otherwise detected during the habitat assessment were recorded in a field notebook. Common plant species observed were identified by visual characteristics and morphology in the field. Any unusual and less-familiar plants were identified in the office using taxonomic keys and guides. Taxonomic nomenclature for plants follows *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012). A complete list of all plant species observed during the site visit is found in Appendix B of this document.[1]

All wildlife species observed or otherwise detected during the habitat assessment were recorded in a field notebook. Wildlife species were detected by sight, calls, tracks, scat, or other sign. Field guides were used to assist with identification of species during surveys and included the *National Geographic Field Guide to the Birds of North America* (National Geographic 2002) for birds, *Western Reptiles and Amphibians* (Stebbins 2003) for reptiles, and *A Field Guide to the Mammals of North America* (Reid 2006) for mammals. A complete list of all wildlife species observed during the site visit is found in Section 3.5 of this document.

2.3.1 Vegetation/Land Use Mapping

Vegetation within the project site and study area was mapped during the habitat assessment on an aerial image of the site taken from Google Earth (scale: 1 inch = 200 feet) (Google Earth 2012 [image dated March 7, 2011]). On June 26, 2013, a Google Earth aerial image (dated September 20, 2012) was reviewed to confirm that conditions remain consistent with the original mapping. The current Google Earth image was also evaluated to confirm conditions within the extended project footprint within the river channel, and the associated 500-foot buffer. When possible, community descriptions from the *Manual of California Vegetation* (Sawyer, Keeler-Wolfe, and Evans 2009) were used to classify the vegetation within the study area. However, because of the urban nature of the study area and the substantial cover of ornamental vegetation present, the majority of the vegetation within the study area could not be classified under the *Manual of California Vegetation* (Sawyer, Keeler-Wolfe, and Evans 2009). As such, several vegetation/land use classifications were prepared specifically for this project.

[1] The floral compendium presented in Appendix B is based on 2012 fieldwork for a project site, including a more extended area within the LASHP. Because plant species with biological value occur only on buffer lands within Elysian Park (which would not be affected), this list has not been updated to reflect the more limited project site and study area boundaries within the park. Since the 2012 fieldwork, the project site has also been modified to include additional lands within the river channel associated with the dam impoundment. Because conditions within the river channel and the associated buffer in this added area are consistent with the previously surveyed area immediately downstream, this compendium remains valid for these added areas as well.

2.4 Survey Limitations

Plant and animal observations were limited because of the timing of the surveys (mid-June). As such, it is important to note that additional species, beyond those observed in this evaluation, may occur in the study area but may not have been detected. For example, some species may not be found because they were not present at the time of day or time of year that the fieldwork was conducted. Some special survey methods may be required to determine the presence or absence of some species (e.g., nighttime surveys for bats). Therefore, the plants and wildlife species observed and reported herein are not intended to be complete lists of species present within the study area; they include only those species observed during the habitat assessment.

2.5 Regulatory Constraints

All applicable local, state, and federal laws and regulations, as well as court precedents enacted to protect and/or manage biological resources, were evaluated for their relevance and potential to constrain the proposed project. The analysis of constraints provided in this report is based on a combination of direct evaluation of the site, current regulatory information, and professional judgment.

The federal and state laws listed below are only some of the laws initially considered during all constraint analyses conducted by ICF. Note that many of the regulations listed below may not be applicable to the project at hand, but the applicability of each was considered to determine potential constraints to the project under consideration. For each law, applicable amendments to the original, resulting regulations empowered therein, and relevant judicial precedent were included.

2.5.1 Federal Laws

The federal laws listed below were considered during evaluation of the biological resources in the study area. Note that this is not an exhaustive list of all federal laws that may be considered.

- Bald and Golden Eagle Protection Act
- Endangered Species Act of 1973 (including designated critical habitat for listed species)
- Environmental Quality Improvement Act of 1970
- Federal Noxious Weed Act of 1974
- Federal Water Pollution Control Act (Clean Water Act)
- Fish and Wildlife Act of 1956
- Migratory Bird Treaty Act
- National Environmental Policy Act of 1969

2.5.2 State Laws and Regulations

The state laws and regulations listed below were considered during evaluation of the biological resources in the study area. Note that this is not an exhaustive list of all state laws and regulations that may be considered.

- California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000–21177, CEQA Guidelines Sections 15000–15387)
- California Fish and Game Code (including codes for the state Endangered Species Act, those similar to the federal Migratory Bird Treaty Act, those for lake or streambed alteration agreements, and those for navigation dredging permits)

Chapter 3
Existing Conditions

The following discussions address conditions and biological resources observed or potentially present in the study area. Chapter 4 and Appendix C contain specific details regarding habitat assessments conducted for special-status resources.

3.1 Environmental Setting

The project is located within an urban area of the City of Los Angeles. A mixture of urban residential and light industrial uses is located to the east, south, and west. The Los Angeles River traverses north/south through the study area. Within the study area, the Los Angeles River is completely concrete lined. It contained a small flow (approximately 10 to 12 inches in depth) within a shallow low-flow channel during the field visit. Minimal deposition or vegetation is present within the river. Both sides of the river are flanked by active railroads. The railroads and associated lands are dominated by developed lands with some bare ground and ruderal vegetation. The lands situated to the east of the river within the study area are predominately urban/developed and contain areas of ornamental vegetation. Lands within the study area west of the river contain areas of open space, consisting of portions of Elysian Park, a City of Los Angeles Park, the LASHP, as well as urban/developed lands. Elysian Park is located in the north portion of the study area. This park is situated on a hill and contains a relatively dense cover of native and ornamental shrubs and trees. The LASHP site is characterized by native plantings, turf grass, and disked fields. The very limited portion of LASHP located within the project site consists of maintenance facilities with no vegetation.

Elevations within the study area range from approximately 280 feet above mean sea level (MSL) within the Los Angeles River to approximately 405 feet above MSL within Elysian Park.

3.2 Vegetation/Land Use Types

The majority of the study area is heavily disturbed, consisting either of disturbed non-vegetated areas or vegetation communities that are dominated by non-native and/or ruderal plant species. Table 1 provides data regarding the vegetation communities, including land use types, and acreages for each community mapped within the study area. Figure 4 (in Chapter 5) depicts the location of each vegetation community within the study area. Each vegetation community is described below in detail. The Coast Live Oak/California Walnut Woodland mapped within Elysian Park would be considered a sensitive vegetation community by CDFW.

Table 1. Vegetation Communities/Land Uses

Vegetation Community/Land Use	Project Site (acre)	500-foot Buffer (acre)
Coast Live Oak/California Walnut Woodland	------	2.48
Developed Lands	3.77	45.33
Interpretive Nature Walk Area	------	1.59
Open Water	2.47	1.91
Ornamental Vegetation	------	5.07
Ruderal Vegetation	0.05	3.77
Total	**6.29**	**60.15**

3.2.1 Coast Live Oak Woodland/California Walnut Grove—*Quercus Agrifolia* Woodland Alliance/*Juglans Californica* Woodland Alliance

Approximately 2.48 acres of Coast Live Oak Woodland/California Walnut Grove were mapped within the 500-foot buffer area. This vegetation community consists of lands situated on the southern slopes of Elysian Park and contains an assorted mixture of native and ornamental vegetation but is dominated by native trees such as coast live oak (*Quercus agrifolia*) and southern California black walnut (*Juglans californica*). The understory is composed chiefly of non-native brome grasses (*bromus* sp.), oat grass (*Avena* sp.), and native forbs such as California wishbone-bush (*Mirabilis laevis*) and narrow-leaved bed straw (*Galium angustifolium*). Additional native vegetation observed within this community consists of toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), blue elderberry (*Sambucus nigra* subsp. *caerulea*), and holly-leaved cherry (*Prunus ilicifolia*). This vegetation community also contains a substantial cover of ornamental vegetation, including gum tree (*Eucalyptus* sp.), ornamental pine (*Pinus* sp.), tree of heaven (*Ailanthus altissima*), Peruvian pepper tree (*Schinus molle*), Brazilian pepper tree (*Schinus terebinthifolius*), Mexican fan palm (*Washingtonia robusta*), Canary Island date palm (*Phoenix canariensis*), acacia (*Acacia* sp.), blue jacaranda (*Jacaranda mimosifolia*), and bottlebrush tree (*Callistemon* sp.).

3.2.2 Developed Lands

Approximately 3.77 acres of Developed Lands were mapped within the project site and an additional 45.33 acres were mapped within the 500-foot buffer area. This land use consists of paved surfaces, buildings, and railways. With the exception of small areas of ornamental vegetation, this land use is mostly void of vegetation.

3.2.3 Interpretive Nature Walk Area

Approximately 1.59 acres of lands classified as Interpretive Nature Walk Area were mapped within the buffer area. This land use area contains a variety of planted native shrubs and trees situated along pathways. A small linear feature, approximately 1 foot deep, has been created between constructed berms within this portion of the study area. Although this feature appear capable of

holding water, no sign of long-term ponding was present (e.g., cracked soils, facultative or wetter wetlands plants). This feature was deemed not to meet the criteria for a jurisdictional stream or wetland feature in the related jurisdictional delineation report (ICF 2013)

This area is irrigated and includes patches with mulch cover, bare ground, and sparse cover of grasses. Plants observed within this area all appear to be recently planted and consist of a mixture of well-spaced individuals of toyon, California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), purple sage (*Salvia leucophylla*), California mugwort (*Artemisia douglasiana*), common sunflower (*Helianthus annuus*), brittlebush (*Encelia farinosa*), California encelia (*Encelia californica*), coastal goldenbush (*Isocoma menziesii*), and common yarrow (*Achillea millefolium*). Coast live oak, Fremont's cottonwood (*Populus fremontii*), bush mallow (*Malacothamnus fasciculatus*), western sycamore (*Platanus racemosa*), and alder (*Alnus sp.*) also occur.

3.2.4 Open Water

Approximately 2.47 acres of Open Water associated with the low flow of the Los Angeles River was mapped within the project site, and an additional 1.91 acres were mapped within the 500-foot buffer area. No vegetation is associated with the open water.

3.2.5 Ornamental Vegetation

Approximately 5.07 acres of Ornamental Vegetation were mapped within the 500-foot buffer area. Ornamental vegetation mapped within the study area is consistent with ornamental vegetation found throughout the Los Angeles basin. Ornamental vegetation present within the study area includes baby sun-rose (*Aptenia cordifolia*), gum tree, ornamental pine, tree of heaven, Peruvian pepper tree, Brazilian pepper tree, Mexican fan palm, Canary Island date palm, and blue jacaranda.

3.2.6 Ruderal Vegetation

Approximately 0.05 acre of Ruderal Vegetation was mapped within the project site, and an additional 3.77 acres were mapped within the 500-foot buffer area. Ruderal vegetation was mapped within the study area adjacent to the railway lands flanking the river, within an undeveloped area south of North Spring Street, and within a strip of land located between North Broadway and the LAHSP. Ruderal vegetation observed is common to the region and consists of both native and non-native species. Areas mapped as Ruderal Vegetation are a result of anthropogenic disturbances and typically contain greater than 50% bare ground. Dominant plants observed within this community include non-native brome grasses and oat grass. Additional species present include castor bean (*Ricinus communis*), tocalote (*Centaurea melitensis*), tree tobacco (*Nicotiana glauca*), mustard (*Brassica* sp.), lamb's quarters (*Chenopodium album*), smilo grass (*Stipa miliacea* var. *miliacea*), horseweed (*Erigeron canadensis*), fennel (*Foeniculum vulgare*), cheeseweed (*Malva parviflora*), ryegrass (*Festuca perennis*), and yellow sweet clover (*Melilotus indicus*).

3.3 Soils

The USDA/NRCS Soil Survey Geographic Database (USDA/NRCS 2013) has mapped the following soil types within the project site and study area:

- Altamont clay loam, and
- Hanford fine sandy loam.

Hanford fine sandy loam is mapped for entire project site and most of the study area (Figure 3). The western portion of the study area is mapped as Altamont clay loam.

3.4 Plants

With the exception of the vegetation associated with Elysian Park, the vegetation within the study area consists chiefly of native and non-native ruderal species common to urban areas in the greater Los Angeles area. One special-status species was determined to be present in Elysian Park within the 500-foot study area: southern California black walnut (*Juglans californica*). This tree is a CNPS CRPR List 4.2 species, a species of local concern in the Los Angeles region, and a City of Los Angeles protected tree.

Appendix B provides a list of all plant species observed on the project site during the habitat assessment.

No USFWS-designated critical habitat for federally threatened and/or endangered plant species is present within a 2-mile radius of the study area (USFWS 2013b). In addition, no occurrences of federally endangered or threatened plant species are mapped within a 2-mile radius of the study area (USFWS 2013a).

3.4.1 Native Trees

The Interpretive Nature Walk Area within LASHP contains several individuals of planted western sycamore and coast live oak. In addition, the northern edge of the study area within Elysian Park contains several older individuals of coast live oak and southern California black walnut. Western sycamore, coast live oak and southern California black walnut are designated as City of Los Angeles protected trees per Article 6, Sections 46.00 through 46.06 of the Los Angeles City Municipal Code: Preservation of Protected Trees.

The trees located within the LASHP and Elysian Park portions of the study area would not be affected either directly or indirectly through project implementation.

3.5 Wildlife

Wildlife species that were observed within the study area are considered common to the general project vicinity. The majority of species detected were birds. Bird species observed during the habitat assessment include mallard (*Anas platyrhynchos*), killdeer (*Charadrius vociferous*), black-necked stilt (*Himantopus mexicanus*), red tail hawk (*Buteo jamaicensis*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), white-throated swift (*Aeronautes saxatalis*), barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon pyrrhonota*), northern rough-winged swallow (*Stelgidopteryx serripennis*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), European starling (*Sturnus vulgaris*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis mexicana*), and house sparrow (*Passer domesticus*).

One reptile species, western fence lizard (*Sceloporus occidentalis*), was observed in the study area (within the SHP).

Mammals observed within the project site and/or study area include desert cottontail (*Sylvilagus audubonii*) and California ground squirrel (*Spermophilus beecheyi*).

No USFWS-designated critical habitat for federally threatened and/or endangered wildlife species is present within a 2-mile radius of the study area (USFWS 2013b). In addition, no occurrences of federally endangered or threatened wildlife species are mapped within a 2-mile radius of the study area (USFWS 2013a).

3.6 Federal and State Jurisdictional Resources

The Los Angeles River is a potential jurisdictional water of the U.S. Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) and a potential CDFW jurisdictional feature. A jurisdictional delineation was prepared for the project, the results of which are presented under separate cover. Please see the jurisdictional delineation report prepared for the proposed project titled *Jurisdictional Delineation Report, Bending the River Back into the City Project, Los Angeles County, California,* dated August 2013 (ICF 2013), for a complete analysis of the federal and state jurisdictional resources present at the project site.

Chapter 4
Results of Habitat Assessments

The following discussions address the results of habitat assessments conducted for special-status plant and wildlife species occurring or potentially occurring within the study area. Appendix C contains specific details regarding the habitat assessments conducted for special-status resources.

4.1 Special-Status Plants

Habitat assessments for all special-status plant species evaluated are presented in Appendix C. Of the 40 special-status species evaluated, one species was determined to be present within the study area: southern California black walnut (*Juglans californica*), a CNPS CRPR List 4.2 species and a species of local concern in the Los Angeles region. An additional seven species were determined to have a low potential to occur within the study area associated with the woodland habitat within Elysian Park in the northern portion of the study area: Nevins's barberry (*Berberis nevinii*; FE, SE, CRPR 1B.1), round-leaved filaree (*California macrophylla*; CRPR 1B.1), slender mariposa lily (*Calochortus clavatus* var*. gracilis*; CRPR 1B.2), Plummer's mariposa lily (*Calochortus plummerae*; CRPR 4.2), Lewis' evening primrose (*Camissoniopsis lewisii*; CRPR 3), mesa horkelia (*Horkelia cuneata* var. *puberula*; CRPR 1B.1), and Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*; CRPR 1B.2). These species are not expected to occur outside of the woodland habitat associated with Elysian Park.

Project activity and resultant impacts will not extend into Elysian Park and will not alter conditions within the study area in a manner that could adversely affect woodland habitat within Elysian Park. Therefore, the southern California black walnut occurring within Elysian Park and the additional seven special-status species potentially present within Elysian Park are not expected to be directly or indirectly affected by project activities.

4.2 Special-Status Wildlife

Habitat assessments for all special-status wildlife species evaluated are presented in Appendix C. Of the 28 special-status species evaluated, six species were determined to have a moderate potential to occur within the study area: American peregrine falcon (*Falco peregrinus anatum*), big free-tailed bat (*Nyctinomops macrotis*, SSC), pallid bat (*Antrozous pallidus*; SSC), pocketed free-tailed bat (*Nyctinomops femorosaccus*; SSC), western mastiff bat (*Eumops perotis californicus*; SSC), and western yellow bat (*Lasiurus xanthinus*; SSC).

4.2.1 American Peregrine Falcon

American peregrine falcon is designated as a State Fully Protected (SFP) species. This species is most commonly observed nesting on high cliffs near large foraging areas such as coastal estuaries; however, the American peregrine falcon is also known to nest in urban areas on high buildings, bridges, and other structures. It was determined that the medium-sized buildings and structures within the study area provide suitable nesting and foraging habitat for the species. The proposed

physical improvements and operational aspects of the proposed project would not significantly alter conditions within the project site and study area with respect to suitability of habitat for foraging. Compliance with the established regulatory provisions under the Migratory Bird Treaty Act and California Fish and Game Code will ensure that take of a peregrine falcon nest does not occur (see Recommendations in Section 5).

4.2.2 Special-Status Bats

Five special-status bat species were determined to have a moderate potential to utilize the study area in some capacity: big free-tailed bat, pallid bat, pocketed free-tailed bat, western mastiff bat, and western yellow bat. All five of these bat species are designated as SSC. In addition, these bat species were determined to have moderate potential to utilize the study area in both a roosting and foraging capacity. In particular, the bridges that cross the Los Angeles River, the buildings and other structures with small exposed crevices, and the ornamental fan palms and date palms within the study area have the greatest potential to support roosting bats. Areas within the study area with the greatest potential to support foraging bats include the bridges crossing the Los Angeles River and Elysian Park.

4.3 Nesting Birds

All developed and undeveloped portions of the study area contain suitable nesting habitat for a variety of avian species, including, but not limited to, those species observed during the habitat assessment. Several bird species, including black phoebe, northern rough-winged swallow, barn swallow, and white throated swift, were observed nesting and foraging within the Los Angeles River area and the LASHP. Black-necked stilt was observed nesting within the Los Angeles River during the site visit.

4.4 Raptor Foraging

Portions of the study area contain suitable raptor foraging habitat. These areas include lands within the LASHP, Elysian Park, the Los Angeles River, and the urban parks/recreational fields within the study area. Considering the location, scale and nature of the proposed improvements, it was determined that the project would not present a significant impact with respect to raptor foraging within the project site or the extended study area.

Chapter 5
Impacts

5.1 Impacts on Vegetation Types and Land Uses

The project would affect approximately 6.24 acres of lands within the project site (Figure 4). Of the 6.24 acres of lands that would be affected, 3.77 acres consist of Developed Lands. Developed Lands consist of concrete and asphalt areas and existing structures and contain no direct biological value. Impacts on 3.77 acres of Developed Lands would be less than significant, and no mitigation would be required.

The remaining 2.47 acres of affected lands consist of Open Water areas associated with the Los Angeles River. Within the project site, the Los Angeles River is completely concrete lined, consisting of a trapezoidal channel that does not support any wetland or vegetated riparian habitat. The Los Angeles River within the project site does not support any habitat for special-status species; however, the area does support foraging and nesting habitat for birds such as black-necked stilt, killdeer, ducks, swallows, and swifts as well as foraging habitat for bats. Given the relatively small size of the area to be affected in relation to the remaining nesting and foraging habitat within the vicinity of the project, impacts on 2.47 acres of Open Water within the Los Angeles River would be considered less than significant, and no mitigation would be required to offset impacts on nesting bird habitat. However, the Open Water areas of the Los Angeles River are within the jurisdiction of USACE, the RWQCB and CDFW, and consultation would be required with these agencies to determine if mitigation would be required to offset impacts on jurisdictional waters.

Figure 4 depicts the project site as overlapping with 0.05 acre of Ruderal Lands located between the railroad right-of-way and the Los Angeles River; however, the project plans state that these lands will not be affected because the project would tunnel underneath this area. As such, no impact on Ruderal Lands is expected to occur.

5.2 Impacts on Special-Status Wildlife

5.2.1 Special-Status Bats

The project site contains bridges and structures that provide suitable roosting habitat for the following special-status bat species: big free-tailed bat, pallid bat, pocketed free-tailed bat, western mastiff bat, and western yellow bat. Impacts on roosting special-status bats would be considered significant. Prior to project implementation a qualified biologist should inspect potential roosting locations to determine if bats are roosting in order to avoid impacts. In addition to roosting habitat for bats, the project site also provides low-moderate quality foraging habitat for special-status bat species. The proposed physical improvements and operational aspects of the proposed project would not significantly alter conditions within the project site with respect to suitability of habitat for bat foraging. As such, impacts associated with project implementation would be considered less than significant in respect to bat foraging.

5.3 Impacts on Nesting Birds

The study area and project site support suitable habitat for nesting birds. Impacts on 6.24 acres of lands, consisting of 3.77 acres of Developed Lands and 2.47 acres of Open Water, are expected to occur from project implementation. Because of the general lack of vegetation and the concrete-lined nature of the Los Angeles River within the project site, the areas to be affected would support only nesting habitat for ground-nesting birds, such as black-necked stilt and killdeer, and birds such as rock pigeon, mourning dove, house sparrow, and house finch, which commonly nest on structures and bridges in developed areas. Impacts on nesting birds that are protected under the Migratory Bird Treaty Act are prohibited, and a nesting bird survey should be conducted during the nesting bird season and prior to any disturbance within the project site to document the presence or absence of nesting birds. A nesting bird survey and the avoidance of work within nesting bird areas will ensure that no impacts will occur and reduce potential impacts on nesting birds to a level below significant.

Chapter 6
Recommendations

The following section discusses recommendations to offset potential indirect or direct impacts on special-status species or resources. Where applicable, specific mitigation measures have been provided to ensure that impacts on special-status biological resources would be mitigated to a level considered less than significant pursuant to CEQA.

6.1 Special-Status Bats

Five special-status bat species were determined to have the potential to roost and forage within the study area. These species are big free-tailed bat, pallid bat, pocketed free-tailed bat, western mastiff bat, and western yellow bat. The following recommendations provide for inspection of potential roosting locations before work commences and identify avoidance measures to be implemented in the event that bats are determined to be present within potential impact areas.

If work is expected to occur within 100 feet of trees or other structures with bat roost potential during the maternity season (April 15 to August 15), a qualified bat biologist should conduct a one-night emergence survey during acceptable weather conditions (i.e., no rain or high winds, night temperatures above 45˚F) or, if conditions permit, physically examine the tree or structure for presence or absence of bats (such as with lift equipment) before the start of construction. If the roost is determined to be occupied at that time, the tree or structure would be avoided until after the maternity season when young are volant. If trees or structures with bat roost potential require removal during the winter months when bats are in torpor (October 31 to February 15 [dependent on specific weather conditions]), a qualified bat biologist would physically examine the tree or structure (e.g., with lift equipment) (if conditions permit) for the presence or absence of bats before the start of construction. If the tree or structure is determined to be occupied at that time, the tree or structure would be avoided until after the winter season when bats are once again active.

6.2 Nesting Birds

Migratory nongame native bird species are protected under the federal Migratory Bird Treaty Act. Additionally, Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests. To avoid impacts on nesting bird species in violation of these federal and state, it is recommended that the construction of the project be conducted outside of the recognized nesting bird season (February 15 through September 15).

If work cannot be avoided during the nesting bird season, then, prior to initiation of the project, a qualified biologist should conduct a pre-construction nesting bird survey within all areas of breeding/nesting habitat within and adjacent to the construction limits. If active nests are found, the following buffers are recommended to be used until a qualified biologist determines that nesting activities have ceased: 500 feet for raptors and any listed species and 100 feet for all other bird species unless otherwise authorized by CDFW.

6.3 Jurisdictional Waters

The Los Angeles River is a potential jurisdictional water of USACE and the RWQCB and a potential CDFW jurisdictional feature. A jurisdictional delineation was prepared for the project, the results of which are presented under separate cover. Please see the jurisdictional delineation report prepared for the proposed project titled *Jurisdictional Delineation Report, Bending the River Back into the City Project, Los Angeles, County, California,* dated August 2013 (ICF 2013), for a complete analysis of the federal and state jurisdictional resources present at the project site.

The proper permits and agreements must be obtained from USACE, the RWQCB and CDFW prior to construction in areas identified in the jurisdictional delineation report as jurisdictional waters or resources.

Chapter 7
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