

April 12, 2021
(2018-047.026)

Dr. David Lin
CA Department of Fish and Wildlife
4665 Lampson Avenue, Suite C
Los Alamitos, CA 90720

Subject: 2021 Protected Species Preconstruction Surveys for the Devil's Gate Reservoir Restoration Project in the City of Pasadena, California

Dear Dr. Lin,

This letter report has been prepared to present the results of preconstruction surveys for protected species conducted by ECORP Consulting, Inc. (ECORP) for Los Angeles County Public Works' (LACPW) Devil's Gate Reservoir Restoration Project in the City of Pasadena, Los Angeles County, California. The preconstruction surveys for protected species were conducted to comply with Condition 2.10 in the California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA) 1600-2015-0263-R5 that was issued for the Devil's Gate Sediment Removal and Management Project (Project) on March 21, 2017.

According to the SAA, protected species are defined as "a species fully protected under state law; a species listed under the California Endangered Species Act (Fish and Game Code § 2050 et seq.) and/or Endangered Species Act (16 U.S.C. § 1531 et seq.); a species identified by CDFW as a species of special concern; or any other species for which take is prohibited under state or federal law". The protected species in the SAA are listed in Table 1 below.

Table 1. Protected Species in SAA

Common Name	Scientific Name	Special-Status Designation*
Plants		
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	Fed: END CA: END
Reptiles and Amphibians		
Two-striped garter snake	<i>Thamnophis hammondi</i>	Fed: none CA: SSC
Coast range newt	<i>Taricha torosa torosa</i>	Fed: none CA: SSC
Western pond turtle	<i>Actinemys marmorata</i>	Fed: none CA: SSC
Coast patch-nosed snake	<i>Salvadora hexalepis</i>	Fed: none CA: SSC
Birds		
Burrowing owl	<i>Athene cunicularia</i>	Fed: none CA: SSC
Yellow warbler	<i>Dendroica petechia</i>	Fed: none

Common Name	Scientific Name	Special-Status Designation*
		CA: SSC
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Fed: END CA: END
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Fed: END CA: END
Yellow breasted chat	<i>Icteria virens</i>	Fed: none CA: SSC
Loggerhead shrike	<i>Lanius ludovicianus</i>	Fed: none CA: SSC
Bats		
Western mastiff bat	<i>Eumops perotis californicus</i>	Fed: none CA: SSC
Western yellow bat	<i>Lasiurus xanthinus</i>	Fed: none CA: SSC
Pallid bat	<i>Antrozous pallidus</i>	Fed: none CA: SSC

* END – endangered; SSC – Species of Special Concern

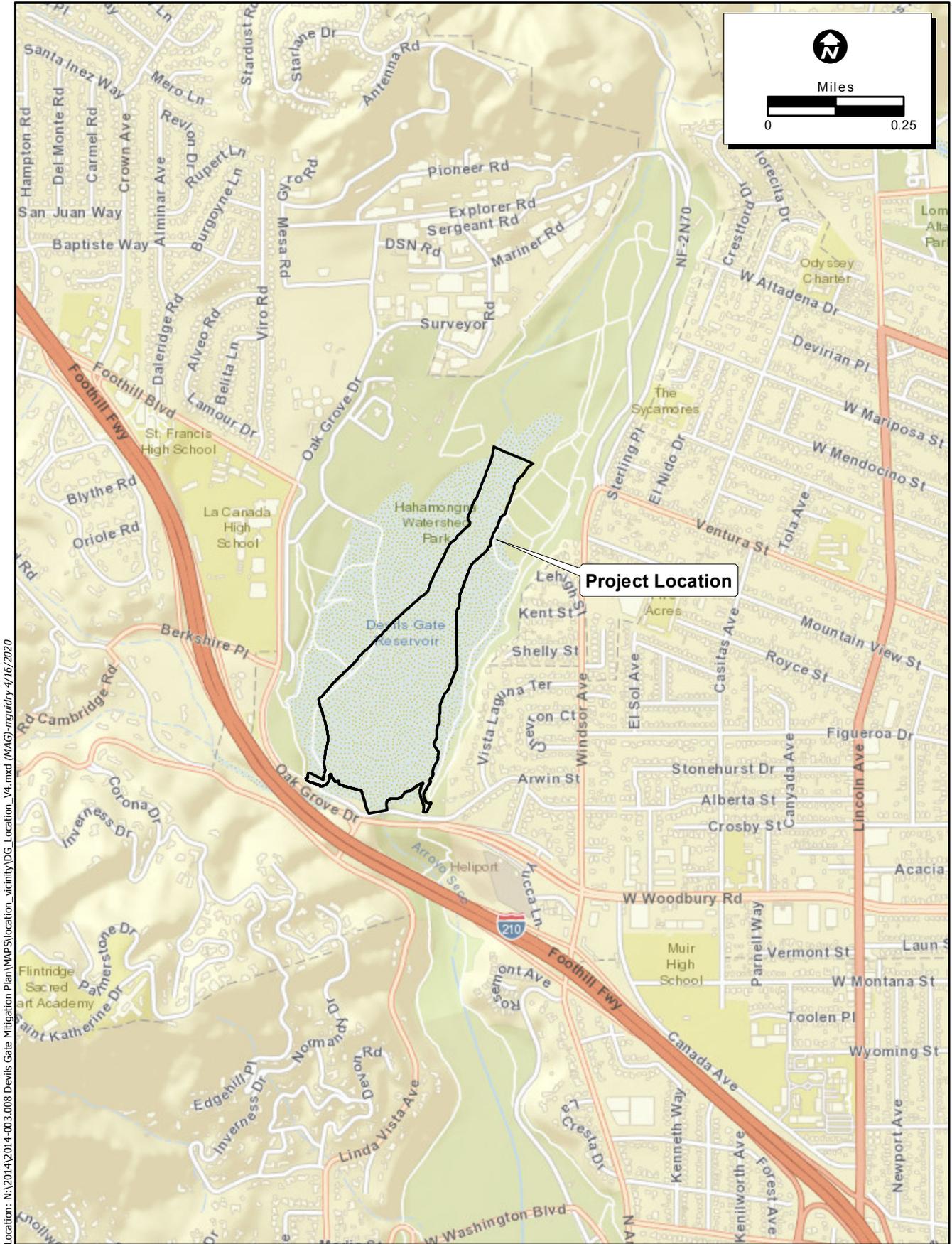
Site Description

The Project is located within the City of Pasadena in the upper portion of the Arroyo Seco Watershed and within the City's Hahamongna Watershed Park. Downtown Los Angeles is approximately 14 miles to the south of the Project, the San Gabriel Mountains are located just north of the Project, and the City of La Cañada Flintridge and the unincorporated community of Altadena are located to the west and east, respectively (Figure 1. Project Vicinity, Figure 2. Project Location). The Project is located within the "Pasadena, California" 7.5-minute quadrangle.

The topography in the vicinity of the Project consists of rolling terrain with a decline into the Arroyo Seco basin. The San Gabriel Mountains are located to the north of the Project and are characterized by both the foothills and steep slopes associated with mountainous terrain. Vegetation within the initial sediment removal area of the Project site was cleared during the first year of Project activities in 2018-2019. The initial sediment removal area is now composed primarily of bare ground and emergent non-native vegetation that has regrown since the initial vegetation removal efforts and includes wild radish (*Raphanus sativus*), perennial pepperweed (*Lepidium latifolium*), and poison hemlock (*Conium maculatum*). The areas surrounding the initial sediment removal area include on-site habitat restoration areas that are composed primarily of black willow thickets (*Salix gooddingii* Woodland Alliance) and mulefat thickets (*Baccharis salicifolia* Shrubland Alliance) towards the southern end, and scalebroom scrub (*Lepidospartum squamatum* Shrubland Alliance) towards the northern end.

METHODS

Preconstruction surveys for each protected species group were conducted following the survey techniques described in the Protected Species Survey Techniques Report submitted to CDFW on October 16, 2018 and approved by CDFW on October 18, 2018. (Attachment A).



Location: N:\2014\2014-003\008 Devils Gate Mitigation Plan\WAPS\location_vicinity\DG_Location_V4.mxd (MAG) nguidry 4/16/2020

Map Date: 4/16/2020
Source: ESRI

Figure 2. Project Location

RESULTS

The preconstruction surveys for protected species were led by CDFW-approved Designated Biologists for each appropriate species group. The dates, survey focus, personnel, and weather conditions for each survey are presented in Table 1. Representative photographs of the project site during surveys are provided in Attachment B and field survey datasheets are provided in Attachment C.

Table 1. Weather Conditions during Surveys

Date	Survey Focus	Surveyors*	Time		Temperature (°F)		Cloud Cover (%)		Wind Speed (mph)	
			start	end	start	end	start	end	start	end
3/17/2021	Plants	CL	0715	1400	45	72	5	0	0-1	3-5
3/24/2021	Plants	CL	0730	1415	54	78	0	35	0-1	0-2
3/24/2021	Birds	LS	0700	1440	54	78	0	35	0-1	2-6
3/29/2021	Birds	LS	0655	1104	46	74	0	0	0-2	0-3
3/25/2021	Reptiles & Amphibians	AS, MM	0655	1336	50	56	80	100	1-3	5-10
3/26/2021	Reptiles & Amphibians	AS, MM	0658	1235	47	62	100	10	0-1	1-3

*CT = Christine Tischer, CL = Carley Lancaster, TD = Taylor Dee, AS = Adam Schroeder, MM = Max Murray

Plants

Slender-horned spineflower was not identified during the preconstruction surveys for protected species. A complete list of all plant species observed during the preconstruction surveys is provided in Attachment D.

Reptiles and Amphibians

No protected reptile or amphibian species listed in the SAA were identified during the preconstruction surveys for protected species. A complete list of all reptiles, amphibians, and other wildlife species observed during the preconstruction surveys is provided in Attachment E.

Birds

No protected bird species were identified during the preconstruction surveys for protected species. A complete list of all birds and other wildlife observed during the preconstruction surveys is provided in Attachment E. Three additional preconstruction surveys for least Bell's vireo (*Vireo pusillus bellii*) will be conducted on three separate days within one week prior to project initiation in 2021.

Bats

Preconstruction bat surveys were not conducted ahead of Project Initiation in 2021 because Project activities during 2021 will not affect existing trees and/or structures that may provide roosting habitat per condition 2.14 of the SAA.

Discussion

No protected species listed in the SAA were observed during any of the preconstruction surveys. Based on the negative findings of the pre-construction presence/absence surveys, it was determined that protected species listed in the SAA were not present on the Project site and Project activities will not affect these protected species at this time. However, it is anticipated that yellow warbler will be present at the Project site later in the spring. Measures implemented during the year three sediment removal activities will include biological monitoring and any additional measures necessary to provide adequate protection to avoid impacts to yellow warbler during all Project activities.

If you have any questions regarding the contents of this letter report, please contact me at (714) 648-0630 or lsimpson@ecorpconsulting.com.

SIGNED: 

Lauren Simpson
Staff Biologist
ECORP Consulting, Inc.
2861 Pullman Street
Santa Ana, CA 92705

DATE: April 12, 2021

Attachments:

Attachment A: Devil's Gate Protected Species Survey Techniques
Attachment B: Representative Site Photos
Attachment C: Field Datasheets
Attachment D: Plant Compendium
Attachment E: Wildlife Compendium

ATTACHMENT A

Devil's Gate Protected Species Survey Techniques

October 16, 2018
(2018-047.006)

Mr. Steve Gibson
Senior Environmental Scientist (Specialist)
CA Department of Fish and Wildlife
4665 Lampson Avenue, Suite C
Los Alamitos, CA 90720

Subject: Protected Species Survey Techniques for the Devil's Gate Reservoir Sediment Removal and Management Project, in the City of Pasadena, California.

Dear Mr. Gibson,

This letter report has been prepared to provide survey techniques for protected species in accordance with Condition 2.10 in the California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA) 1600-2015-0263-R5 that was issued for the Devil's Gate Sediment Removal and Management Project (Project) on March 21, 2017.

ECORP is proposing the following survey techniques for approval by the CDFW for the protected species listed in the SAA. According to the SAA, protected species are defined as "a species fully protected under state law; a species listed under the California Endangered Species Act (Fish and Game Code § 2050 et seq.) and/or Endangered Species Act (16 U.S.C. § 1531 et seq.); a species identified by CDFW as a species of special concern; or any other species for which take is prohibited under state or federal law". The protected species found in the SAA are listed in Table 1 below.

Table 1. Protected Species in SAA

Common Name	Scientific Name	Special-Status Designation*
Plants		
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	Fed: END CA: END
Reptiles and Amphibians		
Two-striped garter snake	<i>Thamnophis hammondi</i>	Fed: none CA: SSC
Coast range newt	<i>Taricha tarosa tarosa</i>	Fed: none CA: SSC
Western pond turtle	<i>Actinemys marmorata</i>	Fed: none CA: SSC
Coast patch-nosed snake	<i>Salvadora hexalepis</i>	Fed: none CA: SSC
Birds		
Burrowing owl	<i>Athene cunicularia</i>	Fed: none CA: SSC

Common Name	Scientific Name	Special-Status Designation*
Yellow warbler	<i>Dendroica petechia</i>	Fed: none CA: SSC
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Fed: END CA: END
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Fed: END CA: END
Yellow breasted chat	<i>Icteria virens</i>	Fed: none CA: SSC
Loggerhead shrike	<i>Lanius ludovicianus</i>	Fed: none CA: SSC
Bats		
Western mastiff bat	<i>Eumops perotis californicus</i>	Fed: none CA: SSC
Western yellow bat	<i>Lasiurus xanthinus</i>	Fed: none CA: SSC
Pallid bat	<i>Antrozous pallidus</i>	Fed: none CA: SSC

* END – endangered; SSC – Species of Special Concern

Survey Techniques

Plants

Survey techniques for slender-horned spineflower (*Dodecahema leptoceras*) will include pedestrian transect surveys spaced approximately 30 feet apart within areas of suitable habitat in the project impact areas and 100-foot buffer. Survey techniques will be consistent with the accepted methodologies outlined by the United States Fish and Wildlife Service (USFWS 1996)¹, CDFW (CDFW 2018)², and the California Native Plant Society (CNPS 2001)³, but the timeframe will be altered to adhere to the project schedule and conditions of Project permits.

Reptiles and Amphibians

Survey techniques for the three protected reptile species (two-striped garter snake [*Thamnophis hammondi*], western pond turtle [*Actinemys marmorata*], and coast patch-nosed snake [*Salvadora hexalepis*]), and one protected amphibian species (coast range newt [*Taricha tarosa tarosa*]) will include visual encounter surveys to be conducted within the proposed work areas and a 500-foot buffer.

¹ United States Fish and Wildlife Service (USFWS). 1996. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants. Available at http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/Listed_plant_survey_guidelines.pdf

² California Department of Fish and Wildlife (CDFW). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. State of California, California Natural Resources Agency Department of Fish and Wildlife, March 20, 2018.

³ California Native Plant Society (CNPS). 2001. CNPS Botanical Survey Guidelines. California Native Plant Society, Sacramento, CA. December 9, 1983. Revised June 2, 2001. Available at http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf.

In accordance with Mitigation Measure (MM) BIO-3 for the Project (Chambers Group 2014⁴) and SAA 2.10, qualified biologists will conduct a survey for sensitive wildlife within 90 days prior to the commencement of ground disturbing activities. In general, visual encounter techniques for protected herpetofauna will follow accepted methodologies for western pond turtle by Holland (1991, 1994)^{5,6} and the United States Geological Society (2006)⁷. Two surveys will be conducted by CDFW-approved designated biologists familiar with the identification, life history, and behaviors of each species. Each survey will be conducted on a separate day and will be conducted when weather conditions are favorable. The habitat requirements for each species, as described on CaliforniaHerps.com⁸ and Stebbins (2003)⁹ will be reviewed prior to conducting surveys.

Surveys will focus on searching all potential habitats using binoculars and/or spotting scopes, as well as looking under various natural or artificial cover objects. Biologists will scan areas ahead of them, searching from a distance, before proceeding in a slow and quiet manner. When turning cover objects, biologists will carefully return each cover object to its original location in an attempt to keep potential impacts to a minimum. All open water habitats, including potential basking or haul-out sites, will be searched. Survey transects performed during the survey will be captured with the tracking on a handheld global positioning system (GPS) unit. Documentation of the transects completed will be provided as an appendix to the preconstruction survey report.

To help prevent the spread of disease, fungus, and invasive species, all field equipment will be free of weeds and when entering aquatic habitats will go through the CDFW Aquatic Invasive Species Disinfection/Decontamination Protocols. Areas of suitable habitat and capture and transport techniques for each Protected Species shall be identified prior to conducting the survey to allow any Protected herpetofauna observed during the surveys to be captured and relocated effectively.

Birds

Survey techniques for the six protected bird species (burrowing owl [*Athene cunicularia*], yellow warbler [*Dendroica petechia*], southwestern willow flycatcher [*Empidonax traillii extimus*], least Bell's vireo [*Vireo bellii pusillus*], yellow breasted chat [*Icteria virens*], and loggerhead shrike

⁴ Chambers Group, Inc. 2014. Devil's Gate Reservoir Sediment Removal and Management Project Final Environmental Impact Report (FEIR), Los Angeles County, California. Submitted to Los Angeles County Flood Control District, Water Resources Division, October 2014.

⁵ Holland, D. C. 1991. A synopsis of the ecology and status of the western pond turtle (*Clemmys marmorata*) in 1991. Prepared for the U.S. Fish and Wildlife Service, National Ecology Research Center, San Simeon, CA.

⁶ Holland, D. C. 1994. The western pond turtle: Habitat and history. Prepared for: U.S. Dept. of Energy, Bonneville Power Administration. Portland, OR. 303 pp.

⁷ United States Geological Survey. 2006. DRAFT Western Pond Turtle Visual Survey Protocol for the Southcoast Ecoregion. Western Ecological Research Center, US Department of Interior, Sacramento, CA. 60 pp.

⁸ CaliforniaHerps.com: A Guide to the Amphibians and Reptiles of California. [web application] Accessed: September 27, 2018.

⁹ Stebbins, R. C. 2003. A field Guide to Western Reptiles and Amphibians. 3rd Edition. Boston: Houghton Mifflin Co. 533 pp.

[*Lanius ludovicianus*]) will include visual and auditory encounter surveys to be conducted within the proposed work areas and a 500-foot buffer.

Surveys for protected birds will begin at dawn and will continue until weather conditions become unfavorable for bird activity or until the bird activity level ceases. Surveys will focus on all potential habitats using binoculars and/or spotting scopes as necessary. Biologists will walk through the entire Project site and scan areas ahead of them, searching and listening from a distance, before proceeding in a slow and quiet manner. All birds observed both visually and audibly will be recorded and GPS points will be taken at all protected bird species observation locations. The surveys will be conducted by CDFW-approved designated biologists with experience surveying for sensitive riparian and upland bird species.

In addition to the surveys for protected bird species, three preconstruction surveys for least Bell's vireo will be conducted within seven days prior to Project initiation. These preconstruction surveys will be consistent with the methodologies in the least Bell's vireo survey protocol (USFWS 2001¹⁰) but the timeframe will be altered to adhere to the project schedule and conditions of Project permits (e.g. the three surveys will be conducted outside of the breeding season). The surveys will be conducted by a CDFW-approved designated biologist familiar with the identification, vocalizations, and behaviors of the species to determine the presence/absence of the species. Each survey will be conducted on a separate day and will be conducted between dawn and 11:00 a.m. when weather conditions are favorable.

Bats

Survey techniques for the three protected bat species (western mastiff bat [*Eumops perotis californicus*], western yellow bat [*Lasiurus xanthinus*], and pallid bat [*Antrozous pallidus*]) will include a daytime habitat and roost assessment and nighttime acoustic and emergence surveys to be conducted within the proposed work areas and a 300-foot buffer.

In accordance with MM BIO-5 and Condition 2.14 of the SAA, preconstruction bat surveys will be performed within 30 days prior to the commencement of vegetation or structure removal activities to avoid the direct loss of bats that could result from removal of trees and/or structures that may provide day or night roost habitat. CDFW-approved designated biologists will survey the project site, 300-foot buffer, and all trees and manmade structures (i.e. bridges, utility poles, kiosks, etc.) proposed to be directly impacted or removed to identify potential roost sites.

The initial bat survey will be performed in two parts, daytime surveys to identify potential roost sites within the impact area and evening surveys to perform emergence counts and acoustical monitoring of the potential roost sites. The diurnal portion of the survey will be done by a thorough visual inspection of the trees and structures within the impact areas to look for larger openings, cavities, crevices, loose bark, and other features that may provide roosting habitat.

⁹ US Fish and Wildlife Service. 2001. Least Bell's Vireo Survey Guidelines. Carlsbad Fish and Wildlife Office, CA. 3 pp.

The biologists will document any bat individuals or roosting colonies that are observed during the survey. Locations of potential roost trees will be recorded using a GPS unit in the field and discretely marked for biologists to revisit during the evening survey portion. Survey transects performed during the survey will be captured with the tracking on a handheld GPS unit. Documentation of the transects completed will be provided as an appendix to the bat survey report.

During the following evenings biologists will observe the potential roost trees using night-vision equipment to determine if the emergence of bats from the tree(s) occurs. Echometer Touch 2 PRO detectors will be used next to the trees during emergence to determine the species emerging, where possible. ECORP biologists will also collect acoustic data using passive Anabat™ detectors at various spots throughout the survey areas. Although these data will be imprecise as to the origin of detected bat species, the information will be useful as a tool to identify bat species that are foraging and may be roosting in the project site.

A second survey will be performed no later than seven days prior to construction activities. Designated biologists will conduct an exit survey with night vision equipment for any previously identified day-roosts (if applicable). Any occupied day roosts will be recorded and CDFW will be notified immediately to determine the next course of action and appropriate avoidance and minimization measures.

The surveys for protected bat species will be conducted separately from the other protected species surveys and a separate bat survey report will be generated and transmitted to CDFW prior to Project initiation.

General Survey Provisions

All surveys for protected wildlife will be conducted under favorable weather conditions. Surveys will not be conducted during extreme temperatures, sustained high winds, or heavy rain. All surveys for protected wildlife will be led by designated biologists that have been pre-approved by CDFW to survey for the appropriate species groups. Prior to conducting surveys, areas of suitable habitat and capture and transport techniques for each protected species shall be identified so capture and relocation can occur to keep protected species out of harm's way.

Biologists will record an inventory of searched habitats along with any species observed. All species detected during the surveys will be recorded on standardized field sheets, and when possible, photographs will be taken. Weather conditions at the start and end of the surveys will be recorded. Any protected species detected will be mapped on an aerial photo and the location will be recorded with a handheld GPS unit. The number of individuals, sex, age/size class, and any distinguishing features will be recorded for each sighting. All observations of protected species will be submitted to the CDFW's California Natural Diversity Database (CNDDDB). Survey transects performed during the surveys will be captured using handheld GPS units track logging to ensure 100 percent coverage of the work areas and associated buffers.

Documentation of the transects completed will be provided as an appendix to the preconstruction survey report(s).

ECORP will prepare a report that presents the findings of the protected species surveys to be transmitted to CDFW prior to project initiation. The report will include methods used to conduct the surveys, a description of the existing biological conditions, and an analysis of any protected species that were found to or have the potential to occur within the project site. The report will also contain copies of field notes, survey maps, representative photographs of the site, and CNDDDB forms for any protected special detected during the surveys.

If you have any questions regarding the contents of this letter report, please contact me at (714) 648-0630 or lsimpson@ecorpconsulting.com.

SIGNED: 

Lauren Simpson
Staff Biologist
ECORP Consulting, Inc.
1801 Park Court Place, Building B. Ste 103.
Santa Ana, CA 92701

DATE: October 16, 2018

ATTACHMENT B
Representative Site Photos



Photo 1. View of initial sediment removal area, facing northwest.



Photo 2. View of initial sediment removal area, facing west.



Photo 3. Pooled water within the initial sediment removal area, facing northwest.



Photo 4. View of riparian habitat along edge of sediment removal boundary, facing south.



Photo 5. View of pooled water in Flint Canyon Wash, facing southwest.



Photo 6. View of pooled water in the Altadena drainage, facing northwest.



Photo 7. Western fence lizard observed on the project site.



Photo 8. Common side-blotched lizard observed on the project site.



Photo 9. Garden slender salamanders observed on the project site.



Photo 10. Western toad observed on the project site.

ATTACHMENT C
Field Datasheets

Devil's Gate Reservoir Project Protected Species Preconstruction Survey

Surveyor Names: Carley Lancaster Date: 3/24/21

Location(s): In reservoir and adjacent in CSS & RAFSS habitat

Targeted Species: Slender horned spineflower

SURVEY CONDITIONS				
	Time	Temp (F)	Wind (mph)	% Cloud Cover
START	0730	54 F	0-1	0
END	1415	78 F	0-2	35

SUITABLE HABITAT/SPECIES OBSERVATIONS?	
TARGET SPECIES	NOTES (coordinates, photo numbers, # individuals, sex, age/size class behaviors)
	None obs

Devil's Gate Reservoir Project Protected Species Preconstruction Survey

Date: 3/24/21

ADDITIONAL NOTES:
(e.g., site description, existing disturbances, other sensitive species identified?)

Portions of site where construction has already occurred are mostly disturbed. Other areas characterized by CSS & RAFFS vegetation

<u>Species obs</u>		ROSCAL	ERICAJ	CONARV	RUBURS
LEPLAT	ARTCAL	HETARB	PENSPE	CIRGCC	SALRAE
AMBACA	SALMEL	CORFIL	CHEAUB	UHPHIR	RIBAUW
BACSAL	PSECAL	EUPPEP	Ageritina sp.	SISIRI	ESCCAL
BRANIG	ACOMGLA	SAMNIG	Amsinkia sp.	PATWRI	PLARAC
MELIND	SALGLOO	MALUW	RAPSAT	URTUME	XANSTR
NICGLA	PODFRE	SALLAS	PHAMIN	URTIO	BROTEL
Solanum sp.	CONMAC	OPULIT	HESWHI	CAPBUR	AUEFAT
LEPSQU	MALSAX	ENCCAL	Pseudognaphalium sp.	CROCAL	
ERIFAS	BROMAD	SALAPI	PLAIND	Persicaria sp.	
LOBMAR	Lupine sp.	MARVUL	HORMUR	Calyptridium sp.	
PHACIC	RICCOM	BRICAL	JUNTEX	CYPERA	
EROCIC	ARTDOU	ARTDRA	JUNRUG	MALPAR	
QUEAGR	URPBIC	Lotus sp.	SCHBAR	RUMCRI	
	GENELA	HETGIR	SALCOL	BACDIL	
		CAMMIC	ANAAUB		

INCIDENTAL SPECIES OBSERVED
(include sign: tracks, carcass, feathers, scat, etc.)

Devil's Gate Reservoir Project Protected Species Preconstruction Survey

Date: 3/24/2021

Surveyor Names: Lauren SimpsonLocation(s): Devil's Gate Reservoir Restoration Project Site - All suitable habitat for upland and riparian birdsTargeted Species: burrowing owl, yellow warbler, southwestern willow flycatcher, least Bell's vireo, yellow breasted chat, loggerhead shrike

SURVEY CONDITIONS				
	Time	Temp (F)	Wind (mph)	% Cloud Cover
START	0700	54	0-1	0
END	1440	78	2-6	35

SUITABLE HABITAT/SPECIES OBSERVATIONS?	
TARGET SPECIES	NOTES (coordinates, photo numbers, # individuals, sex, age/size class behaviors)
Burrowing owl	Limited, marginal, low-quality burrowing owl habitat exists in the 500-ft buffer where multiple basins are present east of the northern half of the sediment removal area. California ground squirrel activity and burrows are present in the two southern-most basins and along the basin slopes. This habitat is marginal and low quality due to multiple disturbances and high human traffic in the area that overlooks these basins. These basins are primarily vegetated by nonnative herbaceous species that grow tall and are subject to periodic mowing. Human activity includes City crews and their vehicles as well as recreational use including horseback riders, walkers, and off-lease dogs. No burrowing owls or their sign were detected
Yellow warbler	Nesting habitat exists in the riparian forest present in the west and southwestern portions of the 500-ft buffer. A narrow strip of riparian forest exists along the middle eastern portion of the 500-ft buffer that may provide suitable nesting habitat; however, this area offers less canopy and is more exposed to adjacent human activity. Although this species is anticipated to be present in Spring, yellow warblers were not detected
Southwestern willow flycatcher	Nesting habitat exists in the riparian forest present in the west and southwestern portions of the 500-ft buffer. A narrow strip of riparian forest exists along the middle eastern portion of the 500-ft buffer that may provide suitable nesting habitat; however, this area offers less canopy and is more exposed to adjacent human activity. Most of the riparian forest lack a dense understory. No southwestern willow flycatchers were detected
Least Bell's vireo	Nesting habitat exists in the riparian forest present in the west and southwestern portions of the 500-ft buffer. A narrow strip of riparian forest exists along the middle eastern portion of the 500-ft buffer that may provide suitable nesting habitat; however, this area offers less canopy and is more exposed to adjacent human activity. Most of the riparian forest lack a dense understory. No least Bell's vireos were detected

Devil’s Gate Reservoir Project Protected Species Preconstruction Survey

Date: 3/24/2021

Yellow-breasted chat	Nesting habitat exists in the riparian forest present in the west and southwestern portions of the 500-ft buffer. A narrow strip of riparian forest exists along the middle eastern portion of the 500-ft buffer that may provide suitable nesting habitat; however, this area offers less canopy and is more exposed to adjacent human activity. Most of the riparian forest lack a dense understory. No yellow-breasted chats were detected
Loggerhead shrike	Limited nesting habitat exists in the narrow strips of upland habitat in the northern half of the 500-foot buffer, particularly on the west and east side. Large shrubs including scalebroom, buckwheat, ceanothus and oak trees provide suitable nest sites. Multiple disturbances exist including high flows from storm events in the adjacent drainage, human traffic from City vehicles and recreational activities including horseback riders, walkers, and off-leash dogs. No loggerhead shrikes were detected

<p>ADDITIONAL NOTES: (e.g., site description, existing disturbances, other sensitive species identified?)</p>	
<p>No nesting habitat for these species exists in the sediment removal area which had emergent herbaceous vegetation, emergent nonnatives (perennial pepperweed & tree tobacco) and multiple smaller emergent willows and short scattered willows that had been washed into the area by flows associated with past storm events. Disturbances: high flows from past storm events in sediment removal area. Regular recreational activity in the sediment removal area and within 500-ft buffer: horseback riding, walkers, bikers, off-leash dogs.</p>	

Devil's Gate Reservoir Project Protected Species Preconstruction Survey

Date: 3/24/2021

INCIDENTAL SPECIES OBSERVED (include sign: tracks, carcass, feathers, scat, etc.)	
Black phoebe	northern rough-winged swallow
mallard	common yellow throat
acorn woodpecker	bushtit
white throated swift	white-crowned sparrow
western fence lizard	lesser goldfinch
ruby-crowned kinglet	Allen's hummingbird
Eurasian collared dove	yellow-rumped warbler
Tree swallow	Cooper's hawk
Alligator lizard	house finch
California towhee	killdeer
Red-tailed hawk	Northern flicker
Cassin's kingbird	mourning dove
California quail	common raven
Nuttall's woodpecker	Anna's hummingbirds
desert cottontail	European starling
barn swallow	Western meadowlark
California thrasher	Song sparrow
parrot sp.	blue-gray gnatcatcher
California scrub jay	
Bewick's wren	



Devil's Gate Reservoir Project Protected Species Preconstruction Survey

Date: 3/29/2021

Surveyor Names: Lauren Simpson

Location(s): Devil's Gate Reservoir Restoration Project Site - All suitable habitat for riparian birds

Targeted Species: yellow warbler, southwestern willow flycatcher, least Bell's vireo, yellow breasted chat,

SURVEY CONDITIONS				
	Time	Temp (F)	Wind (mph)	% Cloud Cover
START	0655	46	0-2	0
END	1104	74	0-3	0

SUITABLE HABITAT/SPECIES OBSERVATIONS?	
TARGET SPECIES	NOTES (coordinates, photo numbers, # individuals, sex, age/size class behaviors)
N/A	No target species were observed, see previous datasheet for habitat descriptions.

ADDITIONAL NOTES:
(e.g., site description, existing disturbances, other sensitive species identified?)

No nesting habitat for these species exists in the sediment removal area which had emergent herbaceous vegetation, emergent nonnatives (perennial pepperweed & tree tobacco) and multiple smaller emergent willows and short scattered willows that had been washed into the area by flows associated with past storm events. Disturbances: high flows from past storm events in sediment removal area. Regular recreational activity in the sediment removal area and within 500-ft buffer: horseback riding, walkers, bikers, off-leash dogs.

Devil's Gate Reservoir Project Protected Species Preconstruction Survey

Date: 3/29/2021

INCIDENTAL SPECIES OBSERVED (include sign: tracks, carcass, feathers, scat, etc.)	
Black phoebe	common yellow throat
mallard	bushtit
acorn woodpecker	white-crowned sparrow
white throated swift	lesser goldfinch
western fence lizard	Allen's hummingbird
Lincoln's sparrow	yellow-rumped warbler
California towhee	Cooper's hawk
Red-tailed hawk	house finch
Cassin's kingbird	mourning dove
California quail	common raven
wrentit	Canada goose
Nuttall's woodpecker	Anna's hummingbird
desert cottontail	European starling
California ground squirrel	Western meadowlark
oak titmouse	Song sparrow
California thrasher	spotted towhee
parrot sp.	dark-eyed junco
California scrub jay	downy woodpecker
Bewick's wren	western bluebird



Devil's Gate Reservoir Project Protected Species Preconstruction Survey

Date: 3/25/2021

Surveyor Names: Adam Schroeder, Max Murray

Location(s): Northern half of project area and mitigation areas

Targeted Species: Southwestern Pond Turtle, Coast Range Newt,
Two-striped garter snake, Coast Patch nosed snake

SURVEY CONDITIONS				
	Time	Temp (F)	Wind (mph)	% Cloud Cover
START	0655	50	1-3	80
END	1336	56	5-10	100

SUITABLE HABITAT/SPECIES OBSERVATIONS?	
TARGET SPECIES	NOTES (coordinates, photo numbers, # individuals, sex, age/size class behaviors)
South western Pond Turtle	- Not observed - No ponded or flowing water observed in the northern section of the project area.
Coast Range Newt	- Not observed - No ponded or flowing water observed in the northern section of the site. Upland habitat on west side is marginal.
Two-striped Garter Snake	- Not observed - No ponded or flowing water observed in the northern section of the site. Upland habitat is marginal
Coast Patch nosed snake	- Not observed - Marginal upland habitat is present along the west side of the project area, however it is surrounded by disturbed areas to the west and the wash to the east

Devil's Gate Reservoir Project Protected Species Preconstruction Survey
Date: 3/25/2021**ADDITIONAL NOTES:**

(e.g., site description, existing disturbances, other sensitive species identified?)

Northern half of the site lacks any flowing or standing water. Many of the upland areas are in the process of restoration, so there is limited ground cover. The project area and surrounding areas receive a lot of foot traffic as well. While some upland habitat does exist for the target species it can be fragmented.

INCIDENTAL SPECIES OBSERVED

(include sign: tracks, carcass, feathers, scat, etc.)

CAQU, CAST, RLPA, AZWO, NUWO, CALT, NOFL, CATH, MODO, ANHU, ALHU, RTHA, MALL, BLPH, Desert cottontail, western fence lizard, Common side blotted lizard, western toad, Coyote (den)

Devil's Gate Reservoir Project Protected Species Preconstruction Survey

Surveyor Names: Adam Schroeder, Max Murray Date: 3/26/2021

Location(s): Southern half of project area and mitigation areas, Flint wash

Targeted Species: Southwestern Pond turtle, Coast range newt, two striped garter snake, Coast patch nosed snake

SURVEY CONDITIONS				
	Time	Temp (F)	Wind (mph)	% Cloud Cover
START	0658	43 47	0-1	100
END	1235	62	1-3	10

SUITABLE HABITAT/SPECIES OBSERVATIONS?	
TARGET SPECIES	NOTES (coordinates, photo numbers, # individuals, sex, age/size class behaviors)
South Western Pond Turtle	- Not observed - Standing water behind reservoir ^{dam} provides decent habitat, however it is devoid of vegetation. Small pool at Altadena drainage, and Flint canyon wash is flowing, limited access to upland habitat in these areas.
Coast Range Newt	- Not observed - Flint canyon wash provides decent habitat for coast range newt, however there is limited access to upland habitat.
Two-striped Garter Snake	- Not observed - Standing water behind dam, flowing water in Altadena drainage and Flint canyon wash. Decent habitat present, however water will likely dry up.
Coast Patch nosed Snake	- Not observed - Limited to marginal habitat observed.


Devil's Gate Reservoir Project Protected Species Preconstruction Survey
Date: 3/26/2021
ADDITIONAL NOTES:

(e.g., site description, existing disturbances, other sensitive species identified?)

The southern half of the project area and surrounding areas has more water than in previous years. There is a decent amount of standing water behind the dam that could turn into decent habitat, however it will likely go dry in the next couple months. The Altadina drainage is flowing and provides some ~~to~~ aquatic habitat, however there is a lot of trash and it is mostly cut off from any adequate upland habitat. Flint Canyon provides some of the best aquatic habitat on site with flowing water ~~over~~ ^{in the form of} riffles, runs and glides over small boulders, cobbles, gravels and sand. Most of the area around Flint wash is man made, so there is little upland habitat.

INCIDENTAL SPECIES OBSERVED

(include sign: tracks, carcass, feathers, scat, etc.)

ACWO, LANG, MODO, PUFF, CALT, NOFL, NUWO, RSHA, COHA, BUSH, ANHU, ALHU, LEGO, BLPH, MALL, SOSR, HOFI, NAW5, SPTO, KILL, RTHA, WCSP, CASS, CATH, CARI, EUST, CA Ground squirrel, desert cottontail, western toad, common side blotted lizard, western fence lizard, slender salamander (*Pseudis* sp.) - (likely garden slender)

ATTACHMENT D
Plant Compendium

Scientific Name	Common Name
VASCULAR PLANTS	
ANGIOSPERMS (DICOTYLEDONS)	
Adoxaceae	Elderberry Family
<i>Sambucus nigra ssp. cerulea</i> (= <i>S. mexicana</i>)	blue elderberry
Agavaceae	Century Plant Family
<i>Hesperoyucca whipplei</i>	chaparral yucca
Amaranthaceae	Amaranth Family
<i>Amaranthus albus</i> *	tumbleweed
Anacardiaceae	Sumac or Cashew Family
<i>Malosma laurina</i>	laurel sumac
<i>Toxicodendron diversilobum</i>	poison oak
Apiaceae	Carrot Family
<i>Conium maculatum</i> *	poison hemlock
Asteraceae	Sunflower Family
<i>Ageratina adenophora</i> *	sticky snakeroot
<i>Ambrosia acanthicarpa</i>	annual bursage
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia dracunculus</i>	tarragon
<i>Artemisia douglasiana</i>	California mugwort
<i>Baccharis pilularis</i>	coyote brush
<i>Baccharis salicifolia</i>	mulefat
<i>Brickellia californica</i>	California brickellbush
<i>Cirsium occidentale</i>	cobweb thistle
<i>Corethrogyne filaginifolia</i>	common sand aster
<i>Encelia californica</i>	California brittlebush
<i>Erigeron canadensis</i>	horseweed
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Isocoma menziesii</i>	Menzie's goldenbush
<i>Lepidospartum squamatum</i>	scale broom
<i>Malacothrix saxatilis</i>	cliff malacothrix
<i>Pseudognaphalium californicum</i>	ladies' tobacco
<i>Pseudognaphalium sp.</i>	cudweed
<i>Xanthium strumarium</i>	cockleburr
Betulaceae	Birch Family
<i>Alnus rhombifolia</i>	white alder
Boraginaceae	Borage Family
<i>Amsinckia menziesii</i>	small flowered fiddleneck
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Phacelia minor</i>	California bluebells
Brassicaceae	Mustard Family
<i>Brassica nigra</i> *	black mustard
<i>Capsella bursa-pastoris</i> *	shepherd's purse

<i>Lepidium latifolium*</i>	perennial pepperweed
<i>Lobularia maritima*</i>	sweet alyssum
<i>Raphanus sativus*</i>	wild radish
<i>Sisymbrium irio*</i>	London rocket
Cactaceae	Cactus Family
<i>Opuntia littoralis</i>	coast prickly pear
Chenopodiaceae	Goosefoot Family
<i>Chenopodium album*</i>	lamb's quarters
Convolvulaceae	Morning-Glory Family
<i>Cuscuta californica</i>	dodder
<i>Convolvulus arvensis*</i>	field bindweed
Cyperaceae	Cypress Family
<i>Cyperus eragrostis</i>	tall flatsedge
Euphorbiaceae	Spurge Family
<i>Croton californicus</i>	California croton
<i>Euphorbia peplus</i>	petty spurge
<i>Ricinus communis*</i>	castor bean
Fabaceae	Legume Family
<i>Acmispon glaber (= Lotus scoparius)</i>	deerweed
<i>Lotus sp.</i>	lotus
<i>Lupinus bicolor</i>	bicolored lupine
<i>Lupinus excubitus</i>	grape soda lupine
<i>Lupinus hirsutissimus</i>	stinging lupine
<i>Melilotus indicus*</i>	yellow sweetclover
Fagaceae	Oak Family
<i>Quercus agrifolia</i>	coast live oak
Geraniaceae	Geranium Family
<i>Erodium cicutarium*</i>	red-stemmed filaree
Grossulariaceae	Gooseberry Family
<i>Ribes aureum</i>	golden currant
Lamiaceae	Mint Family
<i>Marrubium vulgare*</i>	white horehound
<i>Salvia apiana</i>	white sage
<i>Salvia columbariae</i>	chia sage
<i>Salvia mellifera</i>	black sage
Malvaceae	Mallow Family
<i>Malva parviflora*</i>	cheeseweed mallow
Onagraceae	Evening Primrose Family
<i>Camissoniopsis micrantha</i>	Spencer primrose
<i>Oenothera elata</i>	evening primrose
Papaveraceae	Poppy Family
<i>Eschscholzia californica</i>	California poppy
Plantaginaceae	Plantain Family
<i>Penstemon spectabilis</i>	showy penstemon
Plantanaceae	Sycamore Family
<i>Platanus racemosa</i>	western sycamore

Polygonaceae	Buckwheat Family
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Rumex crispus</i> *	curly dock
Rosaceae	Rose Family
<i>Heteromeles arbutifolia</i>	toyon
<i>Prunus ilicifolia</i>	holly leaf cherry
<i>Rosa californica</i>	California rose
<i>Rubus ursinus</i>	California blackberry
Salicaceae	Willow Family
<i>Populus fremontii</i>	Fremont cottonwood
<i>Salix gooddingii</i>	black willow
<i>Salix laevigata</i>	red willow
<i>Salix lasiolepis</i>	Arroyo willow
Solanaceae	Nightshade Family
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca</i> *	tree tobacco
<i>Solanum sp.</i>	nightshade
Urticaceae	Nettle Family
<i>Urtica dioica</i>	stinging nettle
<i>Urtica urens</i> *	dwarf nettle
ANGIOSPERMS (MONOCOTYLEDONS)	
Juncaceae	Rush Family
<i>Juncus rugulosus</i>	wrinkled rush
<i>Juncus textilis</i>	basket rush
Poaceae	Grass Family
<i>Avena fatua</i> *	wild oat
<i>Bromus madritensis</i> *	red brome
<i>Bromus tectorum</i> *	cheatgrass
<i>Hordeum murinum</i> *	foxtail barley
<i>Schismus barbatus</i> *	Mediterranean grass

*Nonnative species

**CDFW California Species of Special Concern/CDFW Fully Protected Species/Watch List Species

***Federally endangered or threatened/State endangered or threatened

ATTACHMENT E
Wildlife Compendium

Scientific Name	Common Name
REPTILES	
Anguidae	Alligator Lizards
<i>Elegaria multicarinata</i>	Southern alligator lizard
Phrynosomatidae	Spiny Lizards
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Uta stansburiana</i>	common side-blotched lizard
AMPHIBIANS	
Plethodontidae	Lungless Salamanders
<i>Batrachoseps major major</i>	Garden slender salamander
Bufo	True Toads
<i>Anaxyrus boreas</i>	western toad
BIRDS	
Accipitridae	Hawks
<i>Accipiter cooperii</i> **	Cooper's hawk
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Buteo lineatus</i>	red-shouldered hawk
Aegithalidae	Bushtits
<i>Psaltriparus minimus</i>	bushtit
Anatidae	Geese, Ducks, Swans
<i>Anas platyrhynchos</i>	mallard
<i>Branta canadensis</i>	Canada goose
Apodidae	Swifts
<i>Aeronautes saxatalis</i>	White-throated swift
Ardeidae	Hérons and Egrets
<i>Ardea alba</i>	great egret
<i>Ardea herodias</i>	great blue heron
Charadriidae	Plovers and Lapwings
<i>Charadrius vociferus</i>	killdeer
Columbidae	Pigeons and Doves
<i>Streptopelia decaocto</i>	Eurasian collared dove
<i>Zenaidura macroura</i>	mourning dove
Corvidae	Jays and Crows
<i>Aphelocoma californica</i>	California scrub-jay
<i>Corvus corax</i>	common raven
<i>Corvus brachyrhynchos</i>	American crow
Fringillidae	Finches
<i>Spinus psaltria</i>	lesser goldfinch
<i>Haemorhous mexicanus</i>	house finch
<i>Haemorhous purpureus</i>	purple finch
Hirundinidae	Swallows
<i>Hirundo rustica</i>	barn swallow

<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
<i>Tachycineta bicolor</i>	tree swallow
Icteridae	Blackbirds and Orioles
<i>Sturnella neglecta</i>	Western meadowlark
Mimidae	Mockingbirds and Thrashers
<i>Mimus polyglottos</i>	northern mockingbird
<i>Toxostoma redivivum</i>	California thrasher
Odontophoridae	New World Quail
<i>Callipepla californica</i>	California quail
Paradoxornithidae	Wrentits
<i>Chamaea fasciata</i>	wrentit
Paridae	Titmice
<i>Baeolophus inornatus</i>	oak titmouse
Parulidae	New World Warblers
<i>Geothlypis trichas</i>	common yellowthroat
<i>Setophaga coronata</i>	yellow-rumped warbler
Passerellidae (previously Emberizidae)	Sparrows and Towhees
<i>Melospiza lincolni</i>	Lincoln's sparrow
<i>Melospiza melodia</i>	song sparrow
<i>Pipilo crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
<i>Junco hyemalis</i>	dark-eyed junco
Picidae	Woodpeckers
<i>Colaptes auratus</i>	northern flicker
<i>Dryobates nuttallii</i>	Nuttall's woodpecker
<i>Dryobates pubescens</i>	downy woodpecker
<i>Melanerpes formicivorus</i>	acorn woodpecker
Polioptilidae	Gnatcatchers
<i>Polioptila caerulea</i>	blue-gray gnatcatcher
Psittacidae	Old World Parrots
<i>Amazona sp.</i>	parrot sp.
Regulidae	Kinglets
<i>Regulus calendula</i>	ruby-crowned kinglet
Sturnidae	Starlings
<i>Sturnus vulgaris*</i>	European starling
Trochilidae	Hummingbirds
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
Troglodytidae	Wrens
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon</i>	house wren
Turdidae	Thrushes
<i>Sialia mexicana</i>	western bluebird
Tyrannidae	Tyrant Flycatchers
<i>Sayornis nigricans</i>	black phoebe

<i>Sayornis saya</i>	Say's phoebe
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
MAMMALS	
Canidae	Dogs, Wolves, and Foxes
<i>Canis latrans</i>	coyote (scat and den)
Cricetidae	New World Rats and Mice
<i>Neotoma sp.</i>	woodrat sp. (midden)
Equidae	Horses and Allies
<i>Equus caballus</i>	domestic horse
Leporidae	Hares and Rabbits
<i>Sylvilagus audubonii</i>	desert cottontail
Sciuridae	Squirrels
<i>Otospermophilus beecheyi</i>	California ground squirrel

*Nonnative species

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***Federally endangered or threatened/State endangered or threatened