APPENDIX C
BIOLOGICAL RECONNAISSANCE SURVEY REPORT

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April 25, 2013
Ms. Irene Paul
City of Los Angeles
Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Subject: 2012 and 2013 Biological Reconnaissance Survey and Constraints Analysis for the Elysian Park-Downtown Water Recycling Project, City of Los Angeles, California

Dear Ms. Paul,

This letter report summarizes the results of biological reconnaissance surveys conducted by AECOM in support of the Elysian Park-Downtown Water Recycling Project (WRP) located in the City of Los Angeles, California, on May 10, 2012 and April 25, 2013.

PROJECT LOCATION

Phase I

Phase I of the project would be located in the City of Los Angeles within Elysian Park, which is located approximately 1.5 miles north of downtown Los Angeles. Elysian Park is bound by Interstate 5 (Golden State Freeway, I-5) on the north, State Route 110 (Pasadena Freeway, SR 110) and Solano Canyon on the east, the community of Chinatown on the south, and the community of Echo Park on the west (Figure 1). Access to Elysian Park is provided via Stadium Way, Academy Road, and Solano Avenue.

Phase II

Phase II of the project would be located within public streets in the urbanized and fully developed communities of Chinatown, downtown Los Angeles, Exposition Park, and Boyle Heights (Figure 2).

Phases I and II are located within the United States Geological Survey (USGS) Los Angeles, California 7.5-minute topographic quadrangle map.

PROJECT DESCRIPTION

Phase I

Phase I of the project involves the delivery of recycled water to Elysian Park. A new 16-inch recycled water pipeline would be constructed from the existing recycled water pipeline serving Taylor Yard (Taylor Yard WRP), totaling approximately 10,800linear feet. The proposed Elysian Park recycled water pipeline would connect to a new approximately 2 million gallon recycled water storage tank located on the hilltop near Elysian Fields within Elysian Park via a new recycled water pumping station located near the west side of I-5 just inside Elysian Park. The proposed route for the recycled water pipeline would roughly follow Stadium Way.. In addition, to provide for the potable water uses within Elysian Park (e.g., restrooms and drinking fountains), approximately 1,000 linear feet of an 8-inch potable water pipeline would be constructed from Park Drive to Grace E. Simons Lodge. Approximately 2,800 linear feet of a 2-inch potable water service line with a booster pump would also be constructed from Grace E. Simons Lodge to Elysian Fields in order to supply the two bathrooms and drinking fountains at Elysian Fields.

Phase II

Phase II of the project involves constructing approximately 10 miles of a new 16-inch recycled water pipeline from the proposed terminus of the Cornfield recycled water pipeline, which is located on Spring Street at Mesnagers Street. The mainline segment would extend approximately 3,000 feet south from termination point of the Cornfield recycled water pipeline on Spring Street to Alpine Street, approximately 50 feet west on Alpine Street to Broadway, approximately 20,750 feet south on Broadway to 37th Street, approximately 2,150 feet west on 37th Street to Exposition Boulevard, and approximately 1,650 feet west on Exposition Boulevard to Exposition Park. The mainline segment would terminate at the USC main campus, located approximately 2 miles south of downtown Los Angeles.

The Atlas Carpet segment would extend from the mainline segment approximately 800 feet south on Avenue 18 from Spring Street to Albion Street, approximately 400 feet west on Albion Street to Avenue 17, and 500 feet southbound on Avenue 17. It would terminate at the Atlas Carpet Mills, Inc., located at 340 South Avenue 17, east of the Los Angeles River, and west of I-5.

The Twin Towers Correctional Facilities segment would extend approximately 1,650 feet east on Vignes Street from Spring Street to Avila Street terminating at the Los Angeles County Sheriff's Department Twin Towers Correctional Facility, located at 450 Bauchet Street.

The Trigen-LA Bunker Hill segment would extend from the mainline segment approximately 1,700 feet west on 3rd Street from Broadway to Hope Street. It would terminate at Veolia Entergy facility (formerly Trigen-LA), located at 555 West 5th Street.

The Los Angeles Convention Center segment would extend from the mainline segment approximately 3,800 feet west on Pico Boulevard from Broadway to LA Live Way. It would terminate at the Los Angeles Convention Center, located at 1201 South Figueroa Street adjacent to the SR 110/I-10 interchange.

The Dye House and Washington Garment segment would extend from the mainline segment approximately 5,400 feet east on Venice Boulevard/16th Street from Broadway to Central Avenue, approximately 560 feet south on Central Avenue to 18th Street, and approximately 700 feet east on the 18th Street. It would terminate at Washington Garment, located at 1332 E. 18th Street just south of Interstate 10 (Santa Monica Freeway, I-10).

The Boyle Heights Mixed Use Project segment would extend approximately 350 feet east on 18th Street from Washington Garment to Naomi Avenue, approximately 300 feet south on Naomi Avenue to Washington Boulevard, approximately 5,800 feet east on Washington Boulevard to Santa Fe Avenue, approximately 2,450 feet north on Santa Fe Avenue to Olympic Boulevard, and approximately 5,200 feet east on Olympic Boulevard to Evergreen Avenue, including 1,750-foot bridge crossing on Olympic Boulevard. It would terminate at a 68.8 acre site proposed to be redeveloped as a mixed-use community approximately 2 miles southeast of downtown Los Angeles. The site is generally bound by East 8th Street to the north, Grande Vista Avenue to the east, Olympic Boulevard to the south, and South Soto Street to the west.

The Phase II segments abut commercial, residential, and public facilities uses. Phase II would be constructed in a fully urbanized area of the City of Los Angeles. Project activity would take place entirely within public rights-of-way.

METHODS

Literature Review

A literature review was conducted in 2012 and 2013 to determine sensitive plant species, animal species, and vegetation communities with the potential to occur in the Phase I and Phase II project sites. The California Natural Diversity DataBase (CNDDB) RareFind 3 program (2012 and 2013) and the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants* (2010) were reviewed for any information on known occurrences of sensitive species and communities within the Los Angeles and Hollywood USGS topographic quadrangles. Based on the literature review, 18 sensitive plant species and 11 wildlife species were identified as having the potential to occur in the vicinity of the project sites. Sensitive plant and wildlife species are listed in Enclosure 2. Three sensitive plant communities were also identified as having the potential to occur in the vicinity of the project sites: California Walnut Woodland, Southern Sycamore Alder Riparian Woodland, and Walnut Forest.

Field Survey

On April 25, 2013, AECOM (Ms. Erin Bergman and Ms. Cristina Lowery) conducted a botanical assessment of the proposed route for the potable water pipeline. On April 25, 2013, weather conditions consisted of clear skies and temperatures ranging from 68 to 75 degrees Fahrenheit. Wind speeds ranged for 1 to 3 mph.

On May 10, 2012, AECOM (Ms. Donna Germann and Ms. Cristina Lowery) conducted a wildlife survey of the proposed route for the recycled water pipelines, the proposed location for the proposed new 30,000 gallon forebay tank, the proposed new recycled and non-potable water pumping stations, and the proposed location for the new recycled water storage tank. On May 10, 2012 weather conditions consisted of clear skies with temperatures ranging from 65 to 73 degrees Fahrenheit. Winds were northwesterly and ranged from 1 to 4 mph.

The Phase I and Phase II project sites were evaluated for habitat suitable for the sensitive species identified in the literature review, as well as for protected trees and potential nesting habitat for migratory birds. Observed plants and wildlife were recorded; however, focused surveys for particular plants and animals were not conducted at this time.

RESULTS

Literature Review

Plants

Sensitivity status, general habitat requirements, and potential habitat presence or absence within the Phase I and Phase II project sites for the species identified during the literature review are provided in Enclosure 2. Only one sensitive plant is reported to have occurred in Elysian Park, Greata's aster (*Symphyotrichum greatae*). The source of the reported occurrence is a collection from 1932, mapped as a best guess to be in the Elysian Park area. In addition to individual species, the following sensitive plant communities are reported from the project vicinity: California walnut woodland, southern sycamore alder riparian woodland, and walnut forest. No sensitive plant communities are reported to have occurred in Elysian Park.

Wildlife

No sensitive wildlife are known to occur in the project site.

Phase I and Phase II of the project site do not occur within any Significant Ecological Areas or designated Critical Habitat.

Field Survey: Habitat

The field survey areas consisted of the proposed route for the recycled water pipelines and the potable water pipeline, the proposed location for the recycled and non-potable water pumping stations and the 30,000 gallon forebay tank, the proposed location for the potable water booster pump, and the proposed location for the new recycled water storage tank.

Phase I

Proposed Recycled Water and Potable Water Pipeline Alignments

The proposed alignment for the recycled water pipeline would roughly follow Riverdale Avenue, Blake Avenue, Dorris Place, Stadium Way, and Angels Point Road (Figure 1). The recycled water pipeline alignment would diverge from Angels Point Road at a hilltop near Elysian Fields. Discussion of the hilltop habitat is provided below under "Proposed Location for the Recycled Water Storage Tank".

The proposed route for the potable water pipeline would roughly follow Elysian Park Drive and existing hiking trails southeast of Park Drive, cross Stadium Way, travel directly up the hillside to Angels Point Road, and roughly follow Angels Point Road and Park Road to Elysian Fields (Figure 1). Stadium Way, Angels Point Road, Park Road, Elysian Park Drive, and Dorris Place are paved roads (Enclosure 1, Photos 1-4). Between Park Drive and Elysian Park Drive, the potable pipeline would follow existing hiking trails (Enclosure 1, Photo 5).

Native species adjacent to the proposed recycled water and potable water pipeline routes include: laurel sumac (*Malosma laurina*), western sycamore (*Plantanus racemosa*), blue elderberry (*Sambucus Mexicana*), native coast live oak (*Quercus agrifolia*), wild cucumber (*Marah* sp.), holly-leafed cherry (*Prunus ilicifolia*), lemonade berry (*Rhus integrifolia*), poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), southern California black walnut (*Juglans californica*), black walnut (*Juglans nigra*), California sagebrush (*Artemisia californica*), Botta's Clarkia (*Clarkia bottae*), mulefat (*Baccharis salicifolia*), western ragweed (*Ambrosia psilostachya*), chaparral whitethorn (*Ceanothus leucodermis*), and pine trees (*Pinus* sp.).

Ornamental and non-native species observed adjacent to the proposed recycled water pipeline route include Peruvian peppertree (*Schinus molle*), Brazilian peppertree (*Schinus terebinthifolius*), mousehole tree (*Myoporum laetum*), bird of paradise (*Strelitzia* sp.), bottle brush tree (*Callistemon* sp.), juniper (*Juniperus* sp.), eucalyptus species (*Eucalyptus* sp.), Russian thistle (*Salsola kali*), tree tobacco (*Nicotiana glauca*), cape leadwort (*Plumbago capensis*), spiny holdback (*Caesalpinia spinosa*), summer lilac (*Buddleya davidii*), cotoneaster (*Cotoneaster* sp.), acacia species (*Acacia* sp.), tree of heaven (*Ailanthus altissima*), tree tobacco (*Nicotiana glauca*), black mustard (*Brassica nigra*), castor bean (*Ricinus communis*), a variety of palm species (*Washingtonia* sp. and *Phoenix* sp.), and a variety of non-native grasses and annuals.

As a portion of the potable water pipeline would be trenched up the vegetated hillside southeast of Stadium Way, a botanical survey of this area was conducted on April 25, 2013. The vegetation communities surveyed at Elysian park in 2013 consist of three different vegetation types which include non-native grassland, eucalyptus woodland, and ornamental vegetation. These vegetation types and dominant plant species found within them are described below.

Non-Native Grassland

According to the modified Holland classification system (Oberbauer et al. 2008), non-native vegetation consists of a dense or sparse cover of annual grasses with flowering culms that range from .2- 1 meter in height. These can be associated with flowers when rainfall events are favorable.

Dominant Plant Species

Approximately one fourth of the vegetation within the BSA consists of non-native grassland. Dominant species found within this community include rip-gut brome (*Bromus diandrus*), short-pod mustard (*Hirshfeldia incana*), field mustard (*Brassica rapa*), mouse barley (*Hordeum murinum*), wild oats (*Avena fatua*), toyon (*Heteromeles arbutifolia*), blue elderberry (*Sambucus nigra* var. *caerulea*), sow thistle (*Sonchus oleraceus*), Sydney golden wattle (*Acacia longifolia*), black mustard (*Brassica nigra*), sticky bed-straw (*Galium aparine*) and poison oak (*Toxicodendron diversilobum*).

Eucalyptus Woodland

According to the modified Holland classification system, eucalyptus habitats vary from a single species thicket to a mixed species thicket with little or no shrubby understory. Eucalyptus thickets can also consist of scattered trees with a well developed herbaceous or shrubby understory. In many instances, eucalyptus forms a dense stand with a closed canopy. Eucalyptus species generate a large amount of leaf litter which has chemical characteristics that limit the growth of other species in the understory. Therefore, eucalyptus woodland can limit the floral diversity. Few native overstory species are present within eucalyptus woodland.

Dominant Plant Species

Approximately half of the vegetation within the BSA consisted of eucalyptus woodland. Dominant species include red river gum (*Eucalyptus camaldulensis*), manna gum (*Eucalyptus viminalis*), iron bark (*Eucalyptus sideroxylon*), flooded gum (*Eucalyptus rudis*) and eucalyptus (*Eucalyptus* sp.), rip-gut brome, short-pod mustard, field mustard, mouse barley, wild oats, toyon, sow thistle, Sydney golden wattle, black mustard, sticky bedstraw and poison oak.

Ornamental Vegetation/Disturbed Habitat

According to the modified Holland classification system, ornamental vegetation/disturbed habitat consists of areas that have been physically disturbed and no longer consist of a native vegetation association. These areas continue to retain soil substrate. Vegetation that is found within these areas includes ornamental species or exotic species that take advantage of areas that have been disturbed.

Dominant Plant Species

Approximately one fourth of the BSA consists of ornamental/disturbed habitat. Dominant species include Sydney golden wattle, aleppo pine (*Pinus halepensis*), Canary island pine (*Pinus canariensis*) Peruvian pepper tree (*Shinus molle*), black mustard, poison oak, rip-gut brome and blue elderberry.

Proposed Location for the Recycled and Non-Potable Water Pumping Stations and 30,000 Gallon Forebay Tank

The proposed location for the new recycled and non-potable water pumping stations, and the 30,000 gallon forebay tank, is a paved and bare area immediately southwest of I-5, directly across from Dorris Place (Enclosure 1, Photo 7). The proposed location can be accessed via a paved road east of Stadium Way. The paved road is secured with a locked gate. An existing pumping station, which would be removed as part of the project, is located immediately northwest of the proposed location for these three facilities (Enclosure 1, Photo 8).

Vegetation surrounding the proposed recycled water pumping station location is heavily disturbed and dominated by non-native species. Species present include: pine, eucalyptus, poison oak, mulefat, castor bean, douglas' nightshade (Solanum douglasii), and a variety of non-native grasses and annuals. Pine trees also occur in the vicinity of the proposed location.

Proposed Location for the Recycled Water Storage Tank

The hilltop near Elysian Fields is located immediately north of Angels Point Road and is proposed for placement of the new approximately 2 million gallon recycled water storage tank. An existing water tank is present on the hilltop, which is sloped, and characterized by native, ornamental, and disturbed vegetation (Enclosure 1, Photo 9). The proposed recycled water pipeline would diverge from Angels Point Road southwest of the hilltop and bisect the hilltop to connect with the proposed recycled water storage tank (Enclosure 1, Photo 10).

Native species in the hilltop area and vicinity include: blue elderberry, toyon, southern California black walnut, chaparral whitethorn, laurel sumac, and poison oak. Ornamental and non-native species include: Russian thistle, *Acacia* species, tree of heaven, *Washingtonia* palm species, tree tobacco, black mustard, western ragweed, eucalyptus, and a variety of non-native grasses and annuals.

Phase II

Proposed Recycled Water Pipeline Route

The proposed route for the recycled water pipeline is located within public streets in the urbanized and fully developed communities of Chinatown, downtown Los Angeles, Exposition Park, and Boyle Heights (Enclosure 1, Photos 11-13).

Species observed adjacent to the proposed pipeline route are primarily non-native or ornamental, including: pine, eucalyptus, palm, and Italian cypress (*Cupressus sempervirens*).

Field Survey: Wildlife

Urban park settings provide habitat for common wildlife species typically adapted to disturbed areas and human presence. Native and disturbed habitat and ornamental vegetation found adjacent to the proposed route for the recycled water pipeline and potable water pipeline and within the proposed locations for the potable water pumping station, recycled water pumping station, and new potable and recycled water tanks provides habitat for a variety of nesting birds and potential habitat for certain species of roosting bats.

Phase I

Twelve species of bird were observed during the reconnaissance survey performed in 2012 and are typically associated with such urban park settings. These species include black phoebe (*Sayornis nigricans*), kingbird (*Tyrannus* sp.), phainopepla (*Phainopepla* nitens), common raven (*Corvus corax*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), wrentit (*Chamaea fasciata*), spotted towhee (*Pipilo maculates*), California towhee (*Pipilo crissalis*), house sparrow (*Passer domesticus*), mourning dove (*Zenaida macroura*), western-scrub jay (*Aphelocoma californica*). Additionally, a red-tailed hawk (*Buteo jamaicensis*) was detected in the project vicinity.

Phase II

Two species of bird were observed during the reconnaissance survey and are typically associated with highly developed, urban settings. These species were common raven and rock dove (*Columba livia*).

Wildlife Corridors and Habitat Linkages

In an urban context, a wildlife migration corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two patches of comparatively undisturbed habitat, or between a patch of habitat and some vital resources. Regional corridors are defined as those linking two or more large areas of natural open space and local corridors are defined as those allowing resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development.

Wildlife migration corridors are essential in geographically diverse settings, and especially in urban settings, for the sustenance of healthy and genetically diverse animal communities. At a minimum, they promote colonization of habitat and genetic variability by connecting fragments of like habitat and they help sustain individual species distributed in and among habitat fragments. Habitat fragments, by definition, are separated by otherwise foreign or inhospitable habitats, such as urban/suburban tracts. Isolation of populations can have many harmful effects and may contribute significantly to local species extinction.

A viable wildlife migration corridor consists of more than a path between habitat areas. To provide food and cover for transient species as well as resident populations of less mobile animals, a wildlife migration corridor must also include pockets of vegetation.

Phase I

Several noncontiguous open spaces support suitable habitat for a variety of wildlife near Elysian Park, including: Mt. Washington (1 mile northeast), Arroyo Seco Park (2 miles northeast), Topanga State Park (16 miles west), Angeles National Forest (10 miles north), Griffith Park (5 miles northwest), and Echo Park (less than 1 mile west). Elysian Park is not part of a major contiguous linkage between two or more large areas of open space, and thus does not serve as a regional wildlife corridor. However, Elysian Park contains suitable acreage for local terrestrial wildlife migration within the Park.

Phase II

Vegetation located along public streets associated with Phase II of the project are primarily ornamental and support a variety species adapted to high levels of disturbance such as common raven, house finch, house sparrow, mourning dove, and western-scrub jay, as indicated by the species observed by AECOM. However, there are no adjacent large open space areas borders the Phase II project site. Therefore, the Phase II alignment does not provide opportunity for wildlife migration.

RECOMMENDATIONS

Sensitive Plants

Phase I

Phase I 2013 survey areas are developed, disturbed, or consist of non-native habitat and do not present quality habitat for sensitive plant species. As addressed above, Greata's aster is reported to have occurred in Elysian Park in 1932. It was not found in the 2013 survey based upon additional subsequent development in the area and vegetation habitat type conversion(s). Additionally, due to the presence of non-native, disturbed habitats in the BSA, Greata's aster is unlikely to be found in the seed bank occurring on-site. No sensitive plants are expected to occur. No sensitive plants were observed during general surveys by AECOM in 2012 or 2013. No surveys for sensitive plants are recommended.

Phase II

Phase II survey areas are fully developed and located within public streets. No sensitive plants were observed during general surveys by AECOM in 2012. No surveys for sensitive plants are recommended.

Protected Trees

Phase I

The City of Los Angeles (City), Department of Recreation and Parks (DRP) Urban Forest Program provides direction for the care of trees within City parkland. DRP recognizes and implements regulatory procedures for trees specified in the Tree Preservation Policy. The Tree Preservation Policy regulates protection of trees in four categories: Trees Protected by LA City Ordinances, Heritage Trees, Special Habitat Value Trees, and all other Common Park Trees. The Urban Forest Program *Tree Care Manual* (2004) describes all regulations, standards, and specifications for implementation of the Tree Preservation Policy. Pruning of park trees must adhere to the recommendations described in section 3.10 of the Urban Forest Program *Tree Care Manual*. The Tree Removal Procedure (Appendix J of the Urban Forest Program *Tree Care Manual*) must be followed for the removal of any park trees.

Coast live oaks occur adjacent to and overhanging the proposed route for the Phase I potable and recycled water pipeline alignments and should be avoided. Trimming should not occur and if it is requested, a certified arborist should monitor all work done to accommodate construction vehicles or equipment. Oak trees are protected from removal by the City of Los Angeles Native Tree Protection Ordinance (Los Angeles Municipal Code Section 17.05.R), enforced by the Los Angeles Department of Public Works Bureau of Street Services. For pruning of trees protected by the Ordinance (branches larger than 2 inches in diameter), the DRP requires a permit from the Board of Public Works (Urban Forest Program *Tree Care Manual*, Section 3.10). Any permitted pruning must be done in compliance with the Oak Tree Pruning Standards set forth by the Western Chapter of the International Society of Arboriculture (e.g., ANSI A300 tree care standards).

California sycamores, southern California walnut, California bay, and toyon are present in outlying areas throughout the Phase I survey areas. These species occur adjacent to, and may overhang, the proposed route for the Phase I water pipelines. Blue elderberry and toyon are intermixed with the ornamental vegetation community; individual specimens may require trimming to accommodate construction vehicles and equipment or trimming may be required for installation of the pipeline. These species are considered Special Habitat Value Trees and are protected under the Native Tree Protection Ordinance. Before any alterations (damage, relocation, or removal) to Special Habitat Value Trees, a recommendation for action must be obtained from RAP Arborists. The recommendation must be approved by the General Manager of DRP or his/her designee before any action proceeds. Furthermore, all actions relating to pruning or removing blue elderberry or toyon (growth habitat tree form within BSA) must comply with all relevant components of RAP's Urban Forest Program *Tree Care Manual*. Replacement of removed trees in accordance with Los Angeles City Landscape Policy (Urban Forest Program *Tree Care Manual*, Appendix M) is also required.

No Heritage Trees would be affected by Phase I of the proposed project.

RAP regulates protection of mature exotic park trees, referred to as Common Park Trees, under the Tree Preservation Policy. Ornamental trees along the Phase II recycled water pipeline route may be considered Common Park Trees. Common Park Trees may be removed with the recommendation of the Forestry Arborist.

Phase II

No tree removal would occur as part of Phase II because all activity would occur within public streets. Trees are located adjacent to, and may overhand, the proposed route for the Phase II water pipeline. Individual specimens may require trimming to accommodate construction vehicles and equipment. Trees Protected by LA City Ordinances, Heritage Trees, Special Habitat Value Trees, and all other Common Park Trees were not observed along the proposed route for Phase II.

Sensitive Plant Communities

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or particularly high wildlife value or provide habitat to rare or endangered species (CNDDB 2012). Phase I and Phase II survey areas did not contain any sensitive vegetation communities.

Sensitive Wildlife

Phase I

Trees and palms through the Phase I survey area provide marginally suitable roosting habitat for hoary bats (*Lasiurus cinereus*). However, the probability for sensitive species of bat to occur on site is low to not expected. No surveys for roosting bats are warranted.

Phase II

The Phase II survey areas did not contain any sensitive wildlife species or habitat.

Migratory Bird Treaty Act

Phases I and II

Congress passed the Migratory Bird Treaty Act (MBTA) in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the United States and Great Britain, the United States and Mexico, the United States and Japan, and the United States and Russia. Although no permit is issued under the MBTA, if vegetation removal within the Project Area occurs during the breeding season for raptors and migratory birds (February 15 through September 15), the U.S. Fish and Wildlife Service requires that surveys be conducted to locate active nests within the construction area. If active raptor or migratory bird nests are detected, project activities may be temporarily curtailed or halted. The project must comply with the MBTA.

The project site for Phases I and II and adjacent areas contain bridges, mature trees, and other vegetation that is suitable for use by migratory birds. Should construction activities or vegetation trimming at the project site occur during the breeding season for migratory non-game native bird species (generally considered to be between February 15 and September 15, depending on seasonal conditions), it is recommended that nesting bird surveys be conducted in order to detect any protected native birds nesting within the construction work area. Surveys should be conducted weekly, beginning no earlier than 30 days and ending no later than 3 days prior to the commencement of disturbance. If an active nest is discovered, disturbance within a particular buffer should be prohibited until nesting is complete; the buffer distance should be determined by the biological monitor in consideration of species sensitivity and existing nest site conditions. Limits of avoidance should be demarcated with flagging or fencing. Once a flagged nest is determined to be no longer active, the biological monitor would remove all flagging and allow construction activities to proceed. The surveys and actions described above will assure compliance with the Migratory Bird Treaty Act of 1918.

Sincerely,

Erin Bergman,
Biologist
Erin.Bergman@aecom.com

and

Donna Germann,
Biologist
Donna.Germann@aecom.com

Figure 1: Phase I,Elysian Park Water Recycling Project Preferred Sites and Routes
Figure 2: Phase I, Vegetation Community Map-Portion of Potable Water Pipeline Alignment

Figure 3: Phase II, Elysian Park Water Recycling Project Preferred Sites and Routes
Enclosures: 1. Photos of the Survey Area
2. Federally-listed, State-listed, and Species of Special Concern with Potential to Occur in the Survey Area

REFERENCES

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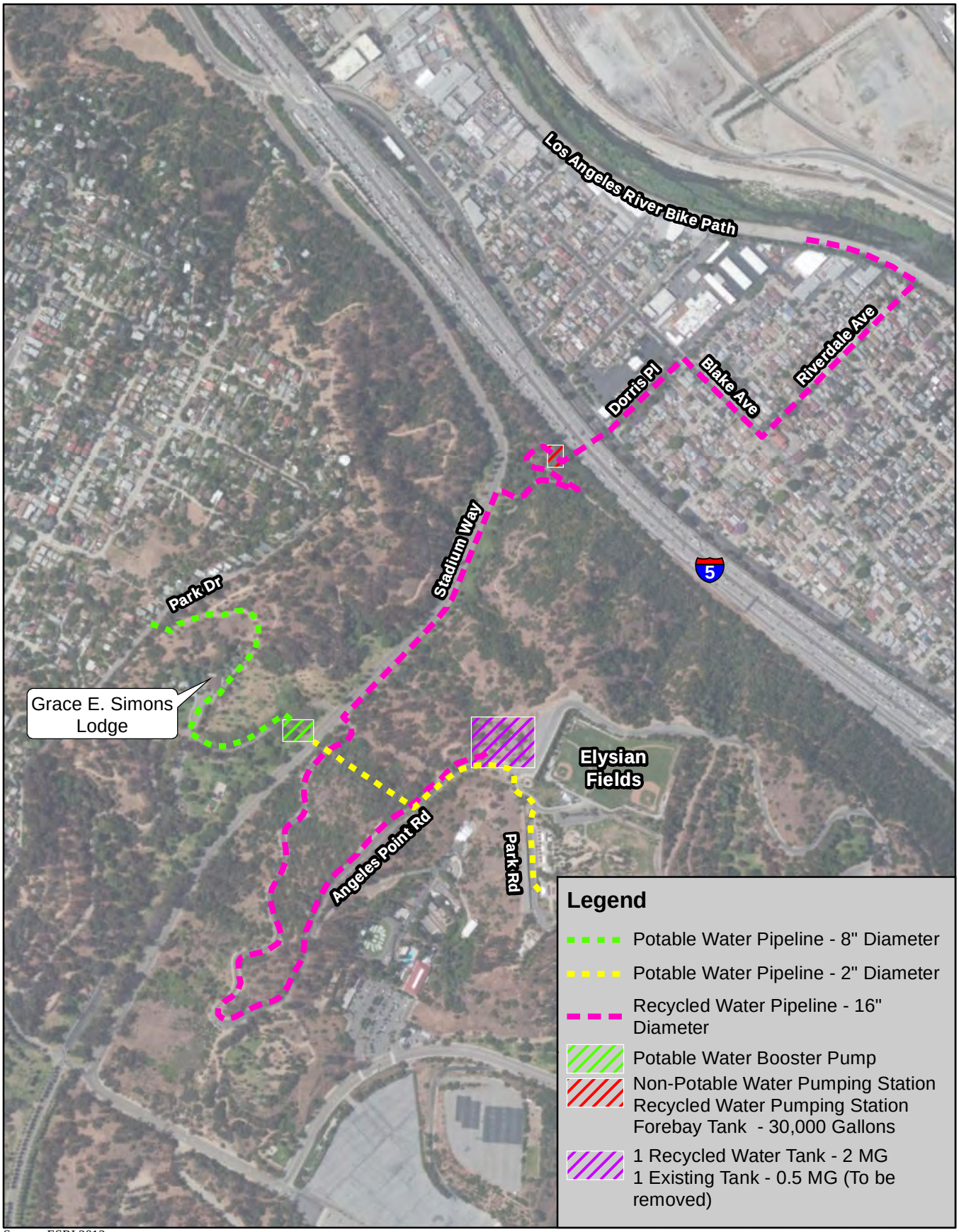

Source: ESRI 2012

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0 500 1,000 Feet

Figure 1
Phase I
Preferred Sites and Routes

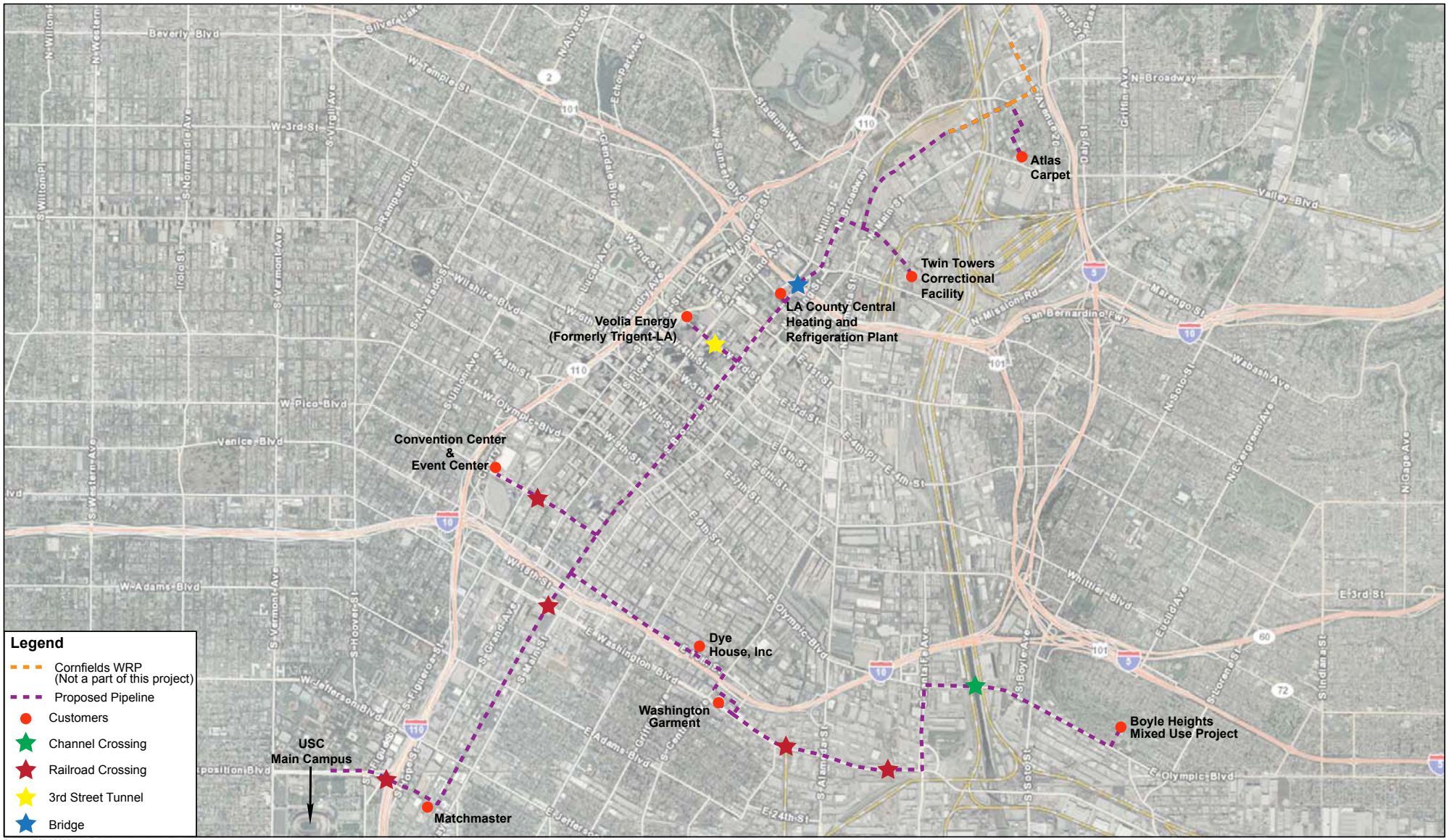

Figure 2
Phase II
Preferred Sites and Routes

Source: AECOM 2013; Microsoft 2013

150 0 150 Feet

Scale: 1 = 1,800; 1 inch = 150 feet

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Figure 3

Vegetation Communities

Enclosure 1

PHOTOS
OF THE SURVEY AREA

Photo 1. Photo of proposed potable and recycled water pipelines route and surrounding vegetation along Angels Point Road. Photo facing north.

Photo 2. Photo of proposed recycled water pipeline route between Stadium Way and the proposed location for a new recycled water pumping station. Photo facing east.

Photo 3. Photo of recycled water pipeline route along Dorris Place. Photo facing northeast.

Photo 4. Photo of proposed potable water pipeline route and surrounding vegetation between Elysian Park Drive and hiking trails west of Park Drive. Photo facing north.

Photo 5. Photo of proposed potable water pipeline route, within an existing compact hiking trail, between Park Drive and paved roads adjacent to Grace E. Simons Lodge and Elysian Park Drive. Photo facing west.

Photo 6. Photo of the proposed site for the new potable water pumping station near the Grace E. Simons Lodge. Photo facing southwest.

Photo 7. The proposed location for the new recycled water pumping station is a bare area immediately southwest of the Golden State Freeway, directly across from Dorris Place. Photo facing east.

Photo 8. Existing electrical boxes and utilities are located immediately northwest of the proposed recycled water pumping station location. Photo facing north.

Photo 9. Photo depicting the existing water tank and surrounding habitat on the hilltop by Elysian Fields. Photo facing north.

Photo 10. Photo depicting the approximate location where the proposed recycled and potable water pipelines would diverge from Angels Point Road bisect the hill and surrounding vegetation to connect with the proposed water tanks. Photo facing northeast.

Photo 11. Photo depicting highly-developed and urbanized setting characteristic of the Phase II proposed pipeline.

Photo 12. Photo depicting ornamental trees and vegetation present along the Phase II proposed pipeline.

Photo 13. Photo depicting bridges and overpasses present along the Phase II proposed pipeline.

Enclosure 1. Federally-listed, State-listed, and Species of Special Concern with Potential to Occur in the Survey Area

Common Name *Scientific Name*	Sensitivity Status	General Habitat Description	Potential to Occur in the Survey Area
Plants			
marsh sandwort *Arenaria paludicola*	USFWS: FE CDFG: SE CNPS: List 1B.1	Found in marshes and swamps. Elevation 10-170 meters. Blooms May-August.	Not Expected. The Survey Area does not contain suitable habitat for this species. The only reported occurrence in the vicinity of the Survey Area was in 1900 in the community of Cienega.
Braunton's milk-vetch *Astragalus brauntonii*	USFWS: FE CDFG: None CNPS: List 1B.1	Found in recently burned or disturbed areas; in stiff gravelly clay soils overlying granite or limestone. Associated with closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grassland. Elevation 4-640 meters. Blooms January-August.	Not Expected. The hilltop contains marginally suitable habitat for this species, however, the species has not been reported in the vicinity of the Survey Area for 100 years. The last reported occurrences of Braunton's milk-vetch in the vicinity of the Survey Area were in 1908 in the foothills above West Hollywood (now presumed extirpated), and a possible collection in the vicinity of Cienega in 1904.
coastal dunes milk-vetch *Astragalus tener* var. *titi*	USFWS: FE CDFG: SE CNPS: List 1B.1	Found in moist, sandy depressions or bluffs or dunes along and near the Pacific ocean. Associated with coastal bluff scrub, coastal dunes. Elevation 1-50 meters. Blooms March-May.	Not Expected. The Survey Area does not contain suitable habitat for this species.
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	USFWS: None CDFG: None CNPS: List 1B.2	Found in alkaline soils. Associated with coastal bluff scrub and coastal scrub. Elevation 3-250 meters. Blooms April-October.	Not Expected. The Survey Area does not contain suitable habitat for this species.
round-leaved filaree *California macrophylla*	USFWS: None CDFG: None CNPS: List 1B.1	Found in clay soils. Associated with cismontane woodland and valley and foothill grassland. Elevation 15-1,200 meters. Blooms March-May.	Not Expected. The Survey Area does not contain suitable habitat for this species.

Common Name ***Scientific Name***	**Sensitivity Status**	**General Habitat Description**	**Potential to Occur in the Survey Area**
Plummer's mariposa lily *Calochortus plummerae*	USFWS: None CDFG: None CNPS: List 1B.2	Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. Associated with coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, and lower montane coniferous forest. Elevation 90-1,610 meters. Blooms May-July.	Not Expected. The hilltop contains marginally suitable habitat for this species, however, the species was not detected during general surveys which coincided with its blooming period and it has not been reported in the vicinity of the Survey Area for almost 100 years. The last reported occurrences of Plummer's mariposa lily in the vicinity of the Survey Area were in 1913 on Poppy Peak in Garvanza, and in 1901 in the hills above West Hollywood.
Plummer's mariposa lily *Calochortus plummerae*	USFWS: None CDFG: None CNPS: List 1B.2	Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. Associated with coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, and lower montane coniferous forest. Elevation 90-1,610 meters. Blooms May-July.	Not Expected. The hilltop contains marginally suitable habitat for this species, however, the species was not detected during general surveys which coincided with its blooming period and it has not been reported in the vicinity of the Survey Area for almost 100 years. The last reported occurrences of Plummer's mariposa lily in the vicinity of the Survey Area were in 1913 on Poppy Peak in Garvanza, and in 1901 in the hills above West Hollywood.
Santa Barbara morning-glory *Calystegia sepium* ssp. *Binghamiae*	USFWS: None CDFG: None CNPS: 1A	Found on dry, rocky open slopes and rock outcrops. Associated with coastal marshes. Elevation 0-30 meters. Blooms April-May.	Not Expected. The Survey Area does not contain suitable habitat for this species.
southern tarplant *Centromadia parryi* ssp. *australis*	USFWS: None CDFG: None CNPS: 1B.1	Often found in disturbed sites near the coast at marsh edges; also in alkaline soils, sometimes with saltgrass. Associated with marshes and swamps (margins), valley and foothill grassland. Elevation 0-30 meters. Blooms May-November.	Not Expected. The Survey Area does not contain suitable habitat for this species.
many-stemmed dudleya *Dudleya multicaulis*	USFWS: None CDFG: None CNPS: 1B.2	Found in heavy, often clayey soils or grassy slopes. Associated with chaparral, coastal scrub, and valley and foothill grassland. Elevation 0-790 meters. Blooms April-July.	Not Expected. The Survey Area does not contain suitable habitat for this species.

Common Name ***Scientific Name***	Sensitivity Status	General Habitat Description	Potential to Occur in the Survey Area
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	USFWS: None CDFG: None CNPS: 1A	Known from both coastal salt and freshwater marshes and swamps.	Not Expected. The Survey Area does not contain suitable habitat for this species.
mesa horkelia *Horkelia cuneata* ssp. *puberula*	USFWS: None CDFG: None CNPS: List 1B.1	Found on sandy or gravelly sites. Associated with chaparral, cismontane woodland, and coastal scrub. Elevation 70-810 meters. Blooms February-July (September).	Not Expected. The hilltop contains marginally suitable habitat for this species, however, the species was not detected during general surveys which coincided with its blooming period and it has not been reported in the vicinity of the Survey Area for 90 years. The last reported occurrences of mesa horkelia in the vicinity of the Survey Area were in 1902 in Garvanza, and in 1918 in Griffith Park.
Orcutt's linanthus *Linanthus orcuttii*	USFWS: None CDFG: None CNPS: List 1.B3	Sometimes found in disturbed areas, often in gravelly clearings. Associated with chaparral, lower montane coniferous forest. Elevation 1,060-2,000 meters. Blooms May-June.	Not Expected. The Survey Area does not contain suitable habitat for this species.
Gambel's water cress *Nasturtium gambelii*	USFWS: Endangered CDFG: Threatened CNPS: List 1B.1	Found in freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. Associated with marshes and swamps. Elevation 5-1305 meters.	Not Expected. The Survey Area does not contain suitable habitat for this species.
prostrate vernal pool navarretia *Navarretia prostrata*	USFWS: None CDFG: None CNPS: List 1B.1	Found in alkaline soils in grassland, or in vernal pools; mesic alkaline sites. Associated with coastal scrub, valley and foothill grassland, vernal pools. Elevation 15-700 meters. Blooms April-July.	Not Expected. The Survey Area does not contain suitable habitat for this species.
white rabbit-tobacco *Pseudognaphalium leucocephalum*	USFWS: None CDFG: None CNPS: List 2.2	Found in sandy, gravelly sites. Associated with riparian woodland, cismontane woodland, coastal scrub, chaparral. Elevation 0-2,100 meters. Blooms (July) August-November (December).	Not Expected. The hilltop contains marginally suitable habitat for this species, however, the species was not detected during general surveys and it has not been reported in the vicinity of the Survey Area for more than 80 years. The last reported occurrence of white rabbit-tobacco in the vicinity of the Survey Area was in 1925 in the general area of Pasadena.

Common Name *Scientific Name*	Sensitivity Status	General Habitat Description	Potential to Occur in the Survey Area
Parish's gooseberry *Ribes divaricatum* var. *parishii*	USFWS: None CDFG: None CNPS: List 1.A	Found in willow swales in riparian habitats. Associated with riparian woodland. Elevation 65-100 meters. Blooms February-April.	Not Expected. The Survey Area does not contain suitable habitat for this species.
San Bernardino aster *Symphyotrichum defoliatum*	USFWS: None CDFG: None CNPS: 1B.2	Found in vernally mesic grassland or near ditches, streams and springs. Also found in disturbed areas. Associated with meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, and grassland. Elevation 2-2,040 meters. Blooms July-November.	Not Expected. The Survey Area does not contain suitable habitat for this species.
Greata's aster *Symphyotrichum greatae*	USFWS: None CDFG: None CNPS: 1B.3	Found in mesic canyons. Associated with chaparral and cismontane woodland. Elevation 800-1,500 meters. Blooms June-October.	Not Expected. The hilltop contains marginally suitable habitat for this species, however, the species was not detected during general surveys which coincided with its blooming period, and it has not been reported in the vicinity of the Survey Area for more than 75 years. The last reported occurrences of Greata's aster in the vicinity of the Survey Area were in 1902 in Arroyo Seco, near Garvanza, and in 1932 in Elysian Park.
Wildlife			
Insects			
Buck's gallmoth *Carolella busckana*	USFWS: None CDFG: None	Unknown	Not Expected. Very little is known about this species' habitat requirements; the only reported occurrence(extirpated in 1939) of Buck's gall moth occurred in Beverly Hills, 7 miles west of Elysian Park.
Reptiles			
coast (San Diego) horned lizard *Phrynosoma coronatum blainvillii*	USFWS: None CDFG: CSC	A variety of habitats including sage scrub, chaparral, and coniferous and broad-leafed woodlands. Most common in lowlands along sandy washes with scattered low bushes. Requires abundand supply of ants and other insects, open areas, bushes, and fine loose soil.	Not Expected. The Survey Area does not contain suitable habitat for this species.

Common Name *Scientific Name*	Sensitivity Status	General Habitat Description	Potential to Occur in the Survey Area
Birds			
burrowing owl *Athene cunicularia*	USFWS: None CDFG: CSC	A subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. Prefers open, dry annual, or perennial grasslands, deserts and scrublands with low-growing vegetation.	Not Expected. The Survey Area does not contain suitable habitat for this species.
southwestern willow flycatcher *Empidonax traillii extimus*	USFWS: FE CDFG: SE	Utilizes riparian woodlands in southern California	Not Expected. The Survey Area does not contain suitable habitat for this species.
coastal California gnatcatcher *Polioptila californica californica*	USFWS: FT CDFG: CSC	A permanent resident of coastal sage scrub in arid washes, mesas, and slopes.	Not Expected. The Survey Area does not contain suitable habitat for this species.
Mammals			
pallid bat *Antrozous pallidus*	USFWS: None CDFG: CSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Low. The Survey Area does not contain rocky habitat suitable habitat for this species. The surrounding area for Phase I contains potentially suitable habitat, however it is severely reduced, and the only reported occurrences in the vicinity of the project was 1951 or earlier in the vicinities of San Dimas and Glendora, approximately 1.0 mile south and 4.0 miles west of the Survey Area, respectively.
western mastiff bat *Eumops perotis californicus*	USFWS: None CDFG: CSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral. Primarily a cliff-dwelling species, but also known to roost in high buildings, trees, and tunnels. Roost locations are generally high above the ground, providing a 3m minimum clearance below the entrance for flight. Requires large open-water drinking sites.	Low. The Trees and palms within the Survey Area for Phase I provide potentially suitable habitat. However, no cliffs are present and the only reported occurrences in the vicinity of the project were from 1958 or earlier in the vicinities of La Vern and Glendora, approximately 1.5 miles southeast and 2.0 miles northwest of the Survey Area, respectively.

Common Name *Scientific Name*	Sensitivity Status	General Habitat Description	Potential to Occur in the Survey Area
hoary bat *Lasiurus cinereus*	USFWS: None CDFG: CSC	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees, and have been found in trees in dense forests, open wooded areas, and urban parks. Feeds primarily on moths. Requires water.	Low: Trees within the Phase I Survey Area provide potentially suitable roosting habitat. The only known occurrences of this species in the vicinity were from 1992, 1977, and 1942 approximately 3 miles northwest, 2 miles northwest, and 1.5 miles south of the Survey Area, respectively.
south coast marsh vole *Microtus californicus stephensi*	USFWS: None CDFG: CSC	Inhabits tidal marshes.	Not Expected. The Survey Area does not contain suitable habitat for this species.
big free-tailed bat *Nycinomops macrotis*	USFWS: None CDFG: CSC	Low-lying arid areas in southern California; need high cliffs or rocky outcrops for roosting sites; feeds principally on large moths	Not Expected. The Survey Area does not contain suitable habitat for this species.
American badger *Taxidea taxus*	USFWS: None CDFG: CSC	Inhabits dry open stages of most shrub, forest, and herbaceous habitats; requires sufficient food source, friable soils and open, uncultivated ground.	Not Expected. The Survey Area does not contain suitable habitat for this species.

[1]Federal U.S. Fish and Wildlife Service (USFWS):
Federally Threatened (FT), Federally Endangered (FE)
U.S. Forest Service (USFS): Sensitive

State California Department of Fish and Game (CDFG):
State Threatened (ST), State Endangered (SE), State Species of Special Concern (CSC), State Rare (SR), State Fully-Protected (SFP), no state status, but tracked by the California Natural Diversity DataBase or otherwise considered to be locally sensitive (CNDDB)

CNPS California Native Plant Society:
List 1A: Plants presumed extinct in California
List 1B: Plants rare, threatened, or endangered in California and elsewhere
List 2: Plants rare, threatened, or endangered in California, but more common elsewhere
List 3: Plants about which we need more information
List 4: Plants of limited distribution – a watch list
Threat Ranks
0.1- Seriously threatened in California (high degree/immediacy of threat)
0.2- Fairly threatened in California (moderate degree/immediacy of threat)
0.3- Not very threatened in California (low degree/immediacy of threats or no current threats known)