BIOLOGICAL RESOURCES ASSESSMENT

FOR

LAKE GREGORY

SEDIMENT MANAGEMENT AND BIORETENTION PROGRAM

Prepared for:

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SUMMARY

San Bernardino County Regional Parks Department proposes the construction of debris/sediment basins at Lake Gregory to minimize long-term sedimentation impacts to the lake and its fishery and to facilitate regular lake maintenance activities. Lake Gregory is located in the San Bernardino Mountains approximately 72 miles east of Los Angeles and 14 miles north of San Bernardino in the community of Crestline.

The proposed project would include the enhancement of an existing debris/sediment basin west of the lake and adjacent to the local public library, construction of a new debris/sediment basin east of the existing basin and Lake Gregory Drive, construction of a new debris/sediment basin at the location of Houston Creek South, realignment of the Houston Creek South channel that discharges to the lake, and removal of sediment accumulated at the south fork of Houston Creek South channel. Additionally, Regional Parks proposes the implementation of a long-term maintenance plan to allow for annual sediment removal and as-needed maintenance of all debris/sediment basins and lake culvert outlets.

One-time construction activities associated with construction of the proposed debris/sediment basins, channel realignment, and sediment removal at the delta would result in impacts to a total of approximately 5.07 acres. Construction of the proposed facilities would impact approximately 3.84 acres of natural habitats including Ponderosa pine forest, lacustrine habitat, red willow thickets, wetland, semi-natural herbaceous stands, and stream. Approximately 1.23 acres of anthropogenic habitats, including sand beaches, parking lot, and developed parkland, would also be impacted. Impacts associated with culvert maintenance and sediment removal are not defined and would occur on an as-needed basis as determined by the Park operating staff. Impacts associated with these activities would be sited to minimize disturbance to the adjacent habitat and lake as much as practicable. Impacts are not expected to exceed one acre per year from typical maintenance activities.

The lake and the adjacent riparian and wetland areas are subject to the jurisdiction of the California Department of Fish and Wildlife, the Lahontan Regional Water Quality Control Board, and the U.S. Army Corps of Engineers. Applicable regulatory permits will be obtained prior to project implementation. It is recommended that mitigation in Section 10 of this report be implemented as part of the project when submitting permit applications to the regulatory agencies.

1.0 INTRODUCTION

1.1 PROJECT LOCATION

Lake Gregory is located in the San Bernardino Mountains approximately 72 miles east of Los Angeles and 14 miles north of San Bernardino in the community of Crestline (see Figure 1). The lake is accessible via Lake Drive off of Highway 138 to Crestline (see Figure 2). The subject project site occurs in Section 23, Township 2 North, Range 4 West, San Bernardino Baseline and Meridian of the San Bernardino North USGS 7.5-minute topographic quadrangle.

1.2 PROJECT DESCRIPTION

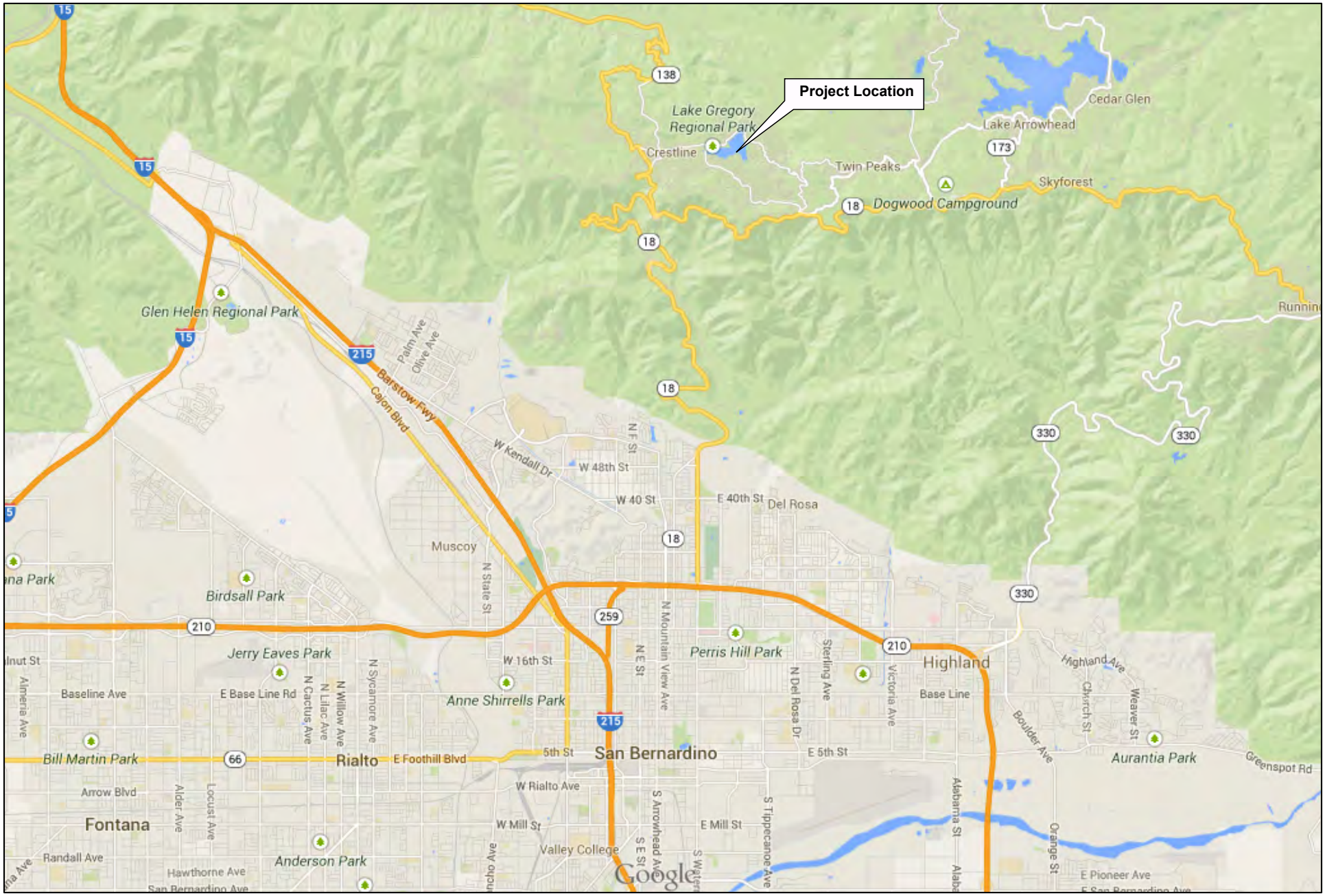
The San Bernardino County Regional Parks Department (Regional Parks) operates Lake Gregory as a regional park that offers year round recreational opportunities to its patrons. Amenities available at the park are anchored by Lake Gregory and include: seasonal boating and swimming, and year round shore fishing, picnic facilities, exercise stations, a skate park, and a dog park.

Lake Gregory is an artificial lake located in the community of Crestline in the San Bernardino Mountains. Refer to Figures 1 and 2 for a Regional Location Map and a Vicinity Map/Aerial Photograph of the lake. The lake is naturally fed by storm runoff and snow melt from the east and west forks of Houston Creek. The normal water level of the lake is set by the Lake Gregory Dam spillway at 4,517 feet above mean sea level. The capacity of the lake is increased by three feet in the spring and summer months via the installation of flashboards on the lake spillway. The flashboards are removed following Labor Day on September 10th of each year. Water levels at the lake may fluctuate by up to five feet below the spillway elevation depending on the season's precipitation.

Regional Parks proposes to establish a sediment management and bioretention program for the near-term and on-going maintenance for silt removal to improve the lake's beneficial uses. The Proposed Project's objectives are to establish a plan for routine maintenance of the lake in order to improve water clarity and quality, enhance recreational features, and improve fishery habitat resources of the lake. Regional Parks proposes to conduct maintenance activities on a year-round basis with seasonal restrictions on certain activities.

Lake Gregory Sediment Management and Bioretention Program

The Lake Gregory sediment management and bioretention program encompasses four primary areas around the lake that have been identified for the removal of accumulated sediment and development of new/improved debris basins designed to prevent future settlement from impacting lake bottom elevations, isobaths and the lake's aquatic habitat. The four primary project areas are shown on Figure 3 and described as follows:



REGIONAL VICINITY

Lake Gregory Sediment Management
and Bioretention Program
San Bernardino County, California

FIGURE 1

Approximate Miles

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PROJECT LOCATION

Lake Gregory Sediment Management
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San Bernardino County, California

FIGURE 2

N

0 600

Approximate Feet

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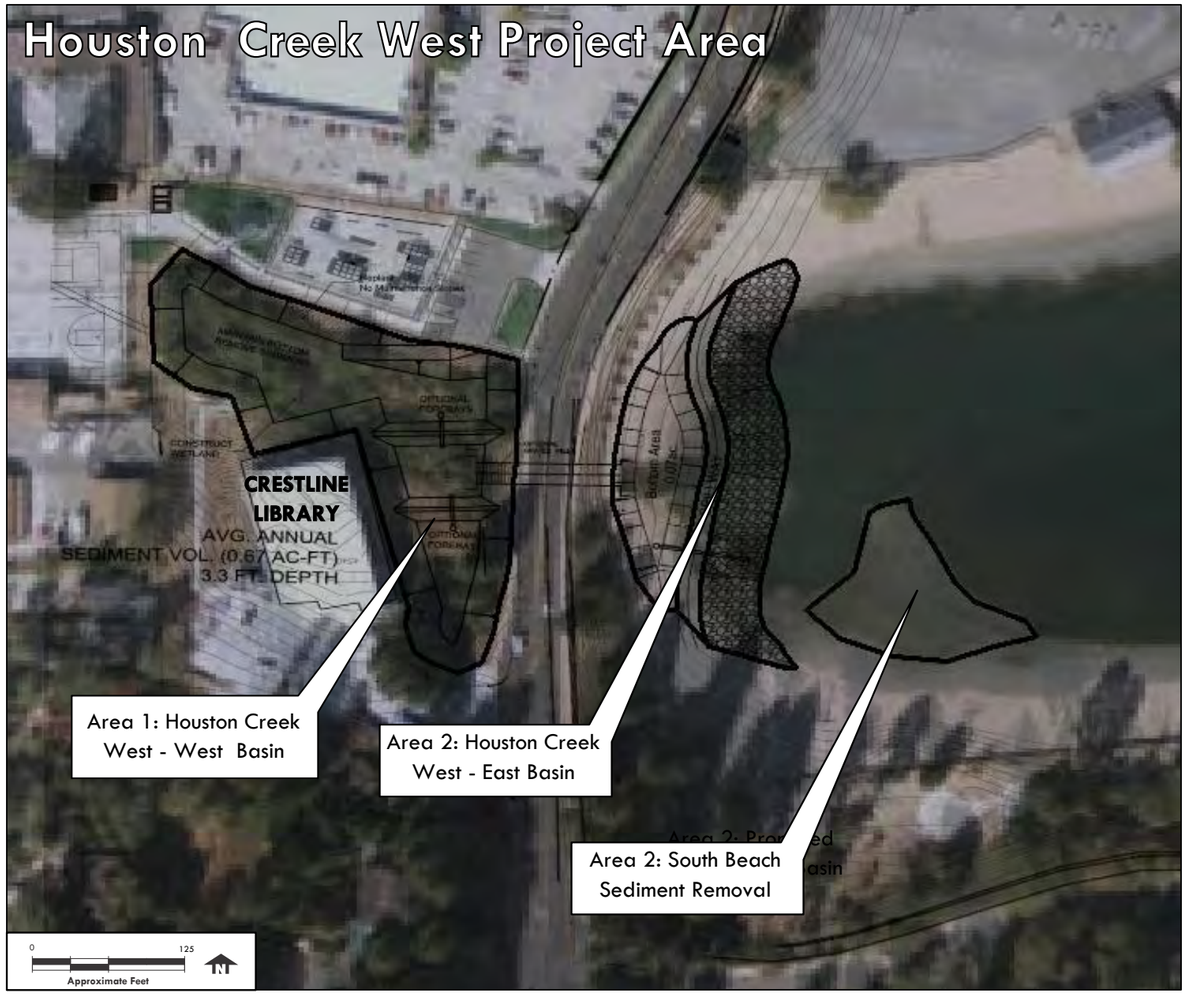

Source: Albert A. Webb Associates, Lake Gregory Debris Reduction Study Conceptual Debris Basins Aerial: San Bernardino County 10/2013

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PROJECT PLANS

Lake Gregory Sediment Management and Bioretention Program
San Bernardino County, California

FIGURE 3

Houston Creek West

Area 1: Existing Houston Creek West – West Debris/Sediment Basin

This existing debris basin is located on the west side of Lake Gregory Drive adjacent to the Crestline Public Library. Basin improvements within this area will create an approximate 0.85-acre basin area encompassing an approximate 14,800 square foot soft bottom area.

Construction of the improved basin will entail the excavation of approximately 1,660 cubic yards of accumulated sediment material and will include the importation of approximately 120 cubic yards of rip-rap materials to armor portions of the basin side-slopes.

Area 2: Proposed Houston Creek West – East Debris/Sediment Basin

This new sediment basin will be developed on an approximate 1-acre area located on the east side of Lake Gregory Drive across from the Crestline Public Library. This area has historically been the inlet area for Houston Creek into Lake Gregory. Basin development will entail creation of a raised basin designed to capture excess sediment flows from the Houston Creek West-West Debris Basin and prevent impact on the lake's aquatic system.

Construction of this basin will entail the placement of approximately 7,700 cubic yards of fill and rip-rap below the OHWM and placement of approximately 2,750 cubic yards of fill, rip-rap, and concrete above the OHWM.

Additionally, site preparation for construction of the Area 2 basin will involve the removal of approximately 1,300 cubic yards of sediment in the Lake Gregory swim area along the South Beach, the majority of which is below the OHWM. Sediment removal at this location would occur as a one-time activity. Continued regular maintenance for sediment control of the beach area following construction of the sediment basins would occur as described below in the proposed Lake Gregory On-Going Maintenance Program.

Houston Creek South

Area 3: Proposed Houston Creek South Debris/Sediment Basin and Channel

This basin will be developed on an approximate 1.2 acre area located on the south side of the existing 72-inch Houston Creek outlet culvert (See Figure 3). Under existing conditions the culvert transmits flow from an approximately 853-acre watershed to the ephemeral channel that discharges to the lake. Constructing this new basin will require excavation of approximately 9,950 cubic yards of materials and placement of approximately 167 cubic yards of rip-rap.

The existing approximate 900-foot linear channel will be reconstructed and re-contoured to restore storm flow capacities. Restoration and re-contouring will entail excavation of approximately 1,250 cubic yards of accumulated sediment and debris from within the channel. Approximately 534 cubic yards of gabions, and 711 cubic yards of Reno mattress reinforcement materials will be placed along the side slopes to protect them from future erosion. The channel

will remain a soft-bottom channel. The channel outlet will be re-contoured to discharge into the lake approximately 50 feet south of its current outlet location.

Area 4: Sediment Removal

Accumulated sediment since the 1980's has created an approximately 1.29-acre sand delta formation at the outlet of the south fork of Houston Creek where it enters the lake. The sediment management program will accommodate removal of approximately 12,300 cubic yards of this accumulated sediment reducing the sand delta by approximately 0.85 acres.

Additional sediment will be removed from an approximately 0.25 acre area on the shore opposite from the delta (Sediment Outlet 6 on Figure 4). Sediment accumulation at this location has led to the formation of a sand beach. Sediment at this location was previously removed from above the shoreline as part of the 2009 Lake Gregory sediment removal project. It is anticipated that 5,000 to 10,000 cubic yards of sediment will be removed from this location in order to return the shore to baseline conditions. In Area 4, approximately 7,500 to 10,000 cubic yards will be removed from below the OHWM.

At conclusion of these one-time construction projects it is anticipated that excessive sediment routinely entering the lake will be effectively controlled and the lake will have been restored to its approximate 1995 condition. To maintain lake conditions, an on-going maintenance program is proposed and outlined below.

Lake Gregory Maintenance Program

The Lake Gregory Maintenance Program will entail a number of maintenance activities that may be conducted during the Park Operational Season of April to September as determined necessary. These activities include:

- Aquatic plant weed control via application of aquatic herbicides based upon and consistent with the written application recommendations and best management practices of the County's State General NPDES Permit for the Discharge of Aquatic Pesticides for Aquatic Weed Control (CAG990005). These activities conditionally take place prior to the swim beach opening on Memorial Day weekend, and on selective days during the season when the swim beach is closed, allowing time for absorption and dissipation.
- Swim beach area lake bottom footfall and/or foot contact grooming below the water line to a depth of six (6) feet based on current elevation. Grooming will be accomplished manually and mechanically. To an approximate depth of three feet, workers with landscape and debris rakes will manually groom the lake bottom surface, removing foreign objects and decaying plant material; while ensuring a consistent, contoured and safe foot contact area for swimmers. To an approximate depth of six (6) feet, a power boat pulled drag will be used at low speed to accomplish the same tasks and minimize turbidity. All material removed from the lake will be disposed of in a safe and legal manner.

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LAKE OUTLET SEDIMENT REMOVAL LOCATIONS

Lake Gregory Sediment Management
and Bioretention Program
San Bernardino County, California

FIGURE 4

Proposed on-going maintenance activities would be conducted as necessary and limited to the Park Non-operational (off-season) Season of September through March. The following activities will be conducted as determined necessary by Park management staff to ensure protection of the lake, the fishery, and the recreational resources available at Lake Gregory Regional Park. Maintenance activities limited to the Off-Season include:

- Houston Creek West - West Debris Basin, debris and sediment removal. Accumulated debris and sediment within the bed of this existing debris basin would be completed by mechanical means including wheeled and tracked vehicles when necessary, or at a minimum semi-annually. No wheeled or tracked vehicles will be allowed on the vegetated basin side slopes except on the designated access ramp(s). Care will be taken to preserve the side slope vegetation as much as practical to provide for enhanced riparian and wetlands habitat.
- Houston Creek West - East Sediment Basin, sediment removal. Accumulated sediment within the new basin will be removed by mechanical means, but limited to long-reach excavators and/or wheeled vehicles when necessary, or at a minimum semi-annually. No tracked vehicles will be allowed below the OHWM .
- Houston Creek South Debris Basin. Debris and sediment removal. Accumulated debris and sediment within the bed of this debris basin would be completed by mechanical means including wheeled and tracked vehicles when necessary, or at least semi-annually. No wheeled or tracked vehicles will be allowed on the vegetated basin side slopes except on the designated access ramp(s). Care will be taken to preserve the side slope vegetation as much as practical to provide for enhanced riparian and wetlands habitat.
- Tree and shrub pruning and management. All debris and sediment basins side slopes will be routinely maintained to keep the soft bottom basins accessible by maintenance vehicles. This may require periodic tree and shrub pruning so the equipment necessary for accumulated sediment removal can safely and effectively maneuver within the basin areas.
- Lake sediment maintenance removal at outlet locations. Sediment removal will be completed by mechanical means at the identified locations of culvert outlets on the perimeter of the lake. Access and topography varies by location; therefore, excavation methods would be site-specific to each of the outlet locations. Approximately 31 pipe outlets have been identified around the Lake Gregory perimeter, regular maintenance is proposed at 13 of the lake outlets (see Figure 4). Lake outlets vary in size from 4-inches to 36-inches in diameter and contribute to lake sedimentation at varying rates. Lake sediment removal at the 13 outlet locations identified on Figure 4 is proposed to occur as determined necessary by the Park operating staff. Sediment removal would occur under the following conditions:
    - Sediment removal: accumulated sediment removal at the designated locations would be completed by mechanical means including wheeled and tracked vehicles when necessary. All sediment removal will be completed while equipment is situated above the lake's OHWM.

- Culvert pipe repair: sediment loads travelling through inlets to the lake have resulted in clogged inlets in the past. When an inlet is observed to be clogged or flow is observed to be obstructed by sediment by the Park's operating personnel, culvert outlet cleaning and grooming will be scheduled. All culvert pipe repair and maintenance activities would be limited to occur during the Park Non-operational Season. Access and topography varies at each of the culvert outlets; thus maintenance methods may vary by location. However, all culvert maintenance would be conducted using equipment situated outside of the lake's OHWM.

1.3 PURPOSE OF BIOLOGICAL RESOURCES ASSESSMENT

The purpose of this Biological Resources Assessment is to:

- Identify sensitive habitats in the project area;
- Identify sensitive species in the project area;
- Identify if the project area is within a wildlife corridor; and
- Identify any Habitat Conservation Plans or Natural Community Conservation Plans that are associated with the project area.

2.0 RARE, THREATENED, OR ENDANGERED SPECIES

This section discusses sensitive plant and animal species that may occur within the project area; these potentially occurring species were the focus of the survey conducted for this BRA. A probability of occurrence has been assigned to each of these species following consideration of available literature materials and field survey results. The probabilities of occurrence range from not present, to low, moderate, or high. Corresponding percentage equivalents for these ranges are:

Not present	0%
Low	less than 50%
Moderate	51 – 75%
High	more than 76%

Sensitive species are those animals and plants which have a federal designation of Candidate, Threatened or Endangered, or a State designation of Rare, Threatened, or Endangered. Additionally, in California, a plant may be designated as sensitive by the California Native Plant Society (CNPS) classification system. CNPS has created five "lists" in an effort to categorize degrees of concern. The CNPS lists are described as follows:

List 1A: Plants Presumed Extinct in California

The plants of List 1A (less than 30 taxa) are presumed extinct because they have not been seen or collected in the wild in California for many years. This list includes plants that are both presumed extinct in California, as well as those plants which are presumed extirpated in California. A plant is extinct in California if it no longer occurs in or outside of California. A

plant that is extirpated from California has been eliminated from California, but may still occur elsewhere in its range.

All of the plants constituting List 1A meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to the California Environmental Quality Act (CEQA).

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

The plants of List 1B are rare throughout their range with the majority of them endemic to California. Most of the plants of List 1B have declined significantly over the last century. List 1B plants constitute the majority of the plants in CNPS' Inventory with more than 1,000 plants assigned to this category of rarity.

All of the plants constituting List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

List 2: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

Except for being common beyond the boundaries of California, the plants of List 2 would have appeared on List 1B. From the federal perspective, plants common in other states or countries are not eligible for consideration under the provisions of the Endangered Species Act. Until 1979, a similar policy was followed in California. However, after the passage of the Native Plant Protection Act, plants were considered for protection without regard to their distribution outside the state.

With List 2, CNPS recognizes the importance of protecting the geographic range of widespread species. In this way, CNPS protects the diversity of the state's flora and helps maintain the evolutionary process and genetic diversity within species. All of the plants constituting List 2 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

List 3: Review List

The plants that comprise List 3 are united by one common theme - CNPS lacks the necessary information to assign them to one of the other lists or to reject them. Nearly all of the plants remaining on List 3 are taxonomically problematic.

Some of the plants constituting List 3 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. The CNPS strongly

recommends that List 3 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.

List 4: Plants of Limited Distribution - A Watch List

The plants in this category are of limited distribution or infrequent throughout a broader area in California, and their vulnerability or susceptibility to threat appears relatively low at this time.

Very few of the plants constituting List 4 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and few, if any, are eligible for state listing.

2.1 POTENTIALLY OCCURRING RARE, THREATENED OR ENDANGERED PLANT SPECIES

The following is a list of Rare, Threatened, or Endangered plant species that have the potential to occur at the project site. These species were identified as potentially occurring from CNDDB observation records and the USFWS San Bernardino County Species List. This BRA documents the probability of occurrence for these species through direct observation of the species or the existence of suitable habitat for the species.

Plant species which are considered Rare under the CDFW January 2013 State and Federally Listed Endangered, Threatened, and Rare Plants of California but not classified as Candidate, Threatened or Endangered under the State and Federal Endangered Species Acts were evaluated during the field survey and are listed in the Species Probability List included in this report as Appendix A.

Listed below are species under the protection of the State and Federal Endangered Species Acts, or species that require special permits or consultation with State and Federal agencies.

Scientific Name	Common Name	Federal Listing	State Listing
Arenaria paludicola	marsh sandwort	Endangered	Endangered
Berberis nevinii	Nevin's barberry	Endangered	Endangered
Brodiaea filifolia	thread-leaved brodiaea	Threatened	Endangered
Chloropyron maritimum ssp. *Maritimum*	salt marsh bird's-beak	Endangered	Endangered
Deinandra mohavensis	Mojave tarplant		Endangered
Dodecahema leptoceras	slender-horned spineflower	Endangered	Endangered
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	Endangered	Endangered
Nasturtium gambelii	Gambel's water cress	Endangered	Threatened

2.2 POTENTIALLY OCCURRING SENSITIVE ANIMAL SPECIES

The following is a list of Candidate, Threatened, or Endangered animal species that have the potential to occur at the project area. These species were identified as potentially occurring from CNDDB observation records and the USFWS San Bernardino County Species List. This BRA documents the probability of occurrence for these species through direct observation of the species or the existence of suitable habitat for the species.

Animal species which are considered Species of Special Concern under the CDFW January 2013 State and Federally Listed Endangered and Threatened Animals of California List but not classified as Candidate, Threatened or Endangered under the State and Federal Endangered Species Acts were evaluated during the field survey and are listed in the Species Probability List included in this report as Appendix A.

Listed below are species under the protection of the State and Federal Endangered Species Acts or species that require special permits or consultation with State and Federal agencies.

Scientific Name	Common Name	Federal Listing	State Listing
Anaxyrus californicus	arroyo toad	Endangered	
Catostomus santaanae	Santa Ana sucker	Threatened	
Charina umbratica	southern rubber boa		Threatened
Coccyzus americanus Occidentalis	western yellow-billed cuckoo	Candidate	Endangered
Dipodomys merriami Parvus	San Bernardino kangaroo rat	Endangered	
Dipodomys stephensi	Stephens' kangaroo rat	Endangered	Threatened
Empidonax traillii extimus	southwestern willow Flycatcher	Endangered	Endangered
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered
Polioptila californica californica	Coastal California gnatcatcher	Threatened	
Rana draytonii	California red-legged frog	Endangered	
Rana muscosa	Sierra Madre yellow-legged frog	Endangered	
Rhaphiomidas terminatus Abdominalis	Delhi sands flower loving fly	Endangered	
Vireo bellii pusillus	least Bell's vireo	Endangered	Endangered

3.0 REGULATORY BACKGROUND

3.1 STATE AND FEDERAL SENSITIVE SPECIES REGULATIONS

3.1.1 Endangered Species Act

The Endangered Species Act (Act) provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered in the U.S. or elsewhere. The Act makes provisions for listing species, as well as for recovery plans and for the designation of critical habitat of listed species. The Act outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species, and contains exceptions and exemptions.

Congress found that various species of fish, wildlife and plants in the U.S. have been rendered extinct while others have been depleted to the point of being in danger of or threatened with extinction. Congress declared that depleted species are of aesthetic, ecological, educational, historical, recreational, and scientific value. As a result, the U.S. has pledged to conserve various species facing extinction pursuant to several international treaties and agreements. To encourage conservation, federal financial assistance and a system of incentives has been put in place so that states and other interested parties may develop conservation programs that meet national and international standards and safeguard the nation's heritage in fish, wildlife and plants.

The purposes of the Act are to: provide a means of conserving the ecosystems upon which endangered and threatened species depend; provide a program for conserving those species; and take steps necessary to achieve the purposes of the international treaties and conventions. The policy of Congress is that federal agencies must seek to conserve endangered and threatened species and use their authorities in to further the Act's purposes.

3.1.2 California Endangered Species Act

The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The California Department of Fish and Wildlife will work with all interested persons, agencies and organizations to protect and preserve such sensitive resources and their habitats.

However, CESA also allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project caused losses of listed species.

3.1.3 California Environmental Quality Act

The California Environmental Quality Act (CEQA) is California's broadest environmental law. CEQA helps to guide the California Department of Fish and Wildlife during issuance of permits and approval of projects. Courts have interpreted CEQA to afford the fullest protection of the

environment within the reasonable scope of the statutes. CEQA applies to all discretionary projects proposed to be conducted or approved by a California public agency, including private projects requiring discretionary government approval.

The purpose of CEQA is to:

- Disclose to the public the significant environmental effects of a proposed discretionary project, through the preparation of an Initial Study (IS), Negative Declaration (ND), or Environmental Impact Report (EIR).
- Prevent or minimize damage to the environment through development of project alternatives, mitigation measures, and mitigation monitoring.
- Disclose to the public the agency's decision making process utilized to approve discretionary projects through findings and statements of overriding consideration.
- Enhance public participation in the environmental review process through scoping meetings, public notice, public review, hearings, and the judicial process.
- Improve interagency coordination through early consultations, scoping meetings, notices of preparation, and State Clearinghouse review.

California Public Resources Code Sections 21000-21004 generally state that:

- State agencies shall regulate the activities of private individuals, corporations, and other public agencies whose activities may affect the environment shall regulate to prevent environmental damage.
- State government agencies shall develop standards and procedures necessary to maintain, protect, rehabilitate and enhance environmental quality, including fish and wildlife populations and plant and animal communities.
- Projects carried out by public agencies shall be subject to the same level of review as private projects requiring approval by public agencies.
- No projects which would cause significant environmental effects should be approved as proposed if there are feasible alternatives or mitigation measures that would lessen those effects.
- Local agencies should integrate CEQA with other environmental review, planning, and information gathering so as to cut costs and time and to apply the conservation of financial, governmental, physical, and social resources towards better mitigation.
- Identification of significant effects, alternatives and mitigation measures, as well as comments from the public and public agencies, and relevant information about significant effects should be made as early as possible in the process.

Failure to comply with CEQA to provide full disclosure of information during the CEQA process, which would result in relevant information not being presented to the public agency, would constitute prejudicial abuse of discretion leaving the project proponent open to possible lawsuits.

4.0 METHODOLOGY

4.1 LITERATURE SEARCH

A literature search was conducted to obtain information for this BRA. The following sources were used to gather species information and topographic data, and to identify potential habitat resources, and federal and State jurisdictions:

- California Natural Diversity Data Base; United States Geological Survey Topographic Quadrangles: San Bernardino North and South, Cajon, Silverwood Lake, Lake Arrowhead, Devore, Harrison Mountain, Fontana, and Redlands;
- United States Fish and Wildlife Service Critical Habitat Portal;
- United States Fish and Wildlife Service Environmental Conservation Online Service;
- Terraserver USA;
- Calflora;
- National Agricultural Imagery Program;
- Landsat 7 Color Imagery; and
- Aerial imagery dated 10-03-2013 provided by San Bernardino County.

4.2 FIELD SURVEY

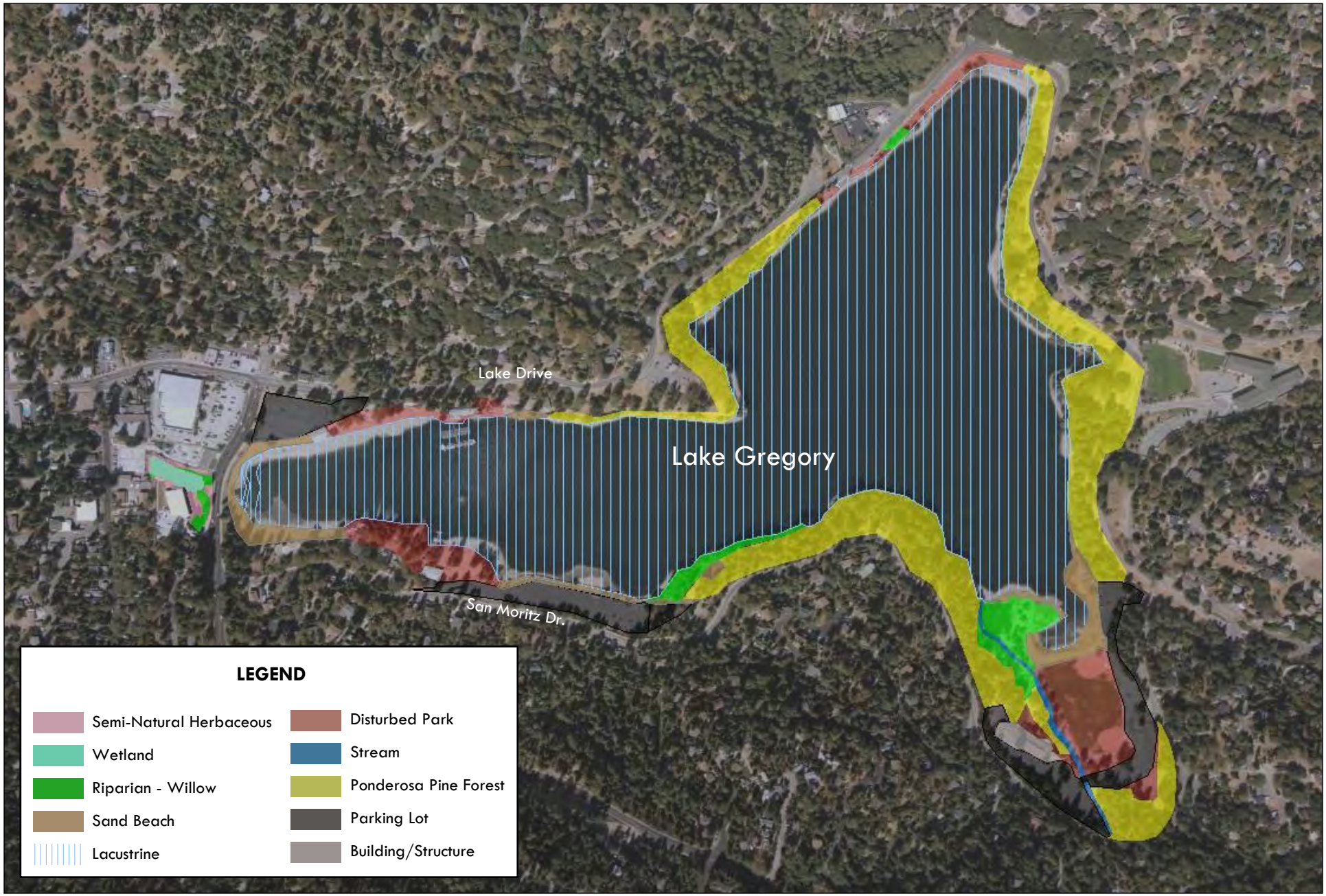
A field survey was conducted on September 7, 2012 for the purpose of assessing habitat present at Lake Gregory Regional Park, and to determine the presence or probability of presence of Candidate, Threatened, or Endangered species or their habitat as listed in Section 2.1 and 2.2 above. All species with the potential to occur, including sensitive species, are listed in Appendix A. The survey study area included a general assessment of all habitat on the perimeter of the lake. Pedestrian surveys were conducted in Areas 1, 2, 3, and 4. Dominant species of plants and animals were recorded and existing site conditions were noted (see Appendix B). Representative photographs of the habitat were taken and are including in Appendix C.

5.0 RESULTS

A field survey of the lake perimeter, the basin construction sites, the outlet sediment removal sites, and the ephemeral channel was conducted to evaluate existing biological resources and to identify potential impacts to the resources associated with implementation of the proposed project. Survey findings for the study area are presented below.

5.1 VEGETATION HABITATS

The basin construction areas and all proposed maintenance areas were evaluated for dominant vegetation type where vegetation was present (see Figure 5). The following vegetation communities identified within the study area follow descriptions presented in Saweyer et al. *A Manual of California Vegetation Second Edition* (2008).



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VEGETATION AND HABITAT MAP

Lake Gregory Sediment Management
and Bioretention Program
San Bernardino County, California

FIGURE 5

Red Willow Thickets

Red willow thicket (*Salix laevigata* woodland alliance) vegetation was observed to occur at the existing Houston Creek West – West Basin, the ephemeral channel, and delta (Areas 1, 3, and 4). Additional species observed at this location include: cattails (*Typha angustafolia*), alder (*Alnus* sp.), blackberry (*Rubus* sp.), common maidenhair fern (*Adiantum capillus*), sedge (*Carex* sp.), goosefoot (*Chenopodium* sp.), tall flat sedge (*Cyperius* sp.), rushes (*Juncus* sp.), Muller oak (*Quercus cornelius*), stinging nettle (*Urtica dioica*), and western ragweed (*Ambrosia psilostachya*). Red willow thickets also occur at riparian areas along the Houston Creek South ephemeral channel and the delta area

Ponderosa Pine Forest

Portions of the survey area with *Pinus ponderosa* dominant tree canopy were mapped as Ponderosa pine forest (*Pinus ponderosa* forest alliance). Ponderosa pine forest occurs on the edges of the park in areas upland of the lake, including the location of the proposed Houston Creek South debris/sediment basin.

Semi-Natural Herbaceous Stands

Semi-natural herbaceous vegetation was observed in Area 1. Semi-natural herbaceous vegetation includes native and/or non-native annuals that respond positively to regular frequent disturbance including, fire, disking, intermittent flooding, or heavy gracing. Species observed during the survey included: *Bromus diandrus*, *Brassica nigra*, *Hirshefeldia incana*, and *Bromus carinatus.*

5.2 OTHER HABITATS

Portions of the project areas that did not follow vegetation series as described by Saweyer et. al were classified as other habitats. These areas are characterized by anthropogenic disturbance associated with park facilities and development.

Lacustrine Habitat

Lake Gregory is classified as lacustrine habitat. Lacustrine habitats are inland depressions or dammed riverine channels containing standing water. Lacustrine habitat is subdivided into the limnetic zone (deep open water), littoral zone (near shore-lake habitat), and shore (water border with less than two percent vegetation cover).

Stream Habitat

Stream habitat consists of water, streambed material, instream and bank vegetation, and instream structure such as boulders, logs, tree roots, and undercut banks. Stream habitat was mapped in Project Area 3. One ephemeral channel was delineated from the Houston Creek East watershed culvert to the lake.

Wetland Habitat

Wetland habitat is defined as shallow aquatic habitat defined identified by the presence of three environmental parameters, hydrology (presence or evidence of a water source), hydric soils (inundated or saturated soils conditions resulting from permanent or periodic inundation by

ground water or surface water), and hydrophytic vegetation (vegetation typically adapted for life in saturated conditions). A wetland was identified at the basin bottom of the existing Houston Creek West – West Basin in project Area 1; the wetland likely formed due to lack of basin maintenance.

Sand Beach

Sand beaches on the perimeter of Lake Gregory are maintained by Park staff and provide park patrons with access to the lake for swimming. Areas identified as sand beach have no dominant vegetation and occur in Areas 1 and 4 as well as in the vicinity of outlet location 4.

Disturbed Park

Areas described as disturbed park include portions of the park where natural vegetation has been removed and replaced with ornamental species or open land uses, such as the ball fields. Disturbed parkland was identified in the vicinity of Area 1, Area 3, and along a north shore of the lake where no project activities as proposed.

Parking Lot

Asphalt parking lots found throughout the perimeter of the park have no dominant vegetation type and do not provide habitat.

Building/ Structure

Several buildings occur throughout the park and in the vicinity of the proposed basin/maintenance sites.

5.3 VEGETATION AND HABITAT ACREAGES

The following acreages shown on Table 1 were identified for each of the habitat types described in section 5.1 and 5.2 above. The acreages account for the entire study area and include all habitat on the perimeter of the lake including project areas 1, 2, 3, and 4.

5.4 RARE, ENDANGERED, OR SENSITIVE SPECIES AND HABITAT RESULTS

The study area was evaluated for the potential presence of threatened, endangered, or candidate plant and animal species. The evaluation was based on either direct observation of the species or presence of suitable habitat for that species. If suitable habitat was present, the probability for presence of the species was determined by other factors such as: human influences, existing records and proximity of similar observed species, and any other factors that would either benefit of detract from the species being present. A determination of presence was made for each species, the determination considered suitable available habitat and the general environmental setting; when applicable the habitat and project area are identified. Appendix B lists all species observed on-site.

Table 1
Vegetation/Habitat in the Study Area

Vegetation/Habitat	Acres in Study Area
Natural Habitats	
Ponderosa Pine Forest	19.06
Lacustrine Habitat	78.60
Red Willow Thickets	2.66
Wetland	0.39
Semi-Natural Herbaceous	0.36
Stream	0.49
Subtotal:	*101.56*
Other Habitat – Anthropogenic Disturbance	
Sand Beach	3.14
Parking Lot	7.51
Disturbed Park Land	7.56
Buildings and Structures	0.81
Subtotal	*19.02*
Total	**120.58**

5.4.1 Federally and State Listed Flora Presence/Absence

Marsh sandwort *(Arenaria paludicola)*

A federally and state listed Endangered plant, the marsh sandwort is found in palustrine (marshes and swamps) habitat. It grows through dense mats of Typha sp., and Scirpus sp., vegetation. Records of this species were obtained in the Santa Ana River in 1899. No records have been found since then.

Conclusion: There is a low probability for this species to occur in areas identified to have riparian red willow thickets and wetland habitat. The riparian area adjacent to the library, near the project area of impact identified as Area 1 was heavily graded and disturbed during construction of the public library. Vegetation growth at this area is relatively recent. No records of observation have occurred since 1899. The riparian area adjacent to the library is determined to have a low probability of presence; the riparian area in the south project area does not have shallow swamp/marsh like area, therefore, there is only a low probability of presence.

Nevin's barberry (*Berberis nevinii)*

A federally and state listed Endangered plant, the barberry prefers chaparral, cismontane (mountainside) woodland, coastal scrub, and riparian scrub on north facing slopes or low grade sandy washes.

Conclusion: No portions of the areas surveyed have habitat for this species. Species is not present.

Thread-leaved brodiaea (*Brodiaea filifolia)*

A federally Threatened and state Endangered plant, the thread-leaved brodiaea is found in vernal pools and grasslands associated with cismontane woodlands, coastal scrub, and foothill grasslands.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Mojave Tarplant *(Deinandra mohavensis*)

The Mojave tarplant is a state listed endangered species. It is endemic to California and is restricted to moist drainages on the arid slopes of the Peninsular Range. Mojave tarplant occurs mostly in clay or silty soils that are saturated with water in winter and spring. Plants are found along grassy swales, intermittent creeks and at seeps.

Conclusion: There is a moderate probability of occurrence in the portions of the project site with riparian and wetland habitat. The riparian areas at the existing Houston Creek West – West Basin (Area 1) and south delta sediment removal location (Area 4) have habitat suitable for this species.

Salt marsh bird's-beak *(Cordylanthus maritimus ssp. maritimus)*

A federally and state Endangered plant, the salt marsh bird's-beak is found in the higher zones of salt marshes.

Conclusion: There is a low probability of occurrence in the portions of the project site with riparian and wetland habitat. The riparian vegetation in Area 1 adjacent to the library was heavily graded and disturbed during construction of the public library. Vegetation growth at this area is relatively recent; the riparian area in the Houston Creek South project area (Area 3 and Area 4) does not have a shallow swamp/marsh area. There is a low probability of presence in Areas 1, 3, and 4.

Slender-horned spineflower *(Dodecahema leptoceras)*

A federally and state Endangered plant, the spine flower is found on flood deposited terraces and washes in alluvial fan sage scrub.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Santa Ana River woollystar *(Eriastrum densifolium ssp. sanctorum)*

A federally and state Endangered plant, the woollystar is found on flood deposited terraces and washes in alluvial fan sage scrub.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Gambel's water cress *(Nasturtium gambelii)*

A federally Endangered and state Threatened plant, the water cress is found in freshwater and brackish marshes at the margins of lakes and along streams.

Conclusion: There have been no records of this species reported in the California Natural Diversity Database for the Lake Gregory area; however, habitat for the species exists in Areas 1, 2, 3, and 4. There is a moderate probability of presence for this species.

5.4.2 Federally and State Listed Fauna Presence/Absence

Arroyo toad *(Anaxyrus californicus)*

The arroyo toad is a federally-listed endangered species. It is found in the southern part of the Coast Ranges from northern San Luis Obispo south to Baja California in semi-arid regions near washes or intermittent streams. Habitats used include valley-foothill and desert riparian as well as a variety of arid habitats including desert wash, palm oasis, and Joshua tree, mixed chaparral and sagebrush.

Conclusion: There have been no reported records of observation for arroyo toad at Lake Gregory or Houston Creek. The ephemeral channel in Area 3 and the delta sediment removal location in Area 4 have potential habitat for the species. Habitat at this location is highly disturbed due to public use of the area. There is a low probability of occurrence at the location of the south channel and delta.

Bald Eagle (*Haliaeetus leucocephalus*)

The bald eagle was federally delisted as an endangered species, but remains listed as a state endangered species. Bald eagles live near rivers, lakes, and marshes where they can find fish, rabbits, snakes, and other small animals and carrion. Bald eagles require a good food base, perching areas, and nesting sites. Habitat includes estuaries, large lakes, reservoirs, rivers, and some seacoasts.

Conclusion: Bald eagle has been known to occur at Lake Gregory Regional Park and the vicinity. Lake Gregory provides good forage habitat for the species and the surrounding ponderosa pine forest provides good nesting habitat. The proposed project would not impact any trees that could be used by the bald eagle to nest; however, construction activities may result in temporary impacts to forage habitat. There is a high probability of presence during the nesting season of January – July and a low probability of presence during the non-nesting season of August – December.

Santa Ana sucker *(Catostomus santaanae)*

A federally threatened fish species, the sucker is endemic to the Los Angeles Basin and coastal streams. It prefers sand-rubble-boulder stream bottoms, in clear, cool running water.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Southern rubber boa (*Charina umbratica)*

A state threatened snake species, the rubber boa is found in the San Bernardino and San Jacinto Mountains at elevations of 5,000 to 8,000 feet above mean sea level (amsl).

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis)*

A federal candidate for listing and state endangered bird species, the cuckoo is found in riparian forests, where it nests. It prefers lower flood bottoms of larger rivers. It nests in riparian vegetation of willows and cottonwoods, with understory of blackberry, nettles, or wild grapes.

Conclusion: There is a low probability of occurrence in the portions of the project site with riparian and wetland habitat (Areas 1, 3, and 4). These areas have limited riparian growth and this species requires large areas of riparian vegetation; therefore, only a low probability exists.

San Bernardino kangaroo rat *(Dipodomys merriami parvus)*

A federally endangered species, the San Bernardino kangaroo rat (SBKR) is found in alluvial fan sage scrub with sandy soils. Usually associated with wash areas, SBKR needs vegetative steral (plant community successional) stages. The project area is located outside of designated Critical Habitat for the SBKR.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Stephens' kangaroo rat *(Dipodomys stephensi)*

A federal endangered and state threatened species, Stephen's kangaroo rat (SKR) is found primarily in annual and perennial grasslands. SKR can also be found in coastal scrub with sparse canopy cover. It prefers areas with buckwheat, chamise, brome grasses, and filaree.

Conclusion: No portions of the area surveyedhave habitat for this species. Species is not present.

Southwestern willow flycatcher (*Empidonax traillii extimus)*

A federal and state endangered species, the Southwestern willow flycatcher is found in riparian habitats along rivers, streams, and other wetland habitats where dense growths of willows, mulefat, arroweed, or other plants of similar structure and form are present.

Conclusion: Focused surveys and habitat assessments were conducted by Gonzales Environmental Consulting, LLC to evaluate habitat suitability and determine presence of the species. The surveys were carried out from May to July 2013 according to the USFWS protocol. The surveys found no breeding or individual southwestern willow flycatcher occupied habitat on the project site. Vegetation on the project site does not appear to provide suitable territorial or breeding habitat for the southwestern willow flycatcher. The species is not present.

Coastal California gnatcatcher *(Polioptila californica californica)*

A federally threatened bird species, the coastal California gnatcatcher is found in coastal sage scrub below 2,500 feet. It can also be found in coastal sage scrub in arid washes.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

California red-legged frog *(Rana draytonii)*

A federally threatened species, California red-legged frog is found in low lands and foothills in or near permanent sources of deep water with dense, shrubby or emergent vegetation.

Conclusion: A low probability of presence occurs at all proposed project construction locations. The lake has a warm and cold water fishery, and the predatory fish associated with the fishery creates problematic habitat conditions for red-legged frog survival.

Sierra Madre yellow-legged frog (*Rana muscosa)*

A federally endangered species, the Sierra Madre yellow-legged frog is found in permanent sources of water in the San Gabriel, San Jacinto, and San Bernardino Mountains.

Conclusion: A low probability of presence occurs at all proposed project construction locations. The lake has a warm and cold water fishery, and the predatory fish associated with the fishery creates problematic habitat condition for yellow-legged frog survival.

Delhi Sands flower-loving fly (*Rhaphiomidas terminates abdominalis)*

A federally endangered species, the delhi sands flower-loving fly is found in only in dunes of Delhi sands.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Least Bell's vireo *(Vireo bellii pusillus)*

A federally and state endangered species the least Bell's vireo is found in riparian areas with a thick understory of mulefat.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

5.4.3 Other Sensitive Species

The following species have been designated by the California Department of Fish and Wildlife as "Special Animals." The CDFW defines "Special Animals" as a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. The CDFW considers the taxa in its latest list (January 2013) to be those of greatest conservation need. The following species from the Special Animal list either have a probability to occur at the subject site or were observed to be present in the course of biological surveys.

Silvery Legless Lizard (*Anniella pulchra pulchra)*

The silvery legless lizard is nearly endemic to California. The species occurs primarily in areas with sandy or loose loamy soils such as under sparse vegetation of beaches, chaparral, or pine-oak woodland; or near sycamores, cottonwoods, or oaks that grow on stream terraces. The species is often found under or in the close vicinity of logs, rocks, old boards, and the compacted debris of woodrat nests. Rocky soils or areas disturbed by agriculture, sand mining, or other human uses are not suitable for legless lizard.

Conclusion: The south debris basin/channel and delta sediment removal areas have habitat that is suitable for this species. There have been no known observations of this species in CNDDB. There is a moderate probability of presence in Area 3.

Pallid Bat (*Antrozous pallidus*)

The pallid bat occurs in arid and semi-arid regions throughout northern Mexico and the western United States. Pallid bats eat beetles, grasshoppers, and moths, and they forage for slow-moving prey, such as scorpions.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Long-eared Owl (*Asio otus*)

The long-eared owl is found in riparian bottomlands with tall willows and cottonwoods. It also prefers areas with live oak paralleling streams. It needs grasslands adjacent to riparian habitat to find prey.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Orangethroat Whiptail (*Aspidoscelis hyperythra)*

Orangethroat whiptail is typically found in hot, dry, flat open spaces in deserts or semi-arid areas. The species often occupies open spaces between clumps of vegetation on loose, fine-grained soils, such as rocky hillsides bordering arroyos or the lower slopes of foothills.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Burrowing Owl (*Athene cunicularia*)

The burrowing owl inhabits open, dry annual or perennial grasslands, deserts, and scrublands characterized by low grasslands. The burrowing owl nests and seeks shelter in burrows dug by rodents or ground squirrels.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)

The San Diego pocket mouse is a large species of pocket mouse, and is characterized by long spine-like hairs on the rump and hips. It is a common resident of open, sandy herbaceous areas, usually in association with rocks or coarse gravel in southwestern California. The range of the species includes mainly arid coastal and desert border areas in Orange, San Diego, Riverside, and San Bernardino Counties.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Pallid San Diego Pocket Mouse (*Chaetodipus fallax pallidus*)

The San Diego Pocket Mouse is found mostly in desert areas of Eastern San Diego County. The mouse is associated with desert wash, desert scrub, and desert succulent communities. It may also be found in pinyon-juniper habitat.

Conclusion: The south debris basin/channel and delta sediment removal areas have habitat that is suitable for this species. There have been no known observations of this species in CNDDB. Due to high traffic and use of the area by the public only a low probability of presence occurs.

Red-diamond Rattlesnake (*Crotalus ruber*)

The red-diamond rattlesnake is found in southwestern California, from the Morongo Valley west to the coast and south along the peninsular ranges to mid Baja California. Its habitat includes arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas, mountain slopes. The species preys on rodents, rabbits, and other small mammals.

Conclusion: The south debris basin/channel and delta sediment removal areas have habitat that is suitable for this species. There have been no known observations of this species in CNDDB. Due to high traffic and use of the area by the public a low probability of presence occurs.

Yellow Warbler (*Dendroica petechial*)

The yellow warbler is a riparian bird species which prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. It can also be found in shrubs within open coniferous forests.

Conclusion: Suitable habitat for this species occurs at the riparian area in the west and at the riparian area in the south. There is a high probability of presence for this species at these two locations.

Western Pond Turtle (*Emys marmorata*)

The pond turtle inhabits slow moving waters, lakes, ponds, marshes, and irrigation ditches. The turtle needs areas to bask.

Conclusion: There is a high probability of presence at sand beach locations with accumulated sediment.

Western Mastiff Bat (*Eumops perotis californicus*)

The western mastiff bat ranges from central Mexico across the southwestern United States. The distribution of the species is likely geomorphically determined, with the species being present only where there are significant rock features offering suitable roosting habitat. It is found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Arroyo Chub (*Gila orcuttii*)

The arroyo chub is found only in the coastal streams of southern California. The species is native to the streams and rivers of the Los Angeles plain in southern California, including the Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita Rivers, and Malibu and San Juan Creeks. Arroyo chub is an omnivorous species; it consumes algae, insects, and crustaceans off of plants or in the bottom of the stream.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

San Bernardino Flying Squirrel (*Glaucomys sabrinus californicus*)

Habitat of the San Bernardino flying squirrel is encompassed largely within the San Bernardino National Forest and it occurs in a range of coniferous and deciduous forest, including riparian forests.

Conclusion: There have been observation records for this species in the vicinity of the proposed project and there is a high probability of occurrence in areas with ponderosa pine forest or riparian habitat.

Yellow-breasted Chat (*Icteria virens*)

The yellow breasted chat is a summer resident that inhabits riparian thickets and willow scrub along watercourses. It builds its nests in low, dense riparian vegetation, consisting of willow, blackberry, and wild grape. It likes to forage and nest within 10 feet of the ground.

Conclusion: Suitable habitat for this species occurs at the riparian area in the west and at the riparian area in the south. There is a high probability of presence for this species at these two locations.

Loggerhead shrike (*Lanius ludovicianus*)

The loggerhead shrike inhabits woodlands, savannahs, pinyon-juniper woodlands, riparian woodlands, desert oases, and desert washes. It prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.

Conclusion: Suitable habitat for this species occurs at the riparian area in the west and at the riparian area in the south. There is a moderate probability of presence for this species at these two locations.

Western Yellow Bat (*Lasiurus xanthinus*)

The western yellow bat occurs in northern Mexico, western Arizona, southern California and Nevada, and southwestern New Mexico. Yellow bats are suspected to be non-colonial. Individuals usually roost in trees, hanging from the underside of a leaf. They are commonly found in the southwestern U.S. roosting in the skirt of dead fronds in both native and non-native palm trees, and have also been documented roosting in cottonwood trees.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)

The San Diego black-tailed jackrabbit occurs throughout the western United States from central Washington south to Mexico. The species occurs in open areas or semi-open country, typically in grasslands, agricultural fields or sparse coastal scrub.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

San Diego Desert Woodrat (*Neotoma lepida intermedia*)

The range of the San Diego desert woodrat extends along the coast of California from south of San Francisco through to the border with Baja California. The species occurs in scrub habitats

such as coastal sage scrub, chaparral and alluvial fan sage scrub. The species is more common in areas with rock piles and coarse sandy to rocky soils throughout coastal southern California.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*)

The pocketed free-tailed bat occurs in western North America, from southern California, central Arizona, southern New Mexico, western Texas, and south into Mexico. The pocketed free-tailed bat is colonial and roosts primarily in crevices of rugged cliffs, high rocky outcrops and slopes. It has been found in a variety of plant association including desert shrub and pine-oak forests. The species may also roost in buildings, caves, and under roof tiles.

Conclusion: There is a low probability for this species to occur in the existing west debris basin, proposed south debris basin and channel construction areas and at Outlet 7. There have been no known observations of the species in the vicinity and suitable habitat is subject to frequent use and impact by park patrons.

Southern Grasshopper Mouse (*Onychomys torridus ramona*)

In California, the Ramona grasshopper mouse ranges southward from Los Angeles County to the Mexican border, generally west of the desert. The species is found in shortgrass prairies, and desert scrub.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

White-eared pocket mouse (*Perognathus alticolus alticolus*)

This species inhabits ponderosa and Jeffery pine habitats.

Conclusion: All of the proposed project construction areas have habitat suitable for this species. There is a high probability of presence for white-eared pocket mouse.

Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*)

The Los Angeles pocket mouse occurs in grasslands and coastal sage scrub habitats, in areas with soils composed of fine sands. The species is a grainivorous rodent and specializes on grass and scrub seeds, but will take insects when available.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

Coast Horned Lizard (*Phrynosoma blainvillii*)

The horned lizard is found in a wide variety of habitat. It is most common in lowlands along sandy washes with scattered low vegetation. It prefers open areas for sunning, and low shrubs for shelter. It feeds on ants and other insects.

Conclusion: There is a moderate probability this species is present.

Santa Ana Speckled Dace (*Rhinichthys osculus ssp.3*)

This fish is endemic to southern California streams and prefers sand, rubble, boulder streams with cool running water.

Conclusion: No portions of the area surveyed have habitat for this species. Species is not present.

American Badger (*Taxidea taxus*)

Badgers occur in appropriate habitat throughout the western United States, and south throughout the mountainous areas of Mexico. They prefer to live in dry, open grasslands, fields, and pastures. The species is found from high alpine meadows to sea level.

Conclusion: There is a low probability for this species to be present at portions of the project area with riparian or wetland habitat.

Two-striped Garter Snake (*Thamnophis hammondii*)

The two-striped garter snake ranges from central California to southern Baja California. The species is found around pools and creeks in rocky areas, woodland, shrubland, and coniferous forest.

Conclusion: There is a low probability for this species to be present at portions of the project area with riparian or wetland habitat.

8.0 CRITICAL HABITAT

The project area is not within any federal critical habitat as designated by the U.S. Fish and Wildlife Service. The nearest critical habitat unit (for southwestern willow flycatcher) occurs approximately two miles south of the project site along Waterman Canyon.

7.0 WILDLIFE CORRIDORS

Houston Creek on the northeast of the lake serves as a wildlife corridor with large undisturbed areas that facilitate the movement of wildlife species across the mountain range. Project activities are not proposed in this portion of the park and the activities would not interfere with the wildlife corridor action.

8.0 POTENTIAL IMPACTS TO SENSITIVE AREAS

Project Implementation

The following table summarizes impacts to vegetation and habitat associated with the proposed development of Areas 1 through 4 as described in Section 1.2 Project Description. Development of the Houston Creek West – East Basin, Houston Creek South basin and channel, delta sediment removal, and enhancement of the existing Houston Creek West – West Basin are anticipated to impact a total of approximately 5.07 acres.

The lake, ephemeral channel, and the adjacent riparian and wetland areas are subject to the jurisdiction of the California Department of Fish and Wildlife, the Lahontan Regional Water Quality Control Board, and the U.S. Army Corps of Engineers. Applicable regulatory permits would be required by the agencies prior to impact to lacustrine habitat, red willow thickets, wetland, and stream as quantified below.

Specific impacts to vegetation and habitat associated with development of all proposed facilities are outlined in Table 2 and depicted in Figure 6.

Table 2
Impacts to Habitat Resulting from Project Implementation

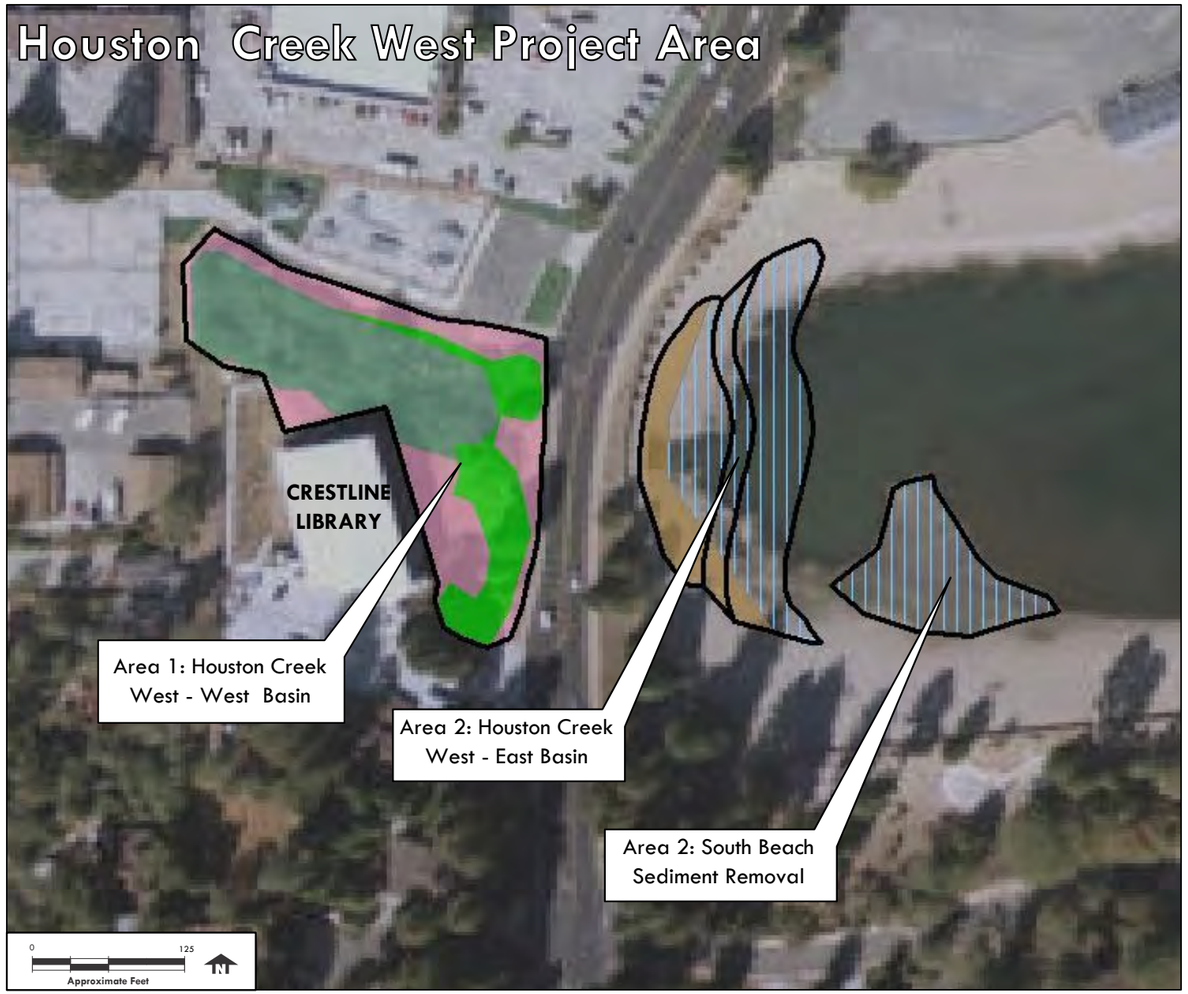
Vegetation/Habitat	Project Impacts (acres)
Natural Habitats	
Ponderosa Pine Forest	1.24
Lacustrine Habitat	0.75
Red Willow Thickets	0.88
Wetland	0.39
Semi-Natural Herbaceous	0.29
Stream	0.29
Subtotal:	*3.84*
Other Habitat – Anthropogenic Disturbance	
Sand Beach	0.60
Parking Lot	0.32
Disturbed Park Land	0.31
Buildings and Structures	0
Subtotal	*1.23*
Total	**5.07**

Off-Season Maintenance

As described in Section 1.2 off-season maintenance activities would include debris and sediment removal at all basin locations, removal of accumulated sediment at lake outlet locations, and culvert pipe repair as determined necessary.

Removal of accumulated debris and sediment within the bed of the basins would be completed by mechanical means and utilize wheeled and tracked vehicles when necessary or at least semi-annually. No wheeled or tracked vehicles will be allowed on the vegetated basin side slopes except upon the designated access ramp(s). Care will be taken to preserve the side slope vegetation as much as practical to provide for enhanced riparian and wetland habitat. Trees and/or shrubs on the basin access road and bottom will be groomed as determined necessary to maintain equipment access necessary for debris and sediment removal. The County should prevent sediment discharge to surface waters and prevent the introduction or spread of noxious/invasive weeds within the project and staging area. Tree and shrub pruning will be limited to occur during the off-season and outside of the bird nesting season.

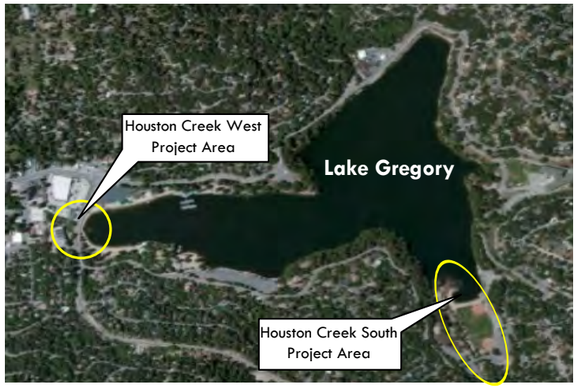
Sediment removal at thirteen of the lake outlet locations is proposed to occur as determined necessary by the Park operating staff. Access and topography varies by location, therefore, excavation methods would be site specific to each of the outlet locations. Sediment removal activities would be completed by mechanical means and may include the use of wheeled or tracked vehicles. Sediment removal will be sited to minimize the project impact area as practicable.



Source: Albert A. Webb Associates, Lake Gregory Debris Reduction Study Conceptual Debris Basins Aerial. San Bernardino County 10/2013.

LEGEND

- Disturbed Herbaceous
- Wetland
- Riparian - Willow
- Sand Beach
- Lacustrine
- Disturbed Parkland
- Stream
- Yellow Pine Forest
- Parking Lot



LILBURN CORPORATION

PROJECT IMPACT MAP

Lake Gregory Sediment Management and Bioretention Program
San Bernardino County, California

FIGURE 6

Culvert pipe repair would occur as necessary during the off-season when an outlet pipe is observed to be clogged or flow is observed to be obstructed by sediment. Thirty-one outlet pipes have been identified throughout the lake's perimeter. Culvert outlet or grooming may be scheduled to occur at any of 13 pipe outlet locations identified on Figure 4. Access and topography varies at each of the culvert outlets and maintenance methodologies may vary by location. Culvert repair activities will be sited to minimize the project area as practicable.

9.0 HABITAT CONSERVATION PLANS OR NATURAL COMMUNITY CONSERVATION PLANS

The project area is not located within an existing or proposed habitat conservation plan or within a Natural Community Conservation Plan.

10.0 PROPOSED RECOMMENDATIONS AND MITIGATION MEASURES

The following mitigation measures are recommended to avoid and minimize potential impacts associated with the implementation of the proposed Lake Gregory sediment management and bioretention program.

Mitigation to Avoid/Minimize Impacts to Vegetation

- Vegetation removal associated with the development of the proposed basin facilities, channel, and lake sediment removal shall be scheduled to occur outside of the bird nesting season (March through September). Should vegetation removal be necessary during the nesting season, a nest clearance survey shall be conducted no more than 30 days prior to removal of vegetation/trees and the vegetation removal shall be monitored by a qualified biologist.
- The County shall identify the limits of construction and mark these areas in the field prior to initiation of sediment removal activities and basin and channel construction activities to prevent unintended impacts to riparian and wetland habitat. No extraction of accumulated sediment or construction activities, other than in the designated areas shall occur.
- The County will ensure that its Contractor employs necessary measures to prevent sediment discharge to surface waters and to prevent the introduction or spread of noxious/invasive weeds within the project and staging area.
- Access and topography at the 13 outlets with proposed ongoing maintenance varies by location, therefore, excavation methods would be site-specific at each of the outlet locations. Maintenance sediment removal at the outlet locations shall occur under the following conditions: 1) all sediment removal shall be completed by mechanical means including wheeled and tracked vehicles when necessary with equipment located above the lake's OHWM, 2) equipment access areas will be marked to define the work area and minimize impacts to adjacent habitat to the greatest extent practicable, and 3) outlet pipe repair and maintenance, as necessary, shall be scheduled during the off-season.

Best Management Practices Mitigation

- All excavated sediment shall be removed to an upland area where they will not be subject to re-depositing in surface waters.
- To minimize water quality impacts associated with disturbance during removal of sediment on the lake's shoreline, the contractor shall create a berm barrier between the lake and sediment stockpile in order to reduce any incidental drainage to the lake.
- All construction equipment must be clean and free from oil, grease and loose metal material, and must be removed from service if necessary to protect water quality.
- Construction equipment staging/storage shall occur in a designated upland area.
- All litter shall be removed from the construction area and disposed of in an appropriate manner at the end of each construction day to ensure that no litter enters riparian areas or jurisdictional waters.

Mitigation to Avoid/Minimize Impacts to Fishery Resources

- Sediment removal within the lake shall be timed to avoid the fish spawning season which is generally March through July.

Compensatory Mitigation

- The Proponent shall provide compensatory mitigation for unavoidable permanent impacts to riparian and wetland habitat at a minimum 1:1.5 ratio. Compensatory mitigation may include restoration or creation of habitat as agreed to by the Proponent and regulatory agencies.

11.0 CONCLUSION

Regional Parks proposes the construction of debris/sediment basins and implementation of an on-going maintenance program for silt removal at Lake Gregory to minimize long-term sedimentation impacts to the Lake, its fishery and its beneficial uses. One time construction activities associated with construction of the proposed debris/sediment basins, channel realignment, and sediment removal at the delta would result in impacts to a total of approximately 5.07 acres. Construction of the proposed facilities would impact approximately 3.84 acres of natural habitats including Ponderosa pine forest, lacustrine habitat, red willow thickets, wetland, semi-natural herbaceous stands, and stream. Approximately 1.23 acres of anthropogenic habitats, including sand beaches, parking lot, and developed parkland, would also be impacted. Impacts associated with culvert maintenance and sediment removal are not defined and would occur on an as-needed basis as determined by the Park operating staff. All culvert pipe repair and maintenance activities would be limited to occur during the Park Non-operational Season. Access and topography varies at each of the culvert inlets; thus maintenance methods may vary by location. All culvert maintenance would be conducted using equipment situated outside of the lake's OHWM.

The lake, ephemeral channel, and the adjacent riparian and wetland areas are subject to the jurisdiction of the California Department of Fish and Wildlife, the Lahontan Regional Water Quality Control Board, and the U.S. Army Corps of Engineers. Applicable regulatory permits

will be obtained prior to project implementation. It is recommended that mitigation in Section 10 of this report be implemented as part of the project when submitting permit applications to the regulatory agencies.

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12.0 CERTIFICATION

The report must include the certification statement within the body of the report as shown below:
CERTIFICATION: *"I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a nondisclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project."*

DATE: 1/16/2014 SIGNED: _____
Report Author

Include names and signatures for those performing fieldwork.

1) Fieldwork Performed By:

_____
Name

2) Fieldwork Performed By:

_____
Name

3) Fieldwork Performed By:

_____
Name

4) Fieldwork Performed By:

_____
Name

Check here _____ if adding any additional names/signatures, below or on other side of page.

APPENDIX A
SPECIES PROBABILITY LIST

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	CDFG LIST	CNPS LIST	GENERAL HABITAT	MICRO HABITAT	ECOLOGICAL COMMUNITY	PROBABILITY OF OCCURANCE
Accipiter cooperii	Cooper's hawk					WOODLAND, CHIEFLY OF OPEN, INTERRUPTED OR MARGINAL TYPE.	NEST SITES MAINLY IN RIPARIAN GROWTHS OF DECIDUOUS TREES, AS IN CANYON BOTTOMS ON RIVER FLOOD-PLAINS; ALSO, LIVE OAKS.	HABITAT CONSISTS OF DENSE LINEAR STANDS OF RIPARIAN. DOMINANT SPECIES INCLUDE SALIX LASIOLEPIS, SALIX HINDSIANA, POPULUS FREMONTII AND BACHARIS GLUTINOSA. YELLOW-BILLED CUCKOO OBSERVED IN AREA.	Not Present
Ambrosia monogyra	singlewhorl burrobrush				2.2	CHAPARRAL, SONORAN DESERT SCRUB.	SANDY SOILS. 10-500M.	COASTAL SAGE SCRUB, IN DISTURBED SOIL.	Not Present
Amphispiza belli belli	Bell's sage sparrow					NESTS IN CHAPARRAL DOMINATED BY FAIRLY DENSE STANDS OF CHAMISE. FOUND IN COASTAL SAGE SCRUB IN SOUTH OF RANGE.	NEST LOCATED ON THE GROUND BENEATH A SHRUB OR IN A SHRUB 6-18 INCHES ABOVE GROUND. TERRITORIES ABOUT 50 YDS APART.	1997: HABITAT CONSISTS OF SAGE SCRUB, DOMINATED BY WHITE SAGE. 2009 AERIAL PHOTOS SHOW THAT THE SITE IS BEING DEVELOPED.	Not Present
Anaxyrus californicus	arroyo toad	Endangered		SC		SEMI-ARID REGIONS NEAR WASHES OR INTERMITTENT STREAMS, INCLUDING VALLEY-FOOTHILL AND DESERT RIPARIAN, DESERT WASH, ETC.	RIVERS WITH SANDY BANKS, WILLOWS, COTTONWOODS, AND SYCAMORES; LOOSE, GRAVELLY AREAS OF STREAMS IN DRIER PARTS OF RANGE.	1995: COTTONWOOD/ALDER/WILLOW RIPARIAN WOODLAND. 2001: LOW GRADIENT, SANDY STREAMBED WITH SLOW MOVING WATER; MANY SANDY POOLS WITH EXPOSED BANKS. 2008: RIPARIAN HABITAT WITH SANDY SUBSTRATE; ROSY BOA ALSO OBSERVED.	Low Probability
Anniella pulchra pulchra	silvery legless lizard			SC		SANDY OR LOOSE LOAMY SOILS UNDER SPARSE VEGETATION.	SOIL MOISTURE IS ESSENTIAL. THEY PREFER SOILS WITH A HIGH MOISTURE CONTENT.	HABITAT CONSISTS OF BUCKWHEAT/CHAMISE SCRUB, BORDERED BY MODERATELY TO HIGHLY-DISTURBED DEVELOPMENT	Moderate Probability
Antrozous pallidus	pallid bat			SC		DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS & 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.		Not Present
Arenaria paludicola	marsh sandwort	Endangered	Endangered		1B.1	MARSHES AND SWAMPS.	GROWING UP THROUGH DENSE MATS OF TYPHA, JUNCUS, SCIRPUS, ETC. IN FRESHWATER MARSH. 10-170M.	IN SWAMPS.	Low Probability
Asclepias nyctaginifolia	Mojave milkweed				2.1	MOJAVEAN DESERT SCRUB, PINYON-JUNIPER WOODLAND.	1000-1700M.		Moderate Probability
Asio otus	long-eared owl			SC		RIPARIAN BOTTOMLANDS GROWN TO TALL WILLOWS & COTTONWOODS; ALSO, BELTS OF LIVE OAK PARALLELING STREAM COURSES.	REQUIRE ADJACENT OPEN LAND PRODUCTIVE OF MICE AND THE PRESENCE OF OLD NESTS OF CROWS, HAWKS, OR MAGPIES FOR BREEDING.		Not Present

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	CDFG LIST	CNPS LIST	GENERAL HABITAT	MICRO HABITAT	ECOLOGICAL COMMUNITY	PROBABILITY OF OCCURANCE
Aspidoscelis hyperythra	orangethroat whiptail			SC		INHABITS LOW-ELEVATION COASTAL SCRUB, CHAPARRAL, AND VALLEY-FOOTHILL HARDWOOD HABITATS.	PREFERS WASHES & OTHER SANDY AREAS WITH PATCHES OF BRUSH & ROCKS. PERENNIAL PLANTS NECESSARY FOR ITS MAJOR FOOD-TERMITES	HABITAT CONSISTED OF "SANDY WASH, ON A HILL SPARSELY COVERED WITH VEGETATION, AND IN THE DUST BY THE ROADSIDE." 2 OF THE 1908 SPECIMENS WERE FOUND "IN THE ACT OF COPULATION."	Not Present
Aspidoscelis tigris stejnegeri	coastal whiptail					FOUND IN DESERTS & SEMIARID AREAS WITH SPARSE VEGETATION AND OPEN AREAS. ALSO FOUND IN WOODLAND & RIPARIAN AREAS.	GROUND MAY BE FIRM SOIL, SANDY, OR ROCKY.	HABITAT CONSISTS OF CHAMISE CHAPARRAL.	Low Probability
Astragalus hornii var. hornii	Horn's milk-vetch				1B.1	MEADOWS AND SEEPS, PLAYAS.	LAKE MARGINS, ALKALINE SITES. 60-850M.	ROADSIDES. DAMP LANDS.	Not Present
Athene cunicularia	burrowing owl			SC		OPEN, DRY ANNUAL OR PERENIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.	SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.	HABITAT CONSISTS OF SANDY SOILS AND OPEN VEGETATION, DOMINATED BY TELEGRAPH WEED, MUSTARD, AND CALIFORNIA CROTON. SITE APPEARS TO HAVE BEEN HISTORICALLY GRADED. GROUND SQUIRRELS DETECTED WITHIN 100 M OF BREEDING LOCATIONS.	Not Present
Batrachoseps gabrieli	San Gabriel slender salamander					KNOWN ONLY FROM THE SAN GABRIEL MTNS. FOUND UNDER ROCKS, WOOD, FERN FRONDS & ON SOIL AT THE BASE OF TALUS SLOPES.	MOST ACTIVE ON THE SURFACE IN WINTER AND EARLY SPRING.		Not Present
Berberis nevinii	Nevin's barberry	Endangered	Endangered		1B.1	CHAPARRAL, CISMONTANE WOODLAND, COASTAL SCRUB, RIPARIAN SCRUB.	ON STEEP, N-FACING SLOPES OR IN LOW GRADE SANDY WASHES. 290-1575M.	SANDY ALLUVIAL SOIL. ASSOCIATED W/ SAMBUCUS MEXICANA, RHAMNUS CROCEA, CHILOPSIS LINEARIS, PRUNUS ILICIFOLIA, CHRYSOTHAMNUS NAUSEOSUS, LEPIDOSPARTUM SQUAMATUM, LOTUS SCOPARIUS, ARTEMISIA DRACUNCULUS, CEANOTHUS CRASSIFOLIUS, ETC.	Not Present
Brodiaea filifolia	thread-leaved brodiaea	Threatened	Endangered		1B.1	CHAPARRAL (OPENINGS), CISMONTANE WOODLAND, COASTAL SCRUB, PLAYAS, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.	USUALLY ASSOCIATED WITH ANNUAL GRASSLAND AND VERNAL POOLS; OFTEN SURR BY SHRUBLAND HABITATS. OCCURS IN OPENINGS ON CLAY	CLAY SOILS THAT ARE PROBABLY INUNDATED WITH WARM WATER EARLY IN THE SEASON. DOMINATED BY CYNODON DACTYLON AND PHOENIX CANARIENSIS. ASSOCIATED WITH CENTAUREA MELITENSIS, LOTUS SCOPARIUS, HIRSCHFELDIA INCANA, AND AVENA BARBATA. BURNED IN '03.	Not Present

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	CDFG LIST	CNPS LIST	GENERAL HABITAT	MICRO HABITAT	ECOLOGICAL COMMUNITY	PROBABILITY OF OCCURANCE
Calochortus palmeri var. palmeri	Palmer's mariposa-lily				1B.2	MEADOWS AND SEEPS, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.	VERNALLY MOIST PLACES IN YELLOW-PINE FOREST, CHAPARRAL. 600-2245M.	GROWING IN OPENINGS ON HILLS AND SLOPES.	Moderate Probability
Calochortus plummerae	Plummer's mariposa-lily				1B.2	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.	ALLUVIAL SLOPE, SETTLING BASINS OF SANDY ROCKY SOIL WITH ERIODICTYON TRICHOCALYLX, RHUS OVATA, ADENOSTOMA FASCICULATA, OPUNTIA PARRYI, AND INTRODUCED GRASSES.	Low Probability
Canbya candida	white pygmy-poppy				4.2	JOSHUA TREE WOODLAND, MOJAVEAN DESERT SCRUB.	SANDY PLACES. 725-1250M.		Not Present
Carex comosa	bristly sedge				2.1	MARSHES AND SWAMPS.	LAKE MARGINS, WET PLACES; SITE BELOW SEA LEVEL IS ON A DELTA ISLAND. -5-1005M.		Not Present
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover				1B.2	MEADOWS, PEBBLE PLAIN, UPPER MONTANE CONIFEROUS FOREST, CHAPARRAL.	MESIC TO DRYING SOILS IN OPEN AREAS OF STREAM AND MEADOW MARGINS OR OF VERNALLY WET AREAS. 1135-2390M.	ASSOCIATED WITH QUERCUS CHRYSOLEPIS, Q. WISLIZENII, ACHILLEA MILLEFOLIUM, NAMA CALIFORNICUM, BLOOMERIA CROCEA, CALOCHORTUS INVENUSTUS, CEANOTHUS LEUCODERMIS, CERCOCARPUS BETULOIDES, BRODIAEA TERRESTRIS, CLAYTONIA PARVIFLORA, ERIODICTYON.	Low Probability
Catostomus santaanae	Santa Ana sucker	Threatened		SC		ENDEMIC TO LOS ANGELES BASIN SOUTH COASTAL STREAMS.	HABITAT GENERALISTS, BUT PREFER SAND-RUBBLE-BOULDER BOTTOMS, COOL, CLEAR WATER, & ALGAE.	HABITAT CONSISTS OF A SOUTH COAST MINNOW/SUCKER STREAM. ASSOCIATED AQUATIC TAXA INCLUDE RED-LEGGED FROG, PACIFIC SPECKLED DACE, PACIFIC TREE FROG, & INTRODUCED BROWN TROUT.	Not Present
Centromadia pungens ssp. laevis	smooth tarplant				1B.1	VALLEY AND FOOTHILL GRASSLAND, CHENOPOD SCRUB, MEADOWS, PLAYAS, RIPARIAN WOODLAND.	ALKALI MEADOW, ALKALI SCRUB; ALSO IN DISTURBED PLACES. 0-480M.	MOIST RUDERAL AREA WITH HIRSCHFELDIA INCANA, AMBROSIA ACANTHICARPA, EREMOCARPUS SETIGERA, CENTAUREA MELITENSIS, ERODIUM CICUTARIUM, AND VULPIA MYUROS.	Not Present
Chaetodipus fallax fallax	northwestern San Diego pocket mouse			SC		COASTAL SCRUB, CHAPARRAL, GRASSLANDS, SAGEBRUSH, ETC. IN WESTERN SAN DIEGO CO.	SANDY, HERBACEOUS AREAS, USUALLY IN ASSOCIATION WITH ROCKS OR COARSE GRAVEL.	VEGETATION IS SPARSE TO DENSE ALLUVIAL FAN SAGE SCRUB DOMINATED BY ERIOGONUM FASCICULATUM, ARTEMISAI CALIFORNICA, SALVIA MELLIFERA. SOILS COARSE SAND TO GRAVEL.	Not Present
Chaetodipus fallax pallidus	pallid San Diego pocket mouse			SC		DESERT BORDER AREAS IN EASTERN SAN DIEGO CO. IN DESERT WASH, DESERT SCRUB, DESERT SUCCULENT SCRUB, PINYON-JUNIPER, ETC.	SANDY HERBACEOUS AREAS, USUALLY IN ASSOCIATION WITH ROCKS OR COARSE GRAVEL.		Low Probability

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	CDFG LIST	CNPS LIST	GENERAL HABITAT	MICRO HABITAT	ECOLOGICAL COMMUNITY	PROBABILITY OF OCCURANCE
Charina trivirgata	rosy boa					DESERT & CHAPARRAL FROM THE COAST TO THE MOJAVE & COLORADO DESERTS. PREFERS MODERATE TO DENSE VEGETATION & ROCKY COVER.	HABITATS WITH A MIX OF BRUSHY COVER & ROCKY SOIL SUCH AS COASTAL CANYONS & HILLSIDES, DESERT CANYONS, WASHES & MOUNTAINS	HABITAT CONSISTS OF AN EPHEMERAL STREAM/RIPARIAN, DOMINATED BY SYCAMORE AND ARIZONA ASH; GRANITIC SOILS/BOULDERS.	Not Present
Charina umbratica	southern rubber boa		Threatened			RESTRICTED TO THE SAN BERNARDINO AND SAN JACINTO MTNS; FOUND IN A VARIETY OF MONTANE FOREST HABITATS.	FOUND IN VICINITY OF STREAMS OR WET MEADOWS; REQUIRES LOOSE, MOIST SOIL FOR BURROWING; SEEKS COVER IN ROTTING LOGS.		Not Present
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	Endangered	Endangered		1B.2	COASTAL SALT MARSH, COASTAL DUNES.	LIMITED TO THE HIGHER ZONES OF THE SALT MARSH HABITAT. 0-30M.	ALKALINE MEADOW.	Low Probability
Chorizanthe parryi var. parryi	Parry's spineflower				1B.1	COASTAL SCRUB, CHAPARRAL.	DRY SLOPES AND FLATS; SOMETIMES AT INTERFACE OF 2 VEG TYPES, SUCH AS CHAP AND OAK WDLAND; DRY, SANDY SOILS. 40-1705M.	IN 1979, GROWING AMONGST OLD STAND OF CERCOCARPUS BETULOIDES, YUCCA WHIPPLEI, ETC. FREE OF ANNUAL GRASSES. ASSOCIATED W/ CHORIZANTHE CORIACEA & C. PROCUMBENS. IN 2006, GROWING IN BARE AREA OF WASH WITH SCATTERED PLATANUS RACEMOSA, ETC.	Not Present
Chorizanthe xanti var. leucotheca	white-bracted spineflower				1B.2	MOJAVEAN DESERT SCRUB, PINYON-JUNIPER WOODLAND, COASTAL SCRUB (ALLUVIAL FANS).	SANDY OR GRAVELLY PLACES. 300-1200M.	ASSOCIATED WITH CHORIZANTHE CORIACEA AND CHORIZANTHE PROCUMBENS, AMONGST OLD STAND OF CERCOCARPUS BETULOIDES, YUCCA WHIPPLEI, ETC. FREE OF ANNUAL GRASSES.	Not Present
Cicindela tranquebarica viridissima	greenest tiger beetle					INHABITS THE WOODLANDS ADJACENT TO THE SANTA ANA RIVER BASIN.	USUALLY FOUND IN OPEN SPOTS BETWEEN TREES.	SAND/PARTIALLY VEGETATED FLOOD PLAIN.	Not Present
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Candidate	Endangered			RIPARIAN FOREST NESTER, ALONG THE BROAD, LOWER FLOOD-BOTTOMS OF LARGER RIVER SYSTEMS.	NESTS IN RIPARIAN JUNGLES OF WILLOW, OFTEN MIXED WITH COTTONWOODS, W/ LOWER STORY OF BLACKBERRY, NETTLES, OR WILD GRAPE.	ALL NESTS FOUND IN WILLOW TREES, IN WILLOW AND WILLOW-COTTONWOOD THICKETS WITH HEAVY UNDERBRUSH OF NETTLES, WILD GRAPE VINES & CATTAILS.	Low Probability
Crotalus ruber	red-diamond rattlesnake			SC		CHAPARRRAL, WOODLAND, GRASSLAND, & DESERT AREAS FROM COASTAL SAN DIEGO COUNTY TO THE EASTERN SLOPES OF THE MOUNTAINS.	OCCURS IN ROCKY AREAS & DENSE VEGETATION. NEEDS RODENT BURROWS, CRACKS IN ROCKS OR SURFACE COVER OBJECTS.		Low Probability
Cuscuta obtusiflora var. glandulosa	Peruvian dodder				2.2	MARSHES AND SWAMPS (FRESHWATER).	FRESHWATER MARSH. 15-280 M.		Low Probability
Deinandra mohavensis	Mojave tarplant		Endangered		1B.3	RIPARIAN SCRUB, CHAPARRAL.	LOW SAND BARS IN RIVER BED; MOSTLY IN RIPARIAN AREAS OR IN EPHEMERAL GRASSY AREAS. 850-1600M.	ON LOW SAND BARS IN RIVER BED WITH VERBASCUM THAPSUS, MIMETANTHE PILOSA, HEMIZONIA FITCHII, BOISDUVALIA SP.	Moderate Probability

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	CDFG LIST	CNPS LIST	GENERAL HABITAT	MICRO HABITAT	ECOLOGICAL COMMUNITY	PROBABILITY OF OCCURANCE
Dendroica petechia brewsteri	yellow warbler			SC		RIPARIAN PLANT ASSOCIATIONS. PREFERS WILLOWS, COTTONWOODS, ASPENS, SYCAMORES, & ALDERS FOR NESTING & FORAGING.	ALSO NESTS IN MONTANE SHRUBBERY IN OPEN CONIFER FORESTS.		High Probability
Diadophis punctatus modestus	San Bernardino ringneck snake					MOST COMMON IN OPEN, RELATIVELY ROCKY AREAS. OFTEN IN SOMEWHAT MOIST MICROHABITATS NEAR INTERMITTENT STREAMS.	AVOIDS MOVING THROUGH OPEN OR BARREN AREAS BY RESTRICTING MOVEMENTS TO AREAS OF SURFACE LITTER OR HERBACEOUS VEG.	INTERMITTENT BOULDER STREWN MONTANE CREEK W/OCCASSIONAL DEEP POOLS. OCC. SHRUBBY WILLOWS ALONG MARGINS, OTHERWISE OPEN UNDERSTORY. WHITE ALDER & WESTERN SYCAMORE CANOPY. LEAF LITTER/WOODY DEBRIS, INC. DOWNED LOGS ABUNDANT ALONG PORTIONS.	Low Probability
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered		SC		ALLUVIAL SCRUB VEGETATION ON SANDY LOAM SUBSTRATES CHARACTERISTIC OF ALLUVIAL FANS AND FLOOD PLAINS.	NEEDS EARLY TO INTERMEDIATE SERAL STAGES.	HABITAT CONSISTS OF DISTURBED ALLUVIAL SCRUB, DOMINATED BY ERIOGONUM FASCICULATUM, LOTUS SCOPARIUS, AND HETEROTHECA SESSIFLORA; SOUTHERN WILLOW SCRUB DOMINATED BY SALIX EXIGUA, BACCHARIS SALICIFOLIA, TAMARIX SP, AND POPULUS FREMONTII.	Not Present
Dipodomys stephensi	Stephens' kangaroo rat	Endangered	Threatened			PRIMARILY ANNUAL & PERENNIAL GRASSLANDS, BUT ALSO OCCURS IN COASTAL SCRUB & SAGEBRUSH WITH SPARSE CANOPY COVER.	PREFERS BUCKWHEAT, CHAMISE, BROME GRASS & FILAREE. WILL BURROW INTO FIRM SOIL.	NON-NATIVE GRASSLAND BORDERED BY ENCELIA SHRUBLAND. SLOPE: 0-10%. SOIL: ARLINGTON, GORGONIO, MONSERATE.	Not Present
Dodecahema leptoceras	slender-horned spineflower	Endangered	Endangered		1B.1	CHAPARRAL, COASTAL SCRUB (ALLUVIAL FAN SAGE SCRUB).	FLOOD DEPOSITED TERRACES AND WASHES; ASSOC INCLUDE ENCELIA, DALEA, LEPIDOSPARTUM, ETC. 200-760M.	ON UNDISTURBED GRAVELLY BENCH OF WASH WITH JUNIPERUS CALIFORNICA AND ERIODICTYON TRICHOCALYX. GROWING IN ALLUVIAL FAN SCRUB WITH ERIASTRUM DENSIFOLIUM SANCTORUM. NOT FOUND IN AREAS WITH DUMPING AND GROUND DISTURBANCE.	Not Present
Dudleya abramsii ssp. affinis	San Bernardino Mountains dudleya				1B.2	PEBBLE (PAVEMENT) PLAIN, UPPER MONTANE CONIFEROUS FOREST, PINYON AND JUNIPER WOODLAND.	OUTCROPS, GRANITE OR QUARTZITE, RARELY LIMESTONE. 1270-2600M.	STEEP, EAST-FACING, DRY, SUNNY AREA. MIXED CONIFEROUS FOREST DOMINATED BY CERCOCARPUS BETULOIDES. ASSOCIATED WITH BROMUS TECTORUM, CHEILANTHES COVILLEI, DICHELOSTEMMA CAPITATUM, AND HOLODISCUS MICROPHYLLUS.	Not Present

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	CDFG LIST	CNPS LIST	GENERAL HABITAT	MICRO HABITAT	ECOLOGICAL COMMUNITY	PROBABILITY OF OCCURANCE
Empidonax traillii extimus	southwestern willow flycatcher	Endangered	Endangered			RIPARIAN WOODLANDS IN SOUTHERN CALIFORNIA.		HABITAT CONSISTS OF DENSE LINEAR STANDS OF RIPARIAN. DOMINANT SPECIES INCLUDE SALIX LASIOLEPIS, SALIX HINDSIANA, POPULUS FREMONTII AND BACHARIS GLUTINOSA. YELLOW-BILLED CUCKOO OBSERVED IN AREA.	Not Present
Emys marmorata	western pond turtle			SC		A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS & IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BE	NEED BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYIN	UNNAMED CHANNEL IS BROAD, PERENNIAL DESERT WASH, LINED ON BOTH SIDES WITH WILLOWS (SALIX SP.) THAT EXTEND > 50 FT INTO ADJACENT UPLAND. STREAM IS DEFINED BY A SERIES OF >10 STEP POOLS THAT EXTEND OVER 0.5 MI REACH. POOLS CREATED BY BEAVERS.	High Probability
Eremophila alpestris actia	California horned lark					COASTAL REGIONS, CHIEFLY FROM SONOMA CO. TO SAN DIEGO CO. ALSO MAIN PART OF SAN JOAQUIN VALLEY & EAST TO FOOTHILLS.	SHORT-GRASS PRAIRIE, "BALD" HILLS, MOUNTAIN MEADOWS, OPEN COASTAL PLAINS, FALLOW GRAIN FIELDS, ALKALI FLATS.		Not Present
Eremothera boothii ssp. boothii	Booth's evening-primrose				2.3	JOSHUA TREE WOODLAND, PINYON-JUNIPER WOODLAND.	900-2400M.		Not Present
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Endangered	Endangered		1B.1	COASTAL SCRUB, CHAPARRAL.	IN SANDY SOILS ON RIVER FLOODPLAINS OR TERRACED FLUVIAL DEPOSITS. 150-610M.	ON ALLUVIAL BENCH WITH GRAVELLY SOIL. IN ALLUVIAL FAN SCRUB W/ ERIOGONUM FASCICULATUM, PLATANUS RACEMOSA, JUNIPERUS CALIFORNICA, LEPIDOSPARTUM SQUAMATUM, SENECIO FLACCIDUS, SCHISMUS BARBATUS, HETEROTHECA GRANDIFLORA, YUCCA SCHIDIGERA, ETC.	Not Present
Euchloe hyantis andrewsi	Andrew's marble butterfly					INHABITS YELLOW PINE FOREST NEAR LAKE ARROWHEAD AND BIG BEAR LAKE, SAN BERNARDINO MTNS, SAN BERNARDINO CO, 5000-6000 FT.	HOSTPLANTS ARE STREPTANTHUS BERNARDINUS & ARABIS HOLBOELLII VAR PINETORUM; LARVAL FOODPLANT IS DESCURAINIA RICHARDSONII.		Moderate Probability
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.		Not Present

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Fimbristylis thermalis	hot springs fimbristylis				2.2	MEADOWS (ALKALINE).	NEAR HOT SPRINGS. 120-1340M.	MODIFIED HOT SPRINGS WITH CEMENTED TUBS AND SEATS. PHOENIX CANERIENSIS OVERSTORY. ASSOCIATED WITH MIMULUS GUTATTUS, AGROSTIS VIRIDIS, NERIUM OLEANDER, JUNCUS SP, SCHOENUS NIGRICANS, SCIURPUS SP.	Not Present
Galium californicum ssp. primum	Alvin Meadow bedstraw				1B.2	CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.	GROWS IN SHADE OF TREES AND SHRUBS AT THE LOWER EDGE OF THE PINE BELT, IN PINE FOREST-CHAPARRAL ECOTONE. 360M.	ASSOCIATED WITH GALIUM NUTTALLII.	Not Present
Gila orcuttii	arroyo chub			SC		NATIVE TO STREAMS FROM MALIBU CR TO SAN LUIS REY RIVER BASIN. INTRODUCED INTO STREAMS IN SANTA CLARA, VENTURA, SANTA YNE	SLOW WATER STREAM SECTIONS WITH MUD OR SAND BOTTOMS. FEEDS HEAVILY ON AQUATIC VEGETATION & ASSOCIATED INVERTEBRATES.	SOUTHERN CALIFORNIA RIVER, SOUTHERN COTTONWOOD WILLOW RIPARIAN FOREST.	Not Present
Glaucomys sabrinus californicus	San Bernardino flying squirrel			SC		BLACK OAK OR WHITE FIR DOMINATED WOODLANDS BETWEEN 5200 - 8500 FT IN THE SAN BERNARDINO AND SAN JACINTO RANGES.	NEED CAVITIES IN TREES/SNAGS FOR NESTS & COVER. NEEDS NEARBY WATER.	CLOSED CANOPY MIXED CONIFER-PINE/OAK PHASE OF MIDDLE ELEVATIONS. MONTANE CONIFEROUS FOREST WITH SCATTERED MONTANE CHAPARRAL (DOMINATED BY CEANOTHUS INTERGERRIMUS). HIGHEST QUALITY HABITAT TO BE PRESERVED AS OPEN SPACE.	High Probability
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered			OCEAN SHORE, LAKE MARGINS, & RIVERS FOR BOTH NESTING & WINTERING. MOST NESTS WITHIN 1 MI OF WATER.	NESTS IN LARGE, OLD-GROWTH, OR DOMINANT LIVE TREE W/OPEN BRANCHES, ESPECIALLY PONDEROSA PINE. ROOSTS COMMUNALLY IN WINTE		High probability during nesting season, low during non-nesting season
Helianthus nuttallii ssp. parishii	Los Angeles sunflower				1A	MARSHES AND SWAMPS (COASTAL SALT AND FRESHWATER). HISTORICAL FROM SOUTHERN CALIFORNIA.	5-1675M.	SWAMP LAND.	Not Present
Helminthoglypta taylori	westfork shoulderband					VICINITY OF THE MOJAVE RIVER.	UNDER LOGS AND LEAVES.	UNDER COTTONWOOD LOGS.	Not Present
Heuchera parishii	Parish's alumroot				1B.3	LOWER MONTANE CONIF. FOREST, SUBALPINE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST, ALPINE BOULDER & ROCK FIELD.	ROCKY PLACES. 1500-3800M.		Not Present
Horkelia cuneata var. puberula	mesa horkelia				1B.1	CHAPARRAL, CISMONTANE WOODLAND, COASTAL SCRUB.	SANDY OR GRAVELLY SITES. 70-810M.		Not Present

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Icteria virens	yellow-breasted chat			SC		SUMMER RESIDENT; INHABITS RIPARIAN THICKETS OF WILLOW & OTHER BRUSHY TANGLES NEAR WATERCOURSES.	NESTS IN LOW, DENSE RIPARIAN, CONSISTING OF WILLOW, BLACKBERRY, WILD GRAPE; FORAGES AND NESTS WITHIN 10 FT OF GROUND.	HABITAT CONSISTS OF DENSE LINEAR STANDS OF RIPARIAN. DOMINANT SPECIES INCLUDE SALIX LASIOLEPIS, SALIX HINDSIANA, POPULUS FREMONTII AND BACHARIS GLUTINOSA. YELLOW-BILLED CUCKOO OBSERVED IN AREA.	High Probability
Imperata brevifolia	California satintail				2.1	COASTAL SCRUB, CHAPARRAL, RIPARIAN SCRUB, MOJAVEAN SCRUB, MEADOWS AND SEEPS (ALKALI).	MESIC SITES, ALKALI SEEPS, RIPARIAN AREAS. 0-500M.		Not Present
Ivesia argyrocoma var. argyrocoma	silver-haired ivesia				1B.2	MEADOWS, PEBBLE PLAINS, UPPER MONTANE CONIFEROUS FOREST.	IN PEBBLE PLAINS AND MEADOWS WITH OTHER RARE PLANTS. 1480-2680M.	FLAT BENCH ABOVE CREEK ON A NNE FACING SLOPE. ASSOCIATED WITH PINUS JEFFREYI, QUERCUS KELLOGGII, ELYMUS ELYMOIDES, POA SECUNDA, ERIOGONUM WRIGHTII, LESSINGIA FILAGINIFOLIA, ALLIUM, BROMUS TECTORUM. UNDERSTORY DOMINATED BY GRASSES.	Not Present
Lanius ludovicianus	loggerhead shrike			SC		BROKEN WOODLANDS, SAVANNAH, PINYON-JUNIPER, JOSHUA TREE, & RIPARIAN WOODLANDS, DESERT OASES, SCRUB & WASHES.	PREFERS OPEN COUNTRY FOR HUNTING, WITH PERCHES FOR SCANNING, AND FAIRLY DENSE SHRUBS AND BRUSH FOR NESTING.	HABITAT CONSISTS OF DENSE LINEAR STANDS OF RIPARIAN. DOMINANT SPECIES INCLUDE SALIX LASIOLEPIS, SALIX HINDSIANA, POPULUS FREMONTII AND BACHARIS GLUTINOSA. YELLOW-BILLED CUCKOO OBSERVED IN AREA.	Moderate Probability
Lasiurus xanthinus	western yellow bat			SC		FOUND IN VALLEY FOOTHILL RIPARIAN, DESERT RIPARIAN, DESERT WASH, AND PALM OASIS HABITATS.	ROOSTS IN TREES, PARTICULARLY PALMS. FORAGES OVER WATER AND AMONG TREES.		Not Present
Lepidium virginicum var. robinsonii	Robinson's pepper-grass				1B.2	CHAPARRAL, COASTAL SCRUB.	DRY SOILS, SHRUBLAND. 1-945M.	DRY HILLSIDES.	Not Present
Lepus californicus bennettii	San Diego black-tailed jackrabbit			SC		INTERMEDIATE CANOPY STAGES OF SHRUB HABITATS & OPEN SHRUB / HERBACEOUS & TREE / HERBACEOUS EDGES.	COASTAL SAGE SCRUB HABITATS IN SOUTHERN CALIFORNIA.	HABITAT CONSISTS OF RIVERSIDEAN SAGE SCRUB WITH AN UNDERSTORY OF NON-NATIVE AND NATIVE ANNUAL HERBS. SOUTHERN WILLOW SCRUB IS LOCATED ALONG AN EAST TO WEST DRAINAGE INSIDE NORTH BOUNDARY OF PROJECT.	Not Present
Lilium parryi	lemon lily				1B.2	LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS, RIPARIAN FOREST, UPPER MONTANE CONIFEROUS FOREST.	WET, MOUNTAINOUS TERRAIN; GEN IN FORESTED AREAS; ON SHADY EDGES OF STREAMS, IN OPEN BOGGY MEADOWS & SEEPS. 1300-2790M.	SPRINGY HILLSIDE ABOVE GRASSY FLAT.	Not Present

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Lycium parishii	Parish's desert-thorn				2.3	COASTAL SCRUB, SONORAN DESERT SCRUB.	300-1000M.		Not Present
Malacothamnus parishii	Parish's bush-mallow				1A	CHAPARRAL, COASTAL SAGE SCRUB.	IN A WASH. ONE SITE KNOWN: 485M.		Not Present
Monardella macrantha ssp. hallii	Hall's monardella				1B.3	BROADLEAVED UPLAND FOREST, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST, CISMONTANE WOODLAND, VALLEY & FOOTHILL GRASSLAND.	DRY SLOPES AND RIDGES IN OPENINGS WITHIN THE ABOVE COMMUNITIES. 695-2195M.	TRANSITION OF CHAPARRAL (ARCTOSTAPHYLOS PRINGLEI, A. GLAUCA, A. GLANDULOSA, QUERCUS KELLOGGII, Q. CHRYSOLEPIS, Q. WISLIZENII, ETC.) AND LOWER CONIFEROUS FOREST (PSEUDOTSUGA MACROCARPA AND PINUS COULTERI).	Not Present
Monardella pringlei	Pringle's monardella				1A	COASTAL SCRUB.	SANDY HILLS. 300-400M.		Not Present
Nasturtium gambelii	Gambel's water cress	Endangered	Threatened		1B.1	MARSHES AND SWAMPS.	FRESHWATER AND BRACKISH MARSHES AT THE MARGINS OF LAKES AND ALONG STREAMS, IN OR JUST ABOVE THE WATER LEVEL. 5-1305M.	THIS SWAMP WAS DRAINED BY 1945 AND IT SOON BECAME SAND AND COTTONWOODS, AND THE YELLOW-BILLED CUCKOOS DISAPPEARED.	Moderate Probability
Neotamias speciosus speciosus	lodgepole chipmunk					SUMMITS OF ISOLATED PIUTE, SAN BERNARDINO, & SAN JACINTO MOUNTAINS. USUALLY FOUND IN OPEN-CANOPY FORESTS.	HABITAT IS USUALLY LODGEPOLE PINE FORESTS IN THE SAN BERNARDINO MTS & CHINQUAPIN SLOPES IN THE SAN JACINTO MTS.		Not Present
Neotoma lepida intermedia	San Diego desert woodrat			SC		COASTAL SCRUB OF SOUTHERN CALIFORNIA FROM SAN DIEGO COUNTY TO SAN LUIS OBISPO COUNTY.	MODERATE TO DENSE CANOPIES PREFERRED. THEY ARE PARTICULARLY ABUNDANT IN ROCK OUTCROPS & ROCKY CLIFFS & SLOPES.	SOIL COARSE SAND TO GRAVELLY. VEGETATION: SPARSE TO DENSE ALLUVIAL FAN SCRUB & DENSE RIVERSIDEAN SAGE SCRUB, DOMINATED BY SALVIA MELLIFERA, S. APIANA, ARTEMISIA CALIFORNICA, & ERIOGONUM FASCICULATUM. DRAINAGES CONTAIN JUGLANS CALIFORNICA.	Not Present
Nyctinomops femorosaccus	pocketed free-tailed bat			SC		VARIETY OF ARID AREAS IN SOUTHERN CALIFORNIA; PINE-JUNIPER WOODLANDS, DESERT SCRUB, PALM OASIS, DESERT WASH, DESERT RIPA	ROCKY AREAS WITH HIGH CLIFFS.		Low Probability
Onychomys torridus ramona	southern grasshopper mouse			SC		DESERT AREAS, ESPECIALLY SCRUB HABITATS WITH FRIABLE SOILS FOR DIGGING. PREFERS LOW TO MODERATE SHRUB COVER.	FEEDS ALMOST EXCLUSIVELY ON ARTHROPODS, ESPECIALLY SCORPIONS & ORTHOPTERAN INSECTS.		Not Present

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Opuntia basilaris var. brachyclada	short-joint beavertail				1B.2	CHAPARRAL, JOSHUA TREE WOODLAND, MOJAVEAN DESERT SCRUB, PINYON-JUNIPER WOODLAND, RIPARIAN WOODLAND.	SANDY SOIL OR COARSE, GRANITIC LOAM. 425-1800M.	WASH IS OPEN, SANDY AND ROCKY SUBSTRATE. ALLUVIAL BENCHES COVERED BY ALLUVIAL SCRUB VEGETATION INCLUDING LEPIDOSPARTUM SQUAMATUM, CERCOCARPUS BETULOIDES, ETC. RIPARIAN SCRUB (SALIX LASIOLEPIS, BACCHARIS SALICIFOLIA) OCCURS ALONG STREAM.	Not Present
Pediomelum castoreum	Beaver Dam breadroot				1B.2	JOSHUA TREE WOODLAND, MOJAVEAN DESERT SCRUB.	SANDY SOILS; WASHES AND ROADCUTS. 610-825M.	DESERT SLOPE WITH ERIOPHYLLUM CONFERTIFLORUM, PURSHIA GLANDULOSA, CHAENACTIS STEVIOIDES, STEPHANOMERIA PARRYI, HAPLOPAPPUS LINEARIFOLIUS, TETRADYMIA SPINOSA, STIPA SPECIOSA, ETC.	Not Present
Perideridia parishii ssp. parishii	Parish's yampah				2.2	LOWER MONTANE CONIFEROUS FOREST, MEADOWS, UPPER MONTANE CONIFEROUS FOREST.	DAMP MEADOWS OR ALONG STREAMBEDS-PREFERS AN OPEN PINE CANOPY. 1390-3000M.		Low Probability
Perognathus alticolus alticolus	white-eared pocket mouse			SC		PONDEROSA & JEFFREY PINE HABITATS; ALSO IN MIXED CHAPARRAL & SAGEBRUSH HABITATS IN THE SAN BERNARDINO MTNS.	BURROWS ARE CONSTRUCTED IN LOOSE SOIL.		High Probability
Perognathus longimembris brevinasus	Los Angeles pocket mouse			SC		LOWER ELEVATION GRASSLANDS & COASTAL SAGE COMMUNITIES IN AND AROUND THE LOS ANGELES BASIN.	OPEN GROUND WITH FINE SANDY SOILS. MAY NOT DIG EXTENSIVE BURROWS, HIDING UNDER WEEDS & DEAD LEAVES INSTEAD.		Not Present
Phrynosoma blainvillii	coast horned lizard			SC		FREQUENTS A WIDE VARIETY OF HABITATS, MOST COMMON IN LOWLANDS ALONG SANDY WASHES WITH SCATTERED LOW BUSHES.	OPEN AREAS FOR SUNNING, BUSHES FOR COVER, PATCHES OF LOOSE SOIL FOR BURIAL, & ABUNDANT SUPPLY OF ANTS & OTHER INSECTS.	HABITAT LOST TO COMMERCIAL AND RESIDENTIAL DEVELOPMENT. SOME OF THE ORCHARDS AND GROVES STILL PRESENT BUT CULTIVATION HAS ELIMINATED ANY FORM OF HABITAT FOR CONCEALMENT AND FOOD SOURCE.	Moderate Probability
Polioptila californica californica	coastal California gnatcatcher	Threatened		SC		OBLIGATE, PERMANENT RESIDENT OF COASTAL SAGE SCRUB BELOW 2500 FT IN SOUTHERN CALIFORNIA.	LOW, COASTAL SAGE SCRUB IN ARID WASHES, ON MESAS & SLOPES. NOT ALL AREAS CLASSIFIED AS COASTAL SAGE SCRUB ARE OCCUPIED.	HABITAT CONSISTS OF MATURE ALLUVIAL SAGE SCRUB, ON A HIGH, STABILIZED BENCH IN THE CENTER OF THE WASH; DOMINANT SPECIES INCLUDE OPEN CHAMISE, BUCKWHEAT, MALOSMA, PRUNUS, AND YUCCA WHIPLEYI.	Not Present

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Rana draytonii	California red-legged frog	Threatened		SC		LOWLANDS & FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.	REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.		Low Probability
Rana muscosa	Sierra Madre yellow-legged frog	Endangered		SC		FEDERAL LISTING REFERS TO POPULATIONS IN THE SAN GABRIEL, SAN JACINTO & SAN BERNARDINO MOUNTAINS ONLY.	ALWAYS ENCOUNTERED WITHIN A FEW FEET OF WATER. TADPOLES MAY REQUIRE 2 - 4 YRS TO COMPLETE THEIR AQUATIC DEVELOPMENT.		Low Probability
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	Endangered				FOUND ONLY IN AREAS OF THE DELHI SANDS FORMATION IN SOUTHWESTERN SAN BERNARDINO & NORTHWESTERN RIVERSIDE COUNTIES.	REQUIRES FINE, SANDY SOILS, OFTEN WITH WHOLLY OR PARTLY CONSOLIDATED DUNES & SPARSE VEGETATION. OVIPOSITION REQ. SHADE.	HABITAT IS WHOLLY OR PARTLY CONSOLIDATED DUNES CONTAINING SANDY SOILS OF THE DELHI SERIES. HABITAT QUALITY IN SOME PARTS OF THIS SITE HAS BEEN REDUCED BY DISKING AND THE SUBSEQUENT INVASION BY TUMBLEWEEDS.	Not Present
Rhinichthys osculus ssp. 3	Santa Ana speckled dace			SC		HEADWATERS OF THE SANTA ANA AND SAN GABRIEL RIVERS. MAY BE EXTIRPATED FROM THE LOS ANGELES RIVER SYSTEM.	REQUIRES PERMANENT FLOWING STREAMS WITH SUMMER WATER TEMPS OF 17-20 C. USUALLY INHABITS SHALLOW COBBLE AND GRAVEL RIFFLE	LITTLE AQUATIC VEGETATION: WATERCRESS, ALGAE, MOSS. DOMINANT VEGETATION (PERCENTAGES CHANGE AT EACH LOCATION) IN ORDER OF DOMINANCE: MULEFAT, WILLOW, COTTONWOOD, MISC SHRUBS, HERBS AND GRASSES	Not Present
Ribes divaricatum var. parishii	Parish's gooseberry				1A	RIPARIAN WOODLAND.	SALIX SWALES IN RIPARIAN HABITATS. 65-100M.	ON BANKS OF CREEK IN DAMP LAND, MEADOWS, OR SWAMPS.	Not Present
Riversidian Alluvial Fan Sage Scrub	Riversidian Alluvial Fan Sage Scrub							ERIASTRUM DENSIFOLIUM, ERICAMERIA PINIFOLIA, YUCCA WHIPPLEI, JUNIPERUS CALIFORNICA, OPUNTIA OCCIDENTALIS, O. PARRYI, RHUS INTEGRIFOLIA.	Not Present
Schoenus nigricans	black bog-rush				2.2	MARSHES AND SWAMPS.	OFTEN IN ALKALINE MARSHES. 150-2000M.	SE-FACING SLOPES WITH HOT SPRINGS; WHOLE SLOPE PROBABLY INFLUENCED BY HOT WATER SEEPAGE. DISTURBED AREA, WITH MANY EXOTICS INCLUDING ARUNDO DONAX, SCHINUS MOLLE, PHOENIX CANARIENSIS, WASHINGTONIA ROBUSTA, EUCALYPTUS, BROMUS RUBENS, ETC.	Moderate Probability

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Scutellaria bolanderi ssp. austromontana	southern mountains skullcap				1B.2	CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.	IN GRAVELLY SOILS ON STREAMBANKS OR IN MESIC SITES IN OAK OR PINE WOODLAND. 425-2000M.	WET, SANDY, ALLUVIAL TERRACE SOILS ON EDGE OF PERENNIAL CREEK. GROWING WITH RECENT SALIX SPROUTS, CIRSIUM VULGARE, JUNCUS BALTICUS, CASTILLEJA LINARIFOLIA, BACCHARIS SALICIFOLIA, ARTEMISIA DRACUNCULUS, MIMULUS SPP, CENTAURIUM VENUSTUM, ETC.	Low Probability
Senecio aphanactis	chaparral ragwort				2.2	CISMONTANE WOODLAND, COASTAL SCRUB.	DRYING ALKALINE FLATS. 20-575M.		Not Present
Sidalcea malviflora ssp. dolosa	Bear Valley checkerbloom				1B.2	MEADOWS AND SEEPS, RIPARIAN WOODLAND, LOWER MONTANE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST.	KNOWN FROM WET AREAS WITHIN FORESTED HABITATS. AFFECTED BY HYDROLOGICAL CHANGES. 1495-2685 M.		Not Present
Sidalcea neomexicana	Salt Spring checkerbloom				2.2	ALKALI PLAYAS, BRACKISH MARSHES, CHAPARRAL, COASTAL SCRUB, LOWER MONTANE CONIFEROUS FOREST, MOJAVEAN DESERT SCRUB.	ALKALI SPRINGS AND MARSHES. 0-1500M.		Not Present
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest							QUERCUS AGRIFOLIA WOODLAND FORMING CLOSED CANOPY ACCORDING TO WIESLANDER SURVEY.	Not Present
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest							MAPPED BY WIESLANDER SURVEY (1935) AS PURE STANDS OF CLOSED CANOPY POPULUS FREMONTII D/S & MIXED STANDS OF CLOSED CANOPY POPULUS FREMONTII & SALIX SPP. OCCURS ON FLOODWAY.	Not Present
Southern Mixed Riparian Forest	Southern Mixed Riparian Forest							MAPPED BY WIESLANDER SURVEY (1935) AS CLOSED CANOPY ALNUS RHOMBIFOLIA, QUERCUS CHRYSOLEPIS, POPULUS FREMONTII AND PLATANUS RACEMOSA.	Not Present
Southern Riparian Forest	Southern Riparian Forest							UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.	Not Present
Southern Riparian Scrub	Southern Riparian Scrub							UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.	Present

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Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland							CLOSED CANOPY QUERCUS CHRYSOLEPIS & ALNUS RHOMBIFOLIA U/S AND ALNUS & PLATANUS RACEMOSA D/S ACCORDING TO WIESLANDER SURVEY.	Not Present
Sphenopholis obtusata	prairie wedge grass				2.2	CISMONTANE WOODLAND, MEADOWS AND SEEPS.	OPEN MOIST SITES, ALONG RIVERS AND SPRINGS, ALKALINE DESERT SEEPS. 360-2325M.	DAMP LAND, MEADOWS, OR SWAMPS.	Not Present
Streptanthus bernardinus	Laguna Mountains jewel-flower				4.3	CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.	CLAY OR DECOMPOSED GRANITE SOILS; SOMETIMES IN DISTURBED AREAS SUCH AS STREAMSIDES OR ROADCUTS. 1440-2500M.	CHAPARRAL WITH ERIODICTYON TRICHOCALYX, CEANOTHUS LEUCODERMIS, RHAMNUS CALIFORNICA, QUERCUS CHRYSOLEPIS, AND Q. KELLOGGII. ON EXPOSED S AND E-FACING SLOPE ON SHALLOW, ROCKY SOILS.	Not Present
Streptanthus campestris	southern jewel-flower				1B.3	CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST, PINYON-JUNIPER WOODLAND.	OPEN, ROCKY AREAS. 600-2790M.	IN GRANITIC SOIL.	Not Present
Symphyotrichum defoliatum	San Bernardino aster				1B.2	MEADOWS AND SEEPS, MARSHES AND SWAMPS, COASTAL SCRUB, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST, GRASSLAND.	VERNALLY MESIC GRASSLAND OR NEAR DITCHES, STREAMS AND SPRINGS; DISTURBED AREAS. 2-2040M.	MOIST ADOBE SOIL. DAMP MEADOWS.	Not Present
Taxidea taxus	American badger			SC		MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.	NEEDS SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREYS ON BURROWING RODENTS. DIGS BURROWS.		Low Probability
Thamnophis hammondii	two-striped garter snake			SC		COASTAL CALIFORNIA FROM VICINITY OF SALINAS TO NORTHWEST BAJA CALIFORNIA. FROM SEA TO ABOUT 7,000 FT ELEVATION.	HIGHLY AQUATIC, FOUND IN OR NEAR PERMANENT FRESH WATER. OFTEN ALONG STREAMS WITH ROCKY BEDS AND RIPARIAN GROWTH.	HABITAT CONSISTS OF WILLOW SCRUB.	Low Probability
Thelypteris puberula var. sonorensis	Sonoran maiden fern				2.2	MEADOWS AND SEEPS.	ALONG STREAMS, SEEPAGE AREAS. 50-550M.	SEEPING ROCK WALL COVERED WITH VITIS GIRDIANA AND STACHYS ALBENS. AREA SHADED BY SALIX GOODINGII. OTHER ASSOCIATED SPECIES INCLUDE BACCHARIS SALICIFOLIA, HIRSCHFELDIA INCANA, LYTHRUM CALIFORNICUM, MIMULUS AURANTIACUS, M. CARDINALIS, ETC.	Not Present

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	CDFG LIST	CNPS LIST	GENERAL HABITAT	MICRO HABITAT	ECOLOGICAL COMMUNITY	PROBABILITY OF OCCURANCE
Vireo bellii pusillus	least Bell's vireo	Endangered	Endangered			SUMMER RESIDENT OF SOUTHERN CALIFORNIA IN LOW RIPARIAN IN VICINITY OF WATER OR IN DRY RIVER BOTTOMS; BELOW 2000 FT.	NESTS PLACED ALONG MARGINS OF BUSHES OR ON TWIGS PROJECTING INTO PATHWAYS, USUALLY WILLOW, BACCHARIS, MESQUITE.	RIPARIAN WOODLAND DOMINATED BY ALDER, COTTONWOOD, WILLOW; UNDERSTORY OF RUBUS, POISON OAK, AND SHRUBBY WILLOWS. COWBIRDS OBSERVED IN AREA IN 2005 AND 2007.	Not Present

APPENDIX B
SPECIES OBSERVED ON-SITE

Appendix B
Lake Gregory Sediment Management and Bioretention Program
Observed Species List

PLANTS

ASTERACEAE	
Abmrosia psilostachya	Western ragweed
BETULACEAE	
Alnus sp.	alder
BRASSICACEAE	
Brassica nigra	black mustard
CHENOPODIACEAE	
Chenopodium sp.	goosefoot
CORNACEAE	
Cornus nuttallii	mountain dogwood
CUPRESSACEAE	
Calocedrus decurrens	incense cedar
Juniperus californica	California juniper
CYPERACEAE	
Carex sp.	sedge
Cyperus sp.	tall flat sedge
FAGACEAE	
Quercus cornelius	Muller oak
JUNCACEAE	
Juncus sp.	rushes
PINACEAE	
Pinus lambertiana	sugar pine
Pinus jeffreyi	Jeffrey pine
Pinus ponderosa	ponderosa pine
POACEAE	
Hordeum sp.	barley
Bromus tectorum	cheatgrass
PTERIDACEAE	
Adiantum capillus	Common maidenhair fern

ROSACEAE

Rubus sp.	blackberry

SALICACEAE

Salix laevigata	Red willow
Salix lasiolepsis	Arroyo willow
Salix lucida	Pacific willow
Populus fremontii	Fremont cottonwood

TYPHACEAE

Typha angustafolia	cattails

URTICACEAE

Urtica dioica	stinging nettle

ANIMALS

Cyprinus caripo	Common Carp
Micropterus salmoides	Large mouth bass

AVES

Cyanocitta cristata	Blue jay
Aphelocoma californica	Scrub jay
Laridae sp.	seagull
Anas platyrchynchos	Mallard ducks
Nectariniidae sp.	Sunbirds
Fulica Americana	coot
Sayornis nigricans	Black pheoby
Sturnidae sp.	Starling
Phalacrocorax sp.	Cormorant

REPTILIA

Actinemys marmorata	Western pond turtle
Uta stansburiana	Side-blotched lizard

APPENDIX C
SITE PHOTOS

Lake Gregory Restoration/Improvement Project and Maintenance Program Site Photos

Area 1: Houston Creek West – West Basin, view of riparian vegetation from the library viewing deck.

Area 2: Location of the proposed Houston Creek West – East Basin.

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Lake Gregory Restoration/Improvement Project and Maintenance Program Site Photos

Area 3: Houston Creek South culvert outlet and channel, and a partial view of the ponderosa pine forest (left) where the Houston Creek South basin is proposed.

Area 4: View of the sand delta and riparian vegetation from the west.

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