MITIGATED NEGATIVE DECLARATION

FILE: P20-0005

PROJECT NAME Lin Parcel Map

NAME OF APPLICANT: Yixu (Tom) Lin

ASSESSOR'S PARCEL NO.: 126-250-012 **SECTION:** 12**T:** 10N **R:** 8E, MDM

LOCATION: The project is located on the south side of Salmon Valley Lane, east of the intersection with Salmon Falls Road, in the El Dorado Hills area.

☐ **GENERAL PLAN AMENDMENT: FROM: TO:**

☐ **REZONING: FROM: TO:**

☒ **TENTATIVE PARCEL MAP** ☐ **SUBDIVISION:**

SUBDIVISION (NAME):

☐ **SPECIAL USE PERMIT TO ALLOW:**

☐ **OTHER:**

REASONS THE PROJECT WILL NOT HAVE A SIGNIFICANT ENVIRONMENTAL IMPACT:

☐ **NO SIGNIFICANT ENVIRONMENTAL CONCERNS WERE IDENTIFIED DURING THE INITIAL STUDY.**

☒ **MITIGATION HAS BEEN IDENTIFIED WHICH WOULD REDUCE POTENTIALLY SIGNIFICANT IMPACTS.**

☐ **OTHER:**

In accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), State Guidelines, and El Dorado County Guidelines for the Implementation of CEQA, the County Environmental Agent analyzed the project and determined that the project will not have a significant impact on the environment. Based on this finding, the Planning Department hereby prepares this MITIGATED NEGATIVE DECLARATION. A period of twenty (20) days from the date of filing this mitigated negative declaration will be provided to enable public review of the project specifications and this document prior to action on the project by COUNTY OF EL DORADO. A copy of the project specifications is on file at the County of El Dorado Planning Services, 2850 Fairlane Court, Placerville, CA 95667.

This Mitigated Negative Declaration was adopted by the *hearing body* on *month/day/year*.

_____

Executive Secretary

COUNTY OF EL DORADO
PLANNING AND BUILDING DEPARTMENT
INITIAL STUDY
ENVIRONMENTAL CHECKLIST

Project Title: P20-0005/Lin Tentative Parcel Map

Lead Agency Name and Address: El Dorado County, 2850 Fairlane Court, Placerville, CA 95667

Contact Person: Evan Mattes, Senior Planner | **Phone Number:** (530) 621-5977

Owner's Name and Address: Yixu (Tom) Lin, 1910 Salmon Valley Lane, El Dorado Hills, CA 95762

Applicant's Name and Address: Yixu (Tom) Lin, 1910 Salmon Valley Lane, El Dorado Hills, CA 95762

Project Engineer's Name and Address: D&Z Engineering, Inc., 3389 Mira Loma Drive, Suite 3, Cameron Park, CA 95682

Project Location: The project is located on the south side of Salmon Valley Lane, 243-feet east of the intersection with Salmon Falls Road in the El Dorado Hills area.

Assessor's Parcel Number: 126-250-012 **Acres:** 15-acres

Sections: **S:**11 and 12 **T:** 10N **R:** 08E

General Plan Designation: Low Density Residential (LDR)

Zoning: Residential Estate Five-Acre (RE-5)

Description of Project: A request for a Tentative Parcel Map to subdivide a 15-acre parcel into two parcels of ten-acres (Parcel A) and five-acres (Parcel B) (Attachment A). The property is developed with an existing primary single-family dwelling with a detached garage, an accessory dwelling unit (ADU) with a detached garage, and a barn located on Parcel A; Parcel B is currently undeveloped, with no proposal for development as part of this parcel map proposal. Access to Parcel A is from the currently existing driveway encroachment onto Salmon Valley Lane (a noncounty-maintained roadway). Access to Parcel B will be from Salmon Falls Road (a County-maintained roadway). No new on-site improvements are proposed at this time. Any future development would be reviewed at time of building permit issuance. No trees are proposed for removal as part of this project.

Environmental Setting: The project site is a 15-acre partially developed parcel located in a rural residential area east of Folsom Lake. Salmon Valley Lane borders the biological study area (BSA) immediately to the north. Salmon Falls Road borders the BSA immediately to the west. Areas to the north, south, and west of the BSA consist of low-density residential developments. Areas to the east of the BSA are largely undeveloped. Vegetation in the surrounding area consists of oak woodlands, pine-oak forests, and chaparral. A drainage flows through the BSA from east to west, draining ultimately to Folsom Lake. The drainage has been modified with impoundments. Several residential buildings occur in the BSA north of the drainage. The southern portion of the parcel is an undeveloped grassland area with few trees. The elevation in the BSA ranges from approximately 590 to 766-feet above sea level. Mapped soil units in the BSA are Auburn very rocky silt loam, two to 30 percent slopes and Auburn very rocky silt loam, 30 to 50 percent slopes. The adjacent-neighboring parcels to the north, south, and west are single-family residential lots averaging approximately five-acres each. The adjacent neighboring parcels to the west and south are primarily similarly zoned and developed RE-5 properties; parcels to the east and north are primarily developed Residential Estate – Ten-Acres (RE-10) zoned parcels.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

1. El Dorado County Surveyor
2. El Dorado County Planning and Building Department
3. El Dorado County Environmental Management Department
4. El Dorado County Department of Transportation
5. El Dorado Hills Water District/Fire Department

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

At the time of the application request, seven Tribes: Colfax-Todds Valley Consolidated Tribe, Ione Band of Miwok Indians, Nashville Enterprise Miwok-Maidu-Nishinam Tribe, Shingle Springs Band of Miwok Indians, T'si-Akim Maidu, United Auburn Indian Community of the Auburn Rancheria, and the Washoe Tribe of California and Nevada, had requested to be notified of proposed projects for consultation in the project area. Staff received a consultation initiation

request from the Shingle Springs Band of Miwok Indians on September 22, 2021. Staff sent the SSBMI all cultural resource related documents associated with the project on September 27, 2021. Staff sent email correspondence on November 1, 2021 to follow-up on consultation progress. Due to 60-days of no response from the SSBMI, Staff closed-out AB52 consultation on November 26, 2021. Additionally, the United Auburn Indian Community sent correspondence stating they will defer any review to the SSBMI. However, if the SSBMI should decline consultation, then a condition regarding cultural resource finds was recommended. Within a ¼ mile radius of the project site found zero known prehistoric-period resources and three known historic-period cultural resources. There is low potential for prehistoric-period cultural resources in the immediate vicinity. There is low potential for locating historic-period cultural resources in the immediate vicinity. The project site is not known to contain neither Tribal Cultural Resources (TCRs) nor historic-period resources.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture and Forestry Resources		Air Quality
X	Biological Resources		Cultural Resources		Geology / Soils
	Greenhouse Gas Emissions		Hazards & Hazardous Materials		Hydrology / Water Quality
	Land Use / Planning		Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
	Transportation/Traffic		Tribal Cultural Resources		Utilities / Service Systems

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and 2) has been addressed by Mitigation Measures based on the earlier analysis as described in attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION, pursuant to applicable standards; and b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or Mitigation Measures that are imposed upon the proposed project, nothing further is required.

Printed Name Evan Mattes, Senior Planner For: El Dorado County

Signature: _____ Date: 6/10/2025

Printed Name Ande Flower, Planning Manager For: El Dorado County

Signature: _____ Date: 6/10/2025

PROJECT DESCRIPTION

Introduction

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts resulting from the proposed project. The proposed project would allow for the subdivision of a partially developed 15-acre parcel into two parcels ranging in size from ten-acres (Parcel A) to five-acres (Parcel B).

Throughout this Initial Study, please reference the following Attachments:

Attachment A: Tentative Parcel Map
Attachment B: Biological Resources Assessment
Attachment C: Aquatic Resource Delineation Report

Project Location and Surrounding Land Uses

The project site is located on the south side of Salmon Valley Lane, approximately 243-feet east of the intersection with Salmon Falls Road in the El Dorado Hills area. The neighboring parcels to the north, south, east and west are currently developed with residential uses.

Project Characteristics

1. Transportation/Circulation/Parking

The project was reviewed by the El Dorado County Transportation Division (DOT). Per DOT, Salmon Valley Lane is currently 12-feet in width, and would ordinarily include a 20-foot width requirement. However, this project has no additional impact to Salmon Valley Lane, as the existing developed portion of the property (proposed parcel A) already obtains access from Salmon Valley Lane, and no changes would occur as a result of this parcel split. The western portion of this property contains Salmon Valley Road, a County maintained road. DOT has conditioned the project to offer for dedication the project portion of Salmon Falls Road to El Dorado County. This dedication would be accepted. The El Dorado Hills Fire Department did not provide any comments or require additional improvements for road widening or turn-outs. The applicant should have a set of improvement plans prepared by a licensed Civil Engineer, and submit those plans and appropriate fees to DOT, and obtain a Grading Permit from DOT to perform the work. Proposed Parcel B would be allowed access off Salmon Falls Road. An encroachment permit would be required at the time that access is desired, or a building permit requested.

2. Utilities and Infrastructure

The El Dorado County Environmental Management Department (EMD) reviewed the project. Each parcel will be served by their own onsite well and wastewater treatment systems. A report in EMD records for an existing well on site shows that the well produced 30-gallons of water per minute. Therefore, no additional information was required to demonstrate an adequate water supply for the two proposed parcels. Regarding onsite wastewater treatment systems, each proposed parcel is required to have a soil percolation rate of 120-minutes per inch or lower and must have an adequately sized effluent dispersal area. A test pit (test trench) and soil percolation rate testing is required on the proposed five-acre lot to demonstrate adequate soil depth and suitability for a leach field. A complete soils evaluation and an identified suitable effluent dispersal area for Parcel B, must be provided to EMD. For electricity, the parcels would have to connect to service provided by Pacific Gas & Electric (PG&E).

3. Construction Considerations

No construction is proposed as a part of the project. The proposed parcels would maintain the current Residential Estate Five-Acre (RE-5) zoning designation, which allows for single-family residential development. Any future construction activities, such as single-family dwelling units or accessory structures, would be completed in

conformance with applicable agency requirements, and subject to a building permit from the El Dorado County Building Services.

Project Schedule and Approvals

This Initial Study is being circulated for public and agency review for a 20-day period. Written comments on the Initial Study should be submitted to the project planner indicated in the Summary section, above. Following the close of the written comment period, the Initial Study will be considered by the Lead Agency in a public meeting and will be certified if it is determined to be in compliance with California Environmental Quality Act (CEQA). The Lead Agency will also determine whether to approve the project.

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. If the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is a fair argument that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of Mitigation Measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the Mitigation Measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    a. the significance criteria or threshold, if any, used to evaluate each question; and
    b. the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL IMPACTS

I. **AESTHETICS.** *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?			X	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				**X**
c. Substantially degrade the existing visual character quality of the site and its surroundings?				**X**
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal regulations are applicable to aesthetics in relation to the proposed project.

State Laws, Regulations, and Policies

In 1963, the California State Legislature established the California Scenic Highway Program, a provision of the Streets and Highways Code, to preserve and enhance the natural beauty of California (Caltrans, 2015). The state highway system includes designated scenic highways and those that are eligible for designation as scenic highways.

There are no officially designated state scenic corridors in the vicinity of the project site.

Local Laws, Regulations, and Policies

The County has several standards and ordinances that address issues relating to visual resources. Many of these can be found in the County Zoning Ordinance (Title 130 of the County Code). The Zoning Ordinance consists of descriptions of the zoning districts, including identification of uses allowed by right or requiring a special-use permit and specific development standards that apply in particular districts based on parcel size and land use density. These development standards often involve limits on the allowable size of structures, required setbacks, and design guidelines. Included are requirements for setbacks and allowable exceptions, the location of public utility distribution and transmission lines, architectural supervision of structures facing a state highway, height limitations on structures and fences, outdoor lighting, and wireless communication facilities.

Visual resources are classified as 1) scenic resources or 2) scenic views. Scenic resources include specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually middle ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor.

A list of the county's scenic views and resources is presented in Table 5.3-1 of the El Dorado County General Plan EIR (p. 5.3-3). This list includes areas along highways where viewers can see large water bodies (e.g., Lake Tahoe and Folsom Reservoir), river canyons, rolling hills, forests, or historic structures or districts that are reminiscent of El Dorado County's heritage.

Several highways in El Dorado County have been designated by the California Department of Transportation (Caltrans) as scenic highways or are eligible for such designation. These include U.S. 50 from the eastern limits of the Government Center interchange (Placerville Drive/Forni Road) in Placerville to South Lake Tahoe, all of SR 89 within the county, and those portions of SR 88 along the southern border of the county.

Rivers in El Dorado County include the American, Cosumnes, Rubicon, and Upper Truckee rivers. A large portion of El Dorado County is under the jurisdiction of the USFS, which under the Wild and Scenic Rivers Act may designate rivers or river sections to be Wild and Scenic Rivers. To date, no river sections in El Dorado County have been nominated for or granted Wild and Scenic River status.

Discussion: A substantial adverse effect to Visual Resources would result in the introduction of physical features that are not characteristic of the surrounding development, substantially change the natural landscape, or obstruct an identified public scenic vista.

a. **Scenic Vista or Resource:** The project site is located in a rural area surrounded by large lot single-family residences. The project site is not adjacent to or visible from a State Scenic Highway. A scenic viewpoint, as designated by the county General Plan, is located along Salmon Valley Road (El Dorado County, 2003, p. 5.3-3 through 5.3-5). There is the potential for residential development with accessory structures on each of the proposed parcels, which is allowed on all lots zoned for single-family residential use. The subject parcel is viewable from the scenic viewpoint along Salmon Falls Road, however future development is anticipated to be consistent with the existing rural residential uses of the surrounding area. Any new structures would require permits for construction and would comply with the General Plan and Zoning code. Impacts would be less than significant.

b. **Scenic Resources:** The project site is not visible from an officially designated State Scenic Highway or county-designated scenic highway, or any roadway that is part of a corridor protection program (Caltrans, 2013). There are no views of the site from public parks or scenic vistas. Though there are trees in the project vicinity, there are no trees or historic buildings that have been identified by the County as contributing to exceptional aesthetic value at the project site, and no trees are proposed for removal. There would be no impact.

c. **Visual Character:** Each proposed lot would have the capability for single-family residential development. Parcel A is already developed with a residential use. Each lot would be allowed to develop new and additional residential structures, such as a primary dwelling, accessory dwelling and/or accessory structures. The site is surrounded by other single-family homes on large rural lots and the proposed project would not affect the visual character of the surrounding area. Impacts would be less than significant.

d. **Light and Glare:** The proposed project does not include any substantial new light sources, however, the project would allow for new dwelling units, such as primary and/or secondary dwellings, to be developed in the future, which could produce minimal new light and glare. The property already has one existing residence and an accessory dwelling unit on Parcel A. Parcel B is currently undeveloped. Future development would be required to comply with the County lighting ordinance requirements, including the shielding of lights to avoid potential glare, during the building permit process, and therefore any impacts would be less than significant.

FINDING: With adherence to El Dorado County Code of Ordinances (County Code), for this Aesthetics category, impacts would be anticipated to be less than significant.

II. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by California Department of forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				**X**
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				**X**
d. Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				**X**

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal regulations are applicable to agricultural and forestry resources in relation to the proposed project.

State Laws, Regulations, and Policies

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP), administered by the California Department of Conservation (CDC), produces maps and statistical data for use in analyzing impacts on California's agricultural resources (CDC 2008). FMMP rates and classifies agricultural land according to soil quality, irrigation status, and other criteria. Important Farmland categories are as follows (CDC 2013a):

Prime Farmland: Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. These lands have the soil quality, growing season, and moisture supply needed to

produce sustained high yields. Prime Farmland must have been used for irrigated agricultural production at some time during the 4 years before the FMMP's mapping date.

Farmland of Statewide Importance: Farmland similar to Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Farmland of Statewide Importance must have been used for irrigated agricultural production at some time during the four-years before the FMMP's mapping date.

Unique Farmland: Farmland of lesser quality soils used for the production of the state's leading agricultural crops. These lands are usually irrigated but might include non-irrigated orchards or vineyards, as found in some climatic zones. Unique Farmland must have been cropped at some time during the four-years before the FMMP's mapping date.

Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) allows local governments to enter into contracts with private landowners for the purpose of preventing conversion of agricultural land to non-agricultural uses (CDC 2013b). In exchange for restricting their property to agricultural or related open space use, landowners who enroll in Williamson Act contracts receive property tax assessments that are substantially lower than the market rate.

Z'berg-Nejedly Forest Practice Act

Logging on private and corporate land in California is regulated by the 1973 Z'berg-Nejedly Forest Practice Act. This Act established the Forest Practice Rules (FPRs) and a politically-appointed Board of Forestry to oversee their implementation. The California Department of Forestry (CALFIRE) works under the direction of the Board of Forestry and is the lead government agency responsible for approving logging plans and for enforcing the FPRs.

Discussion: A substantial adverse effect to Agricultural Resources would occur if:

- There is a conversion of choice agricultural land to nonagricultural use, or impairment of the agricultural productivity of agricultural land;
- The amount of agricultural land in the County is substantially reduced; or
- Agricultural uses are subjected to impacts from adjacent incompatible land uses.

a. **Farmland Mapping and Monitoring Program:** The site is not zoned for agricultural use or located within an Agricultural District. The site is not designated as farm land of local importance. There would be no impact.

b. **Agricultural Uses:** The property is not located within a Williamson Act Contract, nor is it adjacent to lands under a contract. There would be no impact.

c-d. **Loss of Forest land or Conversion of Forest land:** The site is not designated as Timberland Preserve Zone (TPZ) or other forestland according to the General Plan and Zoning Ordinance. No trees are proposed for removal as part of the project. There would be no impact.

e. **Conversion of Prime Farmland or Forest Land:** The project is not within an agricultural district or located on forest land and would not convert farmland or forest land to non-agriculture use. There would be no impact.

FINDING: For this Agriculture category, the thresholds of significance have not been exceeded and no impacts would be anticipated as a result of the project.

III. AIR QUALITY. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			**X**	
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			**X**	
d. Expose sensitive receptors to substantial pollutant concentrations?			**X**	
e. Create objectionable odors affecting a substantial number of people?				**X**

Regulatory Setting:

Federal Laws, Regulations, and Policies

The Clean Air Act is implemented by the U.S. Environmental Protection Agency (USEPA) and sets ambient air limits, the National Ambient Air Quality Standards (NAAQS), for six criteria pollutants: particulate matter of aerodynamic radius of 10 micrometers or less (PM10), particulate matter of aerodynamic radius of 2.5 micrometers or less (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO2), ground-level ozone, and lead. Of these criteria pollutants, particulate matter and ground-level ozone pose the greatest threats to human health.

State Laws, Regulations, and Policies

The California Air Resources Board (CARB) sets standards for criteria pollutants in California that are more stringent than the U.S. National Ambient Air Quality Standards (NAAQS) and include the following additional contaminants: visibility-reducing particles, hydrogen sulfide, sulfates, and vinyl chloride. The proposed project is located within the Mountain Counties Air Basin, which is comprised of seven air districts: the Northern Sierra Air Quality Management District (AQMD), Placer County Air Pollution Control District (APCD), Amador County APCD, Calaveras County APCD, the Tuolumne County APCD, the Mariposa County APCD, and a portion of the El Dorado County AQMD, which consists of the western portion of El Dorado County. The El Dorado County Air Quality Management District (AQMD) manages air quality for attainment and permitting purposes within the west slope portion of El Dorado County.

USEPA and CARB regulate various stationary sources, area sources, and mobile sources. USEPA has regulations involving performance standards for specific sources that may release toxic air contaminants (TACs), known as hazardous air pollutants (HAPs) at the federal level. In addition, USEPA has regulations involving emission criteria for off-road sources such as emergency generators, construction equipment, and vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also establishes passenger vehicle fuel specifications.

Air quality in the project area is regulated by the El Dorado County Air Quality Management District. California Air Resources Board and local air districts are responsible for overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required to comply with CEQA. The AQMD regulates air quality through the federal and state Clean Air Acts, district rules, and its permit authority. National and state ambient air quality standards (AAQS) have been adopted by the Environmental Protection Agency and State of California, respectively, for each criteria pollutant: ozone, particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide.

The Environmental Protection Agency and State also designate regions as "attainment" (within standards) or "nonattainment" (exceeds standards) based on the ambient air quality. The County is in nonattainment status for both federal and state ozone standards and for the state PM10 standard, and is in attainment or unclassified status for other pollutants (California Air Resources Board 2013). County thresholds are included in the chart below.

Criteria Pollutant	**El Dorado County Threshold**	
Reactive Organic Gasses (ROG)	82 lbs/day	
Nitrogen Oxides (NOx)	82 lbs/day	
Carbon Monoxide (CO)	Eight-hour average: Six parts per million (ppm)	One-hour average: 20 ppm
Particulate Matter (PM10):	Annual geometric mean: 30 µg/m3	24-hour average: 50 µg/m3
Particulate Matter (PM2.5):	Annual arithmetic mean: 15 µg/m3	24-hour average: 65 µg/m3
Ozone	Eight-hour average: 0.12 ppm	One-hour average: .09

The guide includes a Table (Table 5.2) listing project types with potentially significant emissions. ROG and NOx Emissions may be assumed to not be significant if:

- The project encompasses 12-acres or less of ground that is being worked at one time during construction;
- At least one of the recommended mitigation measures related to such pollutants is incorporated into the construction of the project;
- The project proponent commits to pay mitigation fees in accordance with the provisions of an established mitigation fee program in the district (or such program in another air pollution control district that is acceptable to District); or
- Daily average fuel use is less than 337-gallons per day for equipment from 1995 or earlier, or 402-gallons per day for equipment from 1996 or later

If the project meets one of the conditions above, AQMD assumed that exhaust emissions of other air pollutants from the operation of equipment and vehicles are also not significant.

For Fugitive dust (PM10), if dust suppression measures will prevent visible emissions beyond the boundaries of the project, further calculations to determine PM emissions are not necessary. For the other criteria pollutants, including CO, PM10, SO2, NO2, sulfates, lead, and H2S, a project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of the applicable national or state ambient air quality standard(s).

Naturally occurring asbestos (NOA) is also a concern in El Dorado County because it is known to be present in certain soils and can pose a health risk if released into the air. The AQMD has adopted an El Dorado County Naturally Occurring Asbestos Review Area Map that identifies those areas more likely to contain NOA (El Dorado County 2005).

Discussion: The El Dorado County Air Quality Management District (AQMD) has developed a Guide to Air Quality Assessment (2002) to evaluate project specific impacts and help determine if air quality mitigation measures are needed, or if potentially significant impacts could result. A substantial adverse effect on air quality would occur if:

- Emissions of ROG and No_x will result in construction or operation emissions greater than 82 lbs/day (Table 3.2);
- Emissions of PM_{10}, CO, SO_2 and No_x, as a result of construction or operation emissions, will result in ambient pollutant concentrations in excess of the applicable National or State Ambient Air Quality Standard (AAQS). Special standards for ozone, CO, and visibility apply in the Lake Tahoe Air Basin portion of the County; or
- Emissions of toxic air contaminants cause cancer risk greater than one in one million (ten in one million if best available control technology for toxics is used) or a non-cancer Hazard Index greater than one. In addition, the project must demonstrate compliance with all applicable District, State and U.S. EPA regulations governing toxic and hazardous emissions.

a. **Air Quality Plan:** El Dorado County has adopted the Rules and Regulations of the El Dorado County Air Quality Management District (2000) establishing rules and standards for the reduction of stationary source air pollutants (ROG/VOC, NOx, and O3). The EDC/State Clean Air Act Plan has set a schedule for implementing and funding transportation contract measures to limit mobile source emissions. The project would not conflict with or obstruct implementation of either plan. Any activities associated with future plans for grading and construction would require a Fugitive Dust Mitigation Plan (FDMP) for grading and construction activities. Such a plan would address grading measures and operation of equipment to minimize and reduce the level of defined particulate matter exposure and/or emissions to a less than significant level. The potential impacts of the project would be less than significant.

b-c. **Air Quality Standards and Cumulative Impacts:** No construction is proposed as part of the project. There is the potential for future development on the lots for construction of additional residential structures as well as accessory structures. Although this would contribute air pollutants due to construction and possible additional vehicle trips to and from the site, these impacts would be minimal. Existing regulations implemented at issuance of building and grading permits would ensure that any construction related PM10 dust emissions would be reduced to acceptable levels. The El Dorado County Air Quality Management District (AQMD) reviewed the project and determined that the project is not expected to cause a significant air quality impact. As such, AQMD waived the requirement of an Air Quality Impact Analysis. With full review for consistency with General Plan Policies, any impacts would be less than significant.

d. **Sensitive Receptors:** The CEQA Guidelines (14 CCR 15000) identify sensitive receptors as facilities that house or attract children, the elderly, people with illnesses, or others that are especially sensitive to the effects of air pollutants. Hospitals, schools, and convalescent hospitals are examples of sensitive receptors. No such facilities exist on or in the vicinity of the subject parcel. No sources of substantial pollutant concentrations are anticipated to be emitted by any future single family residences, during construction or following construction. The impact would be less than significant.

e. **Objectionable Odors:** Table 3-1 of the Guide to Air Quality Assessment (AQMD, 2002) does not list the proposed use of the parcels for residential uses as a use known to create objectionable odors. The request to subdivide a 15-acre parcel into two parcels would not be a source of objectionable odors. There would be no impact.

FINDING: The proposed project would not affect the implementation of regional air quality regulations or management plans. The proposed project would not be anticipated to cause substantial adverse effects to air quality, nor exceed established significance thresholds for air quality impacts.

IV. BIOLOGICAL RESOURCES. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species		**X**		

identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		**X**		
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			**X**	
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			**X**	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			**X**	
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

Endangered Species Act

The Endangered Species Act (ESA) (16 U.S. Code [USC] Section 1531 *et seq*.; 50 Code of Federal Regulations [CFR] Parts 17 and 222) provides for conservation of species that are endangered or threatened throughout all or a substantial portion of their range, as well as protection of the habitats on which they depend. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. In general, USFWS manages terrestrial and freshwater species, whereas NMFS manages marine and anadromous species.

Section 9 of the ESA and its implementing regulations prohibit the "take" of any fish or wildlife species listed under the ESA as endangered or threatened, unless otherwise authorized by federal regulations. The ESA defines the term "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC Section 1532). Section 7 of the ESA (16 USC Section 1531 *et seq*.) outlines the procedures for federal interagency cooperation to conserve federally listed species and designated critical habitats. Section 10(a)(1)(B) of the ESA provides a process by which nonfederal entities may obtain an incidental take permit from USFWS or NMFS for otherwise lawful activities that incidentally may result in "take" of endangered or threatened species, subject to specific conditions. A habitat conservation plan (HCP) must accompany an application for an incidental take permit.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC, Chapter 7, Subchapter II) protects migratory birds. Most actions that result in take, or the permanent or temporary possession of, a migratory bird constitute violations of the MBTA. The MBTA also prohibits destruction of occupied nests. USFWS is responsible for overseeing compliance with the MBTA.

Bald and Golden Eagle Protection Act

The federal Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), first enacted in 1940, prohibits "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The definition for "Disturb" includes injury to an eagle, a decrease in its productivity, or nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present.

Clean Water Act

Clean Water Act (CWA) section 404 regulates the discharge of dredged and fill materials into waters of the U.S., which include all navigable waters, their tributaries, and some isolated waters, as well as some wetlands adjacent to the aforementioned waters (33 CFR Section 328.3). Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial waterbodies such as swimming pools, vernal pools, and water-filled depressions (33 CFR Part 328). Areas meeting the regulatory definition of waters of the U.S. are subject to the jurisdiction of U.S. Army Corps of Engineers (USACE) under the provisions of CWA Section 404. Construction activities involving placement of fill into jurisdictional waters of the U.S. are regulated by USACE through permit requirements. No USACE permit is effective in the absence of state water quality certification pursuant to Section 401 of CWA.

Section 401 of the CWA requires an evaluation of water quality when a proposed activity requiring a federal license or permit could result in a discharge to waters of the U.S. In California, the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) issue water quality certifications. Each RWQCB is responsible for implementing Section 401 in compliance with the CWA and its water quality control plan (also known as a Basin Plan). Applicants for a federal license or permit to conduct activities that may result in the discharge to waters of the U.S. (including wetlands or vernal pools) must also obtain a Section 401 water quality certification to ensure that any such discharge will comply with the applicable provisions of the CWA.

State Laws, Regulations, and Policies

California Fish and Game Code

The California Fish and Game Code includes various statutes that protect biological resources, including the Native Plant Protection Act of 1977 (NPPA) and the California Endangered Species Act (CESA). The NPPA (California Fish and Game Code Section 1900-1913) authorizes the Fish and Game Commission to designate plants as endangered or rare and prohibits take of any such plants, except as authorized in limited circumstances.

CESA (California Fish and Game Code Section 2050–2098) prohibits state agencies from approving a project that would jeopardize the continued existence of a species listed under CESA as endangered or threatened. Section 2080 of the California Fish and Game Code prohibits the take of any species that is state listed as endangered or threatened, or designated as a candidate for such listing. California Department of Fish and Wildlife (CDFW) may issue an incidental take permit authorizing the take of listed and candidate species if that take is incidental to an otherwise lawful activity, subject to specified conditions.
California Fish and Game Code Section 3503, 3513, and 3800 protect native and migratory birds, including their active or inactive nests and eggs, from all forms of take. In addition, Section 3511, 4700, 5050, and 5515 identify

species that are fully protected from all forms of take. Section 3511 lists fully protected birds, Section 5515 lists fully protected fish, Section 4700 lists fully protected mammals, and Section 5050 lists fully protected amphibians.

Streambed Alteration Agreement

Sections 1601 to 1606 of the California Fish and Game Code require that a Streambed Alteration Application be submitted to CDFW for any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

California Native Plant Protection Act

The California Native Plant Protection Act (California Fish and Game Code Section 1900–1913) prohibits the taking, possessing, or sale of any plants with a state designation of rare, threatened, or endangered (as defined by CDFW). The California Native Plant Society (CNPS) maintains a list of plant species native to California that has low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2001). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

Forest Practice Act

Logging on private and corporate land in California is regulated by the Z'berg-Nejedly Forest Practices Act (FPA), which took effect January 1, 1974. The act established the Forest Practice Rules (FPRs) and a politically-appointed Board of Forestry to oversee their implementation. CALFIRE works under the direction of the Board of Forestry and is the lead government agency responsible for approving logging plans and for enforcing the FPRs. A Timber Harvest Plan (THP) must be prepared by a Registered Professional Forester (RPF) for timber harvest on virtually all non-federal land. The FPA also established the requirement that all non-federal forests cut in the State be regenerated with at least three hundred stems per acre on high site lands, and one hundred fifty trees per acre on low site lands.

Local Laws, Regulations, and Policies

The County General Plan also include policies that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that address potential impacts on special-status plant species or create opportunities for habitat improvement. The El Dorado County General Plan designates the Important Biological Corridor (IBC) (Exhibits 5.12-14, 5.12-5 and 5.12-7, El Dorado County, 2003). Lands located within the overlay district are subject to the following provisions, given that they do not interfere with agricultural practices:

- Increased minimum parcel size;
- Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands;
- Lower thresholds for grading permits;
- Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetland/riparian habitat loss;
- Increased riparian corridor and wetland setbacks;
- Greater protection for rare plants (e.g., no disturbance at all or disturbance only as recommended by U.S. Fish and Wildlife Service/California Department of Fish and Wildlife);
- Standards for retention of contiguous areas/large expanses of other (non-oak or non-sensitive) plant communities;
- Building permits discretionary or some other type of "site review" to ensure that canopy is retained;
- More stringent standards for lot coverage, floor area ratio (FAR), and building height; and
- No hindrances to wildlife movement (e.g., no fences that would restrict wildlife movement).

Discussion: A substantial adverse effect on Biological Resources would occur if the implementation of the project would:

- Substantially reduce or diminish habitat for native fish, wildlife or plants;

- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a native plant or animal community;
- Reduce the number or restrict the range of a rare or endangered plant or animal;
- Substantially affect a rare or endangered species of animal or plant or the habitat of the species; or
- Interfere substantially with the movement of any resident or migratory fish or wildlife species.

a. **Special Status Species:** The project site is located within the county's rare plant mitigation area zero but no other sensitive natural community of the County, state or federal agency, including but not limited to an Ecological Preserve, or U.S. Fish and Wildlife Service (USFWS) Recovery Plan boundaries. A biological resources report (Attachment B) and Aquatic Resource Delineation Report (Attachment C) was prepared in August of 2021, by SWCA Environmental Consultants. The Biological Resources Report details potential habitat for seventeen special-status species and natural communities with potential to occur on site. Species of special concern are species that are at risk. The BSA provides nesting habitat for birds regulated by State Fish and Game Code and listed under the federal Migratory Bird Treaty Act. In order to reduce possible impacts, future development is required to perform a pre-construction survey and avoidance of nests during nesting season.

The Biological Resources Report (Attachment B) identified a turtle onsite, however it could not be identified prior to submerging into the onsite pond. The observed turtle was most likely a Western pond turtle (*Emys mormorata*). The Biological Resources Report determined that the required riparian setbacks, of 25 feet from intermittent aquatic resources and 50 feet from perineal aquatic resources, as established in El Dorado County Zoning Ordinance Section 130.30.050. Impacts would be less than significant with mitigation incorporated.

MM BIO-1 Pre-Construction Breeding Bird Surveys:

Planning Services shall verify completion of the requirement prior to issuance of grading and building permits, and to ensure compliance with the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code, and to avoid and reduce direct and indirect impacts on migratory, non-game breeding birds and their nests, young, and eggs to less than significant levels, the following measures would be implemented:

a) Project activities that would remove or disturb potential nest sites shall be scheduled outside the breeding bird season, if feasible. The breeding bird nesting season is typically from February 15 through September 15, but can vary slightly from year to year, usually depending on weather conditions.
b) If project activities that would remove or disturb potential nest sites cannot be avoided during February 15 through September 15, a qualified biologist shall conduct a pre-construction clearance and nesting bird survey to search for all potential nesting areas, breeding birds, and active nests or nest sites within the limits of project disturbance up to 30-days prior to mobilization, staging, and other disturbances.
c) If no breeding birds or active nests are observed during the pre-construction survey(s), or if they are observed and would not be disturbed, then project activities may begin and no further mitigation would be required.
d) If a breeding bird territory or active bird nest is located during the pre-construction survey and potentially would be disturbed, a no-activity buffer zone shall be delineated on maps and marked (flagging or other means) up to 500-feet for special-status avian species or raptors, or 100-feet for non-special status avian species. The limits of the buffer shall be demarked so as not to provide a specific indicator of the location of the nest to predators or people. Materials used to demarcate the nests shall be removed as soon as work is complete or the fledglings have left the nest. The biologist shall determine the appropriate size of the buffer zone based on the type of activities planned near the nest and bird species because some bird species are more tolerant than others to noise and other disturbances. The nest and buffer zone shall be field-checked weekly by a qualified biologist. The nest and buffer zone shall not be disturbed until the biologist has determined that the young have fledged, the young are no longer being

fed by the parents, the young have left the area, or the young would no longer be impacted by project activities.

Monitoring Requirement: This mitigation measure shall be incorporated as a note on the recorded parcel map.

Monitoring Responsibility: El Dorado County Planning and Building Department, Planning Services.

b, c. **Riparian Habitat and Wetlands:** Based on review of the Biological Resources Report and the Aquatic Resource Delineation Report prepared for the project by Sycamore Environmental Consultant, Inc. in July 2021, which was based on field reviews conducted throughout the summer of 2021, indicates that there are several impoundments and two riparian channels running across the site. Four impoundments contained water during site surveys. Two channels occur within the BSA. The four impoundments that contained water during the survey drain downstream from east to west via Channel One (CH-1)–as identified within Attachment C. CH-1 flows out of the BSA to the west and ultimately drains into Folsom Lake. Channel Two (CH-2) occurs at the central eastern portion of the BSA and flows east to west. An additional impoundment and one swale occur at the southern portion of the BSA. Both features were dry at the time of the survey. Water may sheet flow in the swale during storms. There are no wetlands existing on site. No riparian vegetation occurs along the impoundments; however, some obligate wetland plants are found within the riparian channels on site. The Biological Resources Report (Attachment B) identified a turtle onsite, however it could not be identified prior to submerging into the onsite pond. The observed turtle was most likely a Western pond turtle (*Emys mormorata*). The Biological Resources Report determined that the required riparian setbacks, of 25 feet from intermittent aquatic resources and 50 feet from perineal aquatic resources, as established in El Dorado County Zoning Ordinance Section 130.30.050. The project shall indicate the location of all intermittent and perennial streams on the recorded parcel map. Impacts would be less than significant with mitigation measures incorporated.

MM BIO-2 Riparian Resource Setbacks:

Planning Services shall verify the inclusion of all intermittent and perennial riparian resource to be shown and mapped on the recorded parcel map.

Monitoring Requirement: This mitigation measure shall be incorporated onto the recorded parcel map.

Monitoring Responsibility: El Dorado County Planning and Building Department, Planning Services.

d. **Migration Corridors:** Review of the Department of Fish and Wildlife Migratory Deer Herd Maps and General Plan DEIR Exhibit 5.12-7 indicate that the Outside deer herd migration corridor does not extend over the project site. The El Dorado County General Plan does identify the project site as an Important Biological Corridor (IBC). The project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with any established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. The impacts would be less than significant.

e. **Local Policies:** Local protection of biological resources includes oak woodland preservation and rare plants and special-status species with the goal to preserve and protect sensitive natural resources within the County. Oak woodlands, individual native oak trees, or heritage trees, as defined in Section 130.39.030, have not been impacted or removed as a result of the proposed project. Any future tree removal would be required to be in compliance with the Oak Resources Conservation Ordinance of Section 130.39.070.C (Oak Tree and Oak Woodland Removal Permits), which would be reviewed at time of future building permit issuance. The BSA is located within Rare Plant Mitigation Area 0. Per Section 130.71.050, future development of each parcel (if a new residence were to be constructed on any of the parcels) is strongly encouraged to pursue on-site mitigation. However, developments may also mitigate impacts through three additional options as listed in Section 130.71.050A-C. Future development would be required to comply with all applicable County ordinances and policies regarding oak woodland conservation, payment of rare plant mitigation fee, and conditioned to require a pre-construction survey to detect and protect if any nests exist on site. Any future

development would need to adhere to the County's setbacks from any intermittent stream or ephemeral drainage, including any new single-family dwellings, accessory dwellings, and/or accessory structures. Therefore, any potential impacts would be less than significant.

f. **Adopted Plans**: No significant impacts to protected species, habitat, wetlands or oak trees were identified for the proposed project. The project will not conflict with the provisions of an adopted Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The impacts would be less than significant.

Finding: With the incorporation of Mitigation Measures BIO-1 and BIO-2, potential impacts to biological resources from any future residential development would be mitigated. Future residential development is required to comply with applicable County codes and policies which would be reviewed at time of submittal of the grading and building permits. Therefore, potential impacts to Biological Resources as mitigated would be less than significant.

V. CULTURAL RESOURCES. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			**X**	
b. Cause a substantial adverse change in the significance of archaeological resource pursuant to Section 15064.5?			**X**	
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			**X**	
d. Disturb any human remains, including those interred outside of formal cemeteries?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

The National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The criteria for listing in the NRHP include resources that:

A. Are associated with events that have made a significant contribution to the broad patterns of history (events);
B. Are associated with the lives of persons significant in our past (persons);
C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (architecture); or
D. Have yielded or may likely yield information important in prehistory or history (information potential).

State Laws, Regulations, and Policies

California Register of Historical Resources

Public Resources Code Section 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed as or determined to be eligible for listing in the National Register of Historic Places (NRHP), including properties evaluated under Section 106 of the National Historic Preservation Act. The criteria for listing are similar to those of the NRHP. Criteria for listing in the CRHR include resources that:

1. Are associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Are associated with the lives of persons important in our past;
3. Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or
4. Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

The California Register of Historic Places

The California Register of Historic Places (CRHP) program encourages public recognition and protection of resources of architectural, historical, archeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under the California Environmental Quality Act. The criteria for listing in the CRHP include resources that:

A. Are associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
B. Are associated with the lives of persons important to local, California or national history.
C. Embody the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.
D. Have yielded, or have the potential to yield, information important to the prehistory or history of the local area, California or the nation.

The State Office of Historic Preservation sponsors the California Historical Resources Information System (CHRIS), a statewide system for managing information on the full range of historical resources identified in California. CHRIS provides an integrated database of site-specific archaeological and historical resources information. The State Office of Historic Preservation also maintains the California Register of Historical Resources (CRHR), which identifies the State's architectural, historical, archeological and cultural resources. The CRHR includes properties listed in or formally determined eligible for the National Register and lists selected California Registered Historical Landmarks.

Public Resources Code (Section 5024.1[B]) states that any agency proposing a project that could potentially impact a resource listed on the CRHR must first notify the State Historic Preservation Officer, and must work with the officer to ensure that the project incorporates "prudent and feasible measures that will eliminate or mitigate the adverse effects."

California Health and Safety Code Section 7050.5 requires that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24-hours, the Native American Heritage Commission.

Section 5097.98 of the California Public Resources Code stipulates that whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of

Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The decedents may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24-hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

CEQA and CEQA Guidelines

Section 21083.2 of CEQA requires that the lead agency determine whether a project may have a significant effect on unique archaeological resources. A unique archaeological resource is defined in CEQA as an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it:

- Contains information needed to answer important scientific research questions, and there is demonstrable public interest in that information;
- Has a special or particular quality, such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.
- Although not specifically inclusive of paleontological resources, these criteria may also help to define "a unique paleontological resource or site."

Measures to avoid, conserve, preserve, or mitigate significant effects on these resources are also provided under CEQA Section 21083.2.

Section 15064.5 of the CEQA Guidelines notes that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Substantial adverse changes include physical changes to the historic resource or to its immediate surroundings, such that the significance of the historic resource would be materially impaired. Lead agencies are expected to identify potentially feasible measures to mitigate significant adverse changes in the significance of a historic resource before they approve such projects. Historic resources are those that are:

- listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (Public Resources Code Section 5024.1[k]);
- included in a local register of historic resources (Public Resources Code Section 5020.1) or identified as significant in an historic resource survey meeting the requirements of Public Resources Code Section 5024.1(g); or
- determined by a lead agency to be historically significant.

CEQA Guidelines Section 15064.5 also prescribes the processes and procedures found under Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.95 for addressing the existence of, or probable likelihood of, Native American human remains, as well as the unexpected discovery of any human remains within the project site. This includes consultation with the appropriate Native American tribes.

CEQA Guidelines Section 15126.4 provides further guidance about minimizing effects to historical resources through the application of mitigation measures. Mitigation measures must be legally binding and fully enforceable.

The lead agency having jurisdiction over a project is also responsible to ensure that paleontological resources are protected in compliance with CEQA and other applicable statutes. Paleontological and historical resource management is also addressed in Public Resources Code Section 5097.5, "Archaeological, Paleontological, and Historical Sites." This statute defines as a misdemeanor any unauthorized disturbance or removal of a fossil site or remains on public land and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. This statute would apply to any construction or other related project impacts that would occur on state-owned or state-managed lands. The County General Plan contains policies describing specific, enforceable measures to protect cultural resources and the treatment of resources when found.

Discussion: In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a historical or cultural resource significant or important. A substantial adverse effect on Cultural Resources would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a prehistoric or historic archaeological site or property that is historically or culturally significant to a community or ethnic or social group; or a paleontological site except as a part of a scientific study;
- Affect a landmark of cultural/historical importance;
- Conflict with established recreational, educational, religious or scientific uses of the area; or
- Conflict with adopted environmental plans and goals of the community where it is located.

a-c. **Historic or Archeological Resources.** Cultural resource analysis includes the low potential for discovery and disturbance of paleontological resources. A Records Search was conducted through the North Central Information Center (NCIC) dated November 5, 2020. According to the NCIC, the proposed project site contains no pre-historic period cultural resource sites, features, or artifacts, nor were there any historic buildings, structures, or objects discovered. Therefore, no significant cultural resources were identified and the project will have no effect to historic properties. Impacts would be less than significant.

d. **Human Remains.** A records search was conducted at the North Central Information Center on November 5, 2020. There were no Tribal Cultural Resources (TCRs) identified in the project footprint and the project site is not known to contain any TCRs. In the event of human remains discovery during any future construction if additional structures are built, standard conditions of approval to address accidental discovery of human remains would apply during any grading activities. In accordance with the laws of AB 52, the County notified seven Tribes: Colfax-Todds Valley Consolidated Tribe, Ione Band of Miwok Indians, Nashville Enterprise Miwok-Maidu-Nishinam Tribe, Shingle Springs Band of Miwok Indians, T'si-Akim Maidu, United Auburn Indian Community of the Auburn Rancheria, and the Washoe Tribe of California and Nevada, which requested to be notified of proposed projects for consultation in the project area. Staff received a consultation initiation request from the Shingle Springs Band of Miwok Indians on September 22, 2021. Staff sent the SSBMI all cultural resource related documents associated with the project on September 27, 2021. Staff sent a follow-up to the SSBMI on November 1, 2021 to inquire on consultation progress. Due to 60-days of no response from the SSBMI, staff closed-out AB52 consultation on November 26, 2021. Additionally, the United Auburn Indian Community sent correspondence stating they will defer any review to the SSBMI. However, since the SSBMI declined consultation, a condition regarding cultural resource finds has been included as recommended. Impacts would be less than significant.

FINDING: Standard conditions of approval would apply in the event of discovery of any Tribal Cultural Resources (TCRs) during any future construction, that construction would stop immediately and the Tribes would be notified. Therefore, the proposed project as conditioned would have a less than significant impact on Cultural Resources.

VI. GEOLOGY AND SOILS. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				**X**
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a				**X**

known fault? Refer to Division of Mines and Geology Special Publication 42.				
ii) Strong seismic ground shaking?				**X**
iii) Seismic-related ground failure, including liquefaction?				**X**
iv) Landslides?				**X**
b. Result in substantial soil erosion or the loss of topsoil?			**X**	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				**X**
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?				**X**
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

National Earthquake Hazards Reduction Act
The National Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) and creation of the National Earthquake Hazards Reduction Program (NEHRP) established a long-term earthquake risk-reduction program to better understand, predict, and mitigate risks associated with seismic events. The following four federal agencies are responsible for coordinating activities under NEHRP: USGS, National Science Foundation (NSF), Federal Emergency Management Agency (FEMA), and National Institute of Standards and Technology (NIST). Since its inception, NEHRP has shifted its focus from earthquake prediction to hazard reduction. The current program objectives (NEHRP 2009) are to:

1. Develop effective measures to reduce earthquake hazards;
2. Promote the adoption of earthquake hazard reduction activities by federal, state, and local governments; national building standards and model building code organizations; engineers; architects; building owners; and others who play a role in planning and constructing buildings, bridges, structures, and critical infrastructure or "lifelines";
3. Improve the basic understanding of earthquakes and their effects on people and infrastructure through interdisciplinary research involving engineering; natural sciences; and social, economic, and decision sciences; and
4. Develop and maintain the USGS seismic monitoring system (Advanced National Seismic System); the NSF-funded project aimed at improving materials, designs, and construction techniques (George E. Brown Jr. Network for Earthquake Engineering Simulation); and the global earthquake monitoring network (Global Seismic Network).

Implementation of NEHRP objectives is accomplished primarily through original research, publications, and recommendations and guidelines for state, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

State Laws, Regulations, and Policies

Alquist–Priolo Earthquake Fault Zoning Act

The Alquist–Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 *et seq*.) was passed to reduce the risk to life and property from surface faulting in California. The Alquist–Priolo Act prohibits construction of most types of structures intended for human occupancy on the surface traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are "sufficiently active" and "well defined." Before a project can be permitted, cities and counties are required to have a geologic investigation conducted to demonstrate that the proposed buildings would not be constructed across active faults.

Historical seismic activity and fault and seismic hazards mapping in the project vicinity indicate that the area has relatively low potential for seismic activity (El Dorado County 2003). No active faults have been mapped in the project area, and none of the known faults have been designated as an Alquist-Priolo Earthquake Fault Zone.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699.6) establishes statewide minimum public safety standards for mitigation of earthquake hazards. While the Alquist–Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist–Priolo Act. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other seismic hazards, and cities and counties are required to regulate development within mapped seismic hazard zones. In addition, the act addresses not only seismically induced hazards but also expansive soils, settlement, and slope stability.

Mapping and other information generated pursuant to the SHMA is to be made available to local governments for planning and development purposes. The State requires: (1) local governments to incorporate site-specific geotechnical hazard investigations and associated hazard mitigation, as part of the local construction permit approval process; and (2) the agent for a property seller or the seller if acting without an agent, must disclose to any prospective buyer if the property is located within a Seismic Hazard Zone. Under the Seismic Hazards Mapping Act, cities and counties may withhold the development permits for a site within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

California Building Standards Code

Title 24 CCR, also known as the California Building Standards Code (CBC), specifies standards for geologic and seismic hazards other than surface faulting. These codes are administered and updated by the California Building Standards Commission. CBC specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in California.

Discussion: A substantial adverse effect on Geologic Resources would occur if the implementation of the project would:

- Allow substantial development of structures or features in areas susceptible to seismically induced hazards such as groundshaking, liquefaction, seiche, and/or slope failure where the risk to people and property resulting from earthquakes could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards;
- Allow substantial development in areas subject to landslides, slope failure, erosion, subsidence, settlement, and/or expansive soils where the risk to people and property resulting from such geologic hazards could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards; or

- Allow substantial grading and construction activities in areas of known soil instability, steep slopes, or shallow depth to bedrock where such activities could result in accelerated erosion and sedimentation or exposure of people, property, and/or wildlife to hazardous conditions (e.g., blasting) that could not be mitigated through engineering and construction measures in accordance with regulations, codes, and professional standards.

a. **Seismic Hazards:**
i) According to the California Department of Conservation Division of Mines and Geology, there are no Alquist-Priolo fault zones within the west slope of El Dorado County. However, a fault zone has been located in the Tahoe Basin and Echo Lakes area. There would be no impact.

ii) The potential for seismic ground shaking in the project area would be considered remote for the reason stated in Section i) above. Any potential impacts due to seismic impacts would be addressed through compliance with the Uniform Building Code (UBC). All structures would be built to meet the construction standards of the UBC for the appropriate seismic zone. There would be no impact.

iii) El Dorado County is considered an area with low potential for seismic activity. There are no landslide, liquefaction, or fault zones (DOC, 2007). There would be no impact.

iv) All grading activities onsite would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. There would be no impact.

b. **Soil Erosion:** The soils on site are Auburn very rocky silt loam 2-30% slopes which is a shallow to moderately deep, well-drained, rocky foothill soil; Auburn very rocky silt loam 30-50% slopes which is a shallow to moderately deep, well-drained, rocky foothill soil. These soils are prominent in the foothills. There could be the potential for erosion, changes in topography during future construction of any primary or accessory structures however these concerns would be addressed during the grading permit process. Any development activities would need to comply with the El Dorado County Grading, Erosion and Sediment Control Ordinance, including the implementation of pre- and post-construction Best Management Practices (BMPs). Implemented BMPs are required to be consistent with the County's California Storm water Pollution Prevention Plan (SWPPP) issued by the State Water Resources Control Board to eliminate run-off and erosion and sediment controls. Any grading activities exceeding 250 cubic yards of graded material or grading completed for the purpose of supporting a structure must meet the provisions contained in the County of El Dorado Grading, Erosion, and Sediment Control Ordinance. Any future construction would require similar review for compliance with the County SWPPP. Impacts would be less than significant. Potential degradation of water quality and soil erosion impacts. If construction will disturb 1 acre or more of soil, the project proponent must obtain a General Permit for discharges of storm water associated with activity from SWRCB. As part of this permit, a SWPPP must be prepared and implemented. The SWPPP must include erosion control measures and construction waste containment measures to ensure that waters of the State are protected during and after project construction. Pursuant to Zoning Ordinance Section 130.30.050, future development would require setbacks from perennial and intermittent streams and wetlands. The project site does not contain blue-line stream, rivers, or lakes; however the site contains a pond and supports wetlands, therefore any future development would need to adhere to the County's setback distance of 50-feet minimum from any intermittent stream or wetland, including single-family dwellings and accessory structures (Attachment B). The impacts would be less than significant.

c. **Geologic Hazards:** Based on the Seismic Hazards Mapping Program administered by the California Geological Survey, no portion of El Dorado County is located in a Seismic Hazard Zone or those areas prone to liquefaction and earthquake-induced landslides (DOC, 2013). Therefore, El Dorado County is not considered to be at risk from liquefaction hazards. Lateral spreading is typically associated with areas experiencing liquefaction. Because liquefaction hazards are not present in El Dorado County, the county is not at risk for lateral spreading. All grading activities would comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. There would be no impact.

d. **Expansive Soils:** Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. This movement may result in cracking foundations, distortion of structures, and warping of doors and windows. The western portions of the county, including the Auburn soil types, have a low expansiveness rating. Any development of the site would be required to comply with the El Dorado County Grading, Erosion and Sediment Control Ordinance and the development plans for any homes or other structures would be required to implement the Seismic construction standards. There would be no impact.

e. **Septic Capability:** The El Dorado County Environmental Management Department reviewed the project and determined that each proposed parcel is required to have a soil percolation rate of 120-minutes per inch or lower and must have an adequately sized effluent dispersal area. A test pit (test trench) and soil percolation rate testing is required on the proposed five-acre lot to demonstrate adequate soil depth and suitability for a leach field. Any future septic development would be required to obtain a septic system permit application, and would have to be compliant with the El Dorado County Standards for the Site Evaluation, Design, and Construction of Onsite Wastewater Treatment Systems (OWTS) Manual. Impacts would be less than significant.

FINDING: A review of the soils and geologic conditions on the project site determined that the project would not result in a substantial adverse effect. All grading activities would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance which would address potential impacts related to soil erosion, landslides and other geologic impacts. Future development would be required to comply with the UBC which would address potential seismic related impacts. Impacts would be less than significant.

VII. GREENHOUSE GAS EMISSIONS. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			**X**	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			**X**	

Background/Science

Cumulative greenhouse gases (GHG) emissions are believed to contribute to an increased greenhouse effect and global climate change, which may result in sea level rise, changes in precipitation, habitat, temperature, wildfires, air pollution levels, and changes in the frequency and intensity of weather-related events. While criteria pollutants and toxic air contaminants are pollutants of regional and local concern (see Section III. Air Quality above); GHG are global pollutants. The primary land-use related GHG are carbon dioxide (CO_2), methane (CH_4) and nitrous oxides (N_2O). The individual pollutant's ability to retain infrared radiation represents its "global warming potential" and is expressed in terms of CO_2 equivalents; therefore CO_2 is the benchmark having a global warming potential of 1. Methane has a global warming potential of 21 and thus has a 21 times greater global warming effect per metric ton of CH_4 than CO_2. Nitrous Oxide has a global warming potential of 310. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., $MTCO_2e/yr$). The three other main GHG are Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. While these compounds have significantly higher global warming potentials (ranging in the thousands), all three typically are not a concern in land-use development projects and are usually only used in specific industrial processes.

GHG Sources

The primary man-made source of CO_2 is the burning of fossil fuels; the two largest sources being coal burning to produce electricity and petroleum burning in combustion engines. The primary sources of man-made CH_4 are natural gas systems losses (during production, processing, storage, transmission and distribution), enteric fermentation (digestion from livestock) and landfill off-gassing. The primary source of man-made N_2O is agricultural soil management (fertilizers), with fossil fuel combustion a very distant second. In El Dorado County, the primary source of GHG is fossil fuel combustion mainly in the transportation sector (estimated at 70% of countywide GHG emissions). A distant second are residential sources (approximately 20%), and commercial/industrial sources are third (approximately 7%). The remaining sources are waste/landfill (approximately 3%) and agricultural (<1%).

Regulatory Setting:

Federal Laws, Regulations, and Policies

At the federal level, USEPA has developed regulations to reduce GHG emissions from motor vehicles and has developed permitting requirements for large stationary emitters of GHGs. On April 1, 2010, USEPA and the National Highway Traffic Safety Administration (NHTSA) established a program to reduce GHG emissions and improve fuel economy standards for new model year 2012-2016 cars and light trucks. On August 9, 2011, USEPA and the NHTSA announced standards to reduce GHG emissions and improve fuel efficiency for heavy-duty trucks and buses.

Federal Laws, Regulations, and Policies

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the *California Climate Solutions Act of 2006* (Stats. 2006, ch. 488) (Health & Safety Code, Section 38500 et seq.). AB 32 requires a statewide GHG emissions reduction to 1990 levels by the year 2020. AB 32 requires the California Air Resources Board (CARB) to implement and enforce the statewide cap. When AB 32 was signed, California's annual GHG emissions were estimated at 600 million metric tons of CO_2 equivalent ($MMTCO_2e$) while 1990 levels were estimated at 427 $MMTCO_2e$. Setting 427 $MMTCO_2e$ as the emissions target for 2020, current (2006) GHG emissions levels must be reduced by 29%. CARB adopted the AB 32 Scoping Plan in December 2008 establishing various actions the state would implement to achieve this reduction (CARB, 2008). The Scoping Plan recommends a community-wide GHG reduction goal for local governments of 15%.

In June 2008, the California Governor's Office of Planning and Research's (OPR) issued a Technical Advisory (OPR, 2008) providing interim guidance regarding a proposed project's GHG emissions and contribution to global climate change. In the absence of adopted local or statewide thresholds, OPR recommends the following approach for analyzing GHG emissions: Identify and quantify the project's GHG emissions, assess the significance of the impact on climate change; and if the impact is found to be significant, identify alternatives and/or Mitigation Measures that would reduce the impact to less than significant levels (CEC, 2006).

Discussion

CEQA does not provide clear direction on addressing climate change. It requires lead agencies identify project GHG emissions impacts and their "significance," but is not clear what constitutes a "significant" impact. As stated above, GHG impacts are inherently cumulative, and since no single project could cause global climate change, the CEQA test is if impacts are "cumulatively considerable." Not all projects emitting GHG contribute significantly to climate change. CEQA authorizes reliance on previously approved plans (i.e., a Climate Action Plan (CAP), etc.) and mitigation programs adequately analyzing and mitigating GHG emissions to a less than significant level. "Tiering" from such a programmatic-level document is the preferred method to address GHG emissions. El Dorado County does not have an adopted CAP or similar program-level document; therefore, the project's GHG emissions must be addressed at the project-level.

Unlike thresholds of significance established for criteria air pollutants in EDCAQMD's *Guide to Air Quality Assessment* (February 2002) ("CEQA Guide"), the District has not adopted GHG emissions thresholds for land use development projects. In the absence of County adopted thresholds, EDCAQMD recommends using the adopted thresholds of other lead agencies which are based on consistency with the goals of AB 32. Since climate change is a global problem and the location of the individual source of GHG emissions is somewhat irrelevant, it's appropriate to use thresholds established by other jurisdictions as a basis for impact significance determinations. Projects exceeding

these thresholds would have a potentially significant impact and be required to mitigate those impacts to a less than significant level. Until the County adopts a CAP consistent with CEQA Guidelines Section 15183.5, and/or establishes GHG thresholds, the County will follow an interim approach to evaluating GHG emissions utilizing significance criteria adopted by the San Luis Obispo Air Pollution Control District (SLOAPCD) to determine the significance of GHG emissions.

SLOAPCD developed a screening table using CalEEMod which allows quick assessment of projects to "screen out" those below the thresholds as their impacts would be less than significant.

These thresholds are summarized below:

Significance Determination Thresholds	
GHG Emission Source Category	**Operational Emissions**
Non-stationary Sources	1,150 $MTCO_2e/yr$ OR 4.9 MT $CO_2e/SP/yr$
Stationary Sources	10,000 $MTCO_2e/yr$

SP = service population, which is resident population plus employee population of the project

Projects below screening levels identified in Table 1-1 of SLOAPCD's CEQA Air Quality Handbook (pp. 1-3, SLOAPCD, 2012) are estimated to emit less than the applicable threshold. For projects below the threshold, no further GHG analysis is required.

a. The proposed project would create two new parcels from a 15-acre parcel. The two new parcel sizes would be ten-acres (Parcel A) and five-acres (Parcel B). Each parcel would be allowed to have a primary residence and secondary dwelling by right, for a total of four residences possible. There is currently one residence and one ADU on site which is located on Parcel A (currently the main house). The potential for future construction may involve a small increase in household GHG production. However, any future construction would be required to incorporate modern construction and design features that reduce energy consumption to the extent feasible. Implementation of these features would help reduce potential GHG emissions resulting from the development. The proposed project would have a negligible contribution towards statewide GHG inventories and would have a less than significant impact.

b. Because any future construction-related emissions would be temporary and below the minimum standard for reporting requirements under AB 32, and because any ongoing GHG emissions would be a result of a maximum potential of four households (two primary residences/two secondary dwellings possible), the proposed project's GHG emissions would have a negligible cumulative contribution towards statewide and global GHG emissions. The proposed project would not conflict with the objectives of AB 32 or any other applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. According to the SLOAPCD Screening Table, the GHG emissions from this project are estimated at less than 1,150 metric tons/year. Cumulative GHG emissions impacts are considered to be less than significant. Therefore, the proposed project would have a less than significant impact.

FINDING: For the Greenhouse Gas Emissions category, there would be no significant adverse environmental effect as a result of the project. Impacts would be less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			**X**	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			**X**	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				**X**
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				**X**
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				**X**
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				**X**
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			**X**	
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			**X**	

Regulatory Setting:

Hazardous materials and hazardous wastes are subject to extensive federal, state, and local regulations to protect public health and the environment. These regulations provide definitions of hazardous materials; establish reporting requirements; set guidelines for handling, storage, transport, and disposal of hazardous wastes; and require health and safety provisions for workers and the public. The major federal, state, and regional agencies enforcing these regulations are USEPA and the Occupational Safety and Health Administration (OSHA); California Department of Toxic Substances Control (DTSC); California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA); California Governor's Office of Emergency Services (Cal OES); and EDCAPCD.

Federal Laws, Regulations, and Policies

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also called the Superfund Act; 42 USC Section 9601 *et seq.*) is intended to protect the public and the environment from the effects of past hazardous waste disposal activities and new hazardous material spills. Under CERCLA, USEPA has the authority to seek the parties responsible for hazardous materials releases and to ensure their cooperation in site remediation. CERCLA also provides federal funding (through the "Superfund") for the remediation of hazardous materials contamination. The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499) amends some provisions of CERCLA and provides for a Community Right-to-Know program.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (RCRA; 42 USC Section 6901 *et seq.*), as amended by the Hazardous and Solid Waste Amendments of 1984, is the primary federal law for the regulation of solid waste and hazardous waste in the United States. These laws provide for the "cradle-to-grave" regulation of hazardous wastes, including generation, transportation, treatment, storage, and disposal. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed of.

USEPA has primary responsibility for implementing RCRA, but individual states are encouraged to seek authorization to implement some or all RCRA provisions. California received authority to implement the RCRA program in August 1992. DTSC is responsible for implementing the RCRA program in addition to California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law.

Energy Policy Act of 2005

Title XV, Subtitle B of the Energy Policy Act of 2005 (the Underground Storage Tank Compliance Act of 2005) contains amendments to Subtitle I of the Solid Waste Disposal Act, the original legislation that created the Underground Storage Tank (UST) Program. As defined by law, a UST is "any one or combination of tanks, including pipes connected thereto, that is used for the storage of hazardous substances and that is substantially or totally beneath the surface of the ground." In cooperation with USEPA, SWRCB oversees the UST Program. The intent is to protect public health and safety and the environment from releases of petroleum and other hazardous substances from tanks. The four primary program elements include leak prevention (implemented by Certified Unified Program Agencies [CUPAs], described in more detail below), cleanup of leaking tanks, enforcement of UST requirements, and tank integrity testing.

Spill Prevention, Control, and Countermeasure Rule

USEPA's Spill Prevention, Control, and Countermeasure (SPCC) Rule (40 CFR, Part 112) apply to facilities with a single above-ground storage tank (AST) with a storage capacity greater than 660-gallons, or multiple tanks with a combined capacity greater than 1,320-gallons. The rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans.

Occupational Safety and Health Administration

OSHA is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

Federal Communications Commission Requirements

There is no federally mandated radio frequency (RF) exposure standard; however, pursuant to the Telecommunications Act of 1996 (47 USC Section 224), the Federal Communications Commission (FCC) established guidelines for dealing with RF exposure, as presented below. The exposure limits are specified in 47 CFR Section 1.1310 in terms of frequency, field strength, power density, and averaging time. Facilities and transmitters licensed

and authorized by FCC must either comply with these limits or an applicant must file an environmental assessment (EA) with FCC to evaluate whether the proposed facilities could result in a significant environmental effect.

FCC has established two sets of RF radiation exposure limits—Occupational/Controlled and General Population/Uncontrolled. The less-restrictive Occupational/Controlled limit applies only when a person (worker) is exposed as a consequence of his or her employment and is "fully aware of the potential exposure and can exercise control over his or her exposure," otherwise the General Population limit applies (47 CFR Section 1.1310).

The FCC exposure limits generally apply to all FCC-licensed facilities (47 CFR Section 1.1307[b][1]). Unless exemptions apply, as a condition of obtaining a license to transmit, applicants must certify that they comply with FCC environmental rules, including those that are designed to prevent exposing persons to radiation above FCC RF limits (47 CFR Section1.1307[b]). Licensees at co-located sites (e.g., towers supporting multiple antennas, including antennas under separate ownerships) must take the necessary actions to bring the accessible areas that exceed the FCC exposure limits into compliance. This is a shared responsibility of all licensees whose transmission power density levels account for 5.0 or more percent of the applicable FCC exposure limits (47CFR 1.1307[b][3]).

Code of Federal Regulations (14 CFR) Part 77

14 CFR Part 77.9 is designed to promote air safety and the efficient use of navigable airspace. Implementation of the code is administered by the Federal Aviation Administration (FAA). If an organization plans to sponsor any construction or alterations that might affect navigable airspace, a Notice of Proposed Construction or Alteration (FAA Form 7460-1) must be filed. The code provides specific guidance regarding FAA notification requirements.

State Laws, Regulations, and Policies

Safe Drinking Water and Toxic Enforcement Act of 1986 – Proposition 65

The Safe Drinking Water and Toxic Enforcement Act of 1986, more commonly known as Proposition 65, protects the state's drinking water sources from contamination with chemicals known to cause cancer, birth defects, or other reproductive harm. Proposition 65 also requires businesses to inform the public of exposure to such chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. In accordance with Proposition 65, the California Governor's Office publishes, at least annually, a list of such chemicals. OEHHA, an agency under the California Environmental Protection Agency (CalEPA), is the lead agency for implementation of the Proposition 65 program. Proposition 65 is enforced through the California Attorney General's Office; however, district and city attorneys and any individual acting in the public interest may also file a lawsuit against a business alleged to be in violation of Proposition 65 regulations.

The Unified Program

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. CalEPA and other state agencies set the standards for their programs, while local governments (CUPAs) implement the standards. For each county, the CUPA regulates/oversees the following:

- Hazardous materials business plans;
- California accidental release prevention plans or federal risk management plans;
- The operation of USTs and ASTs;
- Universal waste and hazardous waste generators and handlers;
- On-site hazardous waste treatment;
- Inspections, permitting, and enforcement;
- Proposition 65 reporting; and
- Emergency response.

Hazardous Materials Business Plans

Hazardous materials business plans are required for businesses that handle hazardous materials in quantities greater than or equal to 55-gallons of a liquid, 500-pounds of a solid, or 200-cubic-feet (cf) of compressed gas, or extremely hazardous substances above the threshold planning quantity (40 CFR, Part 355, Appendix A) (Cal OES, 2015). Business plans are required to include an inventory of the hazardous materials used/stored by the business, a site map, an emergency plan, and a training program for employees (Cal OES, 2015). In addition, business plan information is provided electronically to a statewide information management system, verified by the applicable CUPA, and transmitted to agencies responsible for the protection of public health and safety (i.e., local fire department, hazardous material response team, and local environmental regulatory groups) (Cal OES, 2015).

California Occupational Safety and Health Administration

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in California. Cal/OSHA regulations pertaining to the use of hazardous materials in the workplace (CCR Title 8) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings about exposure to hazardous substances, and preparation of emergency action and fire prevention plans.
Hazard communication program regulations that are enforced by Cal/OSHA require workplaces to maintain procedures for identifying and labeling hazardous substances, inform workers about the hazards associated with hazardous substances and their handling, and prepare health and safety plans to protect workers at hazardous waste sites. Employers must also make material safety data sheets available to employees and document employee information and training programs. In addition, Cal/OSHA has established maximum permissible RF radiation exposure limits for workers (Title 8 CCR Section 5085[b]), and requires warning signs where RF radiation might exceed the specified limits (Title 8 CCR Section 5085 [c]).

California Accidental Release Prevention

The purpose of the California Accidental Release Prevention (CalARP) program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. In accordance with this program, businesses that handle more than a threshold quantity of regulated substance are required to develop a risk management plan (RMP). This RMP must provide a detailed analysis of potential risk factors and associated mitigation measures that can be implemented to reduce accident potential. CUPAs implement the CalARP program through review of RMPs, facility inspections, and public access to information that is not confidential or a trade secret.

California Department of Forestry and Fire Protection Wildland Fire Management

The Office of the State Fire Marshal and the CALFIRE administer state policies regarding wildland fire safety. Construction contractors must comply with the following requirements in the Public Resources Code during construction activities at any sites with forest-, brush-, or grass-covered land:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code Section 4442).
- Appropriate fire-suppression equipment must be maintained from April 1 to December 1, the highest-danger period for fires (Public Resources Code Section 4428).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (Public Resources Code Section 4427).
- On days when a burning permit is required, portable tools powered by gasoline fueled internal combustion engines must not be used within 25-feet of any flammable materials (Public Resources Code Section 4431).

California Highway Patrol

CHP, along with Caltrans, enforce and monitor hazardous materials and waste transportation laws and regulations in California. These agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. All motor carriers and drivers involved in transportation of hazardous materials must apply for and obtain a hazardous materials transportation license from CHP.

Local Laws, Regulations, and Policies

A map of the fuel loading in the County (General Plan Figure HS-1) shows the fire hazard severity classifications of the SRAs in El Dorado County, as established by CDF. The classification system provides three classes of fire hazards: Moderate, High, and Very High. Fire Hazard Ordinance (Chapter 8.08) requires defensible space as described by the State Public Resources Code, including the incorporation and maintenance of a 30-foot fire break or vegetation fuel clearance around structures in fire hazard zones. The County's requirements on emergency access, signing and numbering, and emergency water are more stringent than those required by state law (Patton 2002). The Fire Hazard Ordinance also establishes limits on campfires, fireworks, smoking, and incinerators for all discretionary and ministerial developments.

Discussion: A substantial adverse effect due to Hazards or Hazardous Materials would occur if implementation of the project would:

- Expose people and property to hazards associated with the use, storage, transport, and disposal of hazardous materials where the risk of such exposure could not be reduced through implementation of Federal, State, and local laws and regulations;
- Expose people and property to risks associated with wildland fires where such risks could not be reduced through implementation of proper fuel management techniques, buffers and landscape setbacks, structural design features, and emergency access; or
- Expose people to safety hazards as a result of former on-site mining operations.

a-c. **Hazardous Materials:** The Tentative Parcel Map project would not involve the routine transportation, use, or disposal of hazardous materials such as construction materials, paints, fuels, landscaping materials, and household cleaning supplies. The project site is not located in close proximity to a school. Any future construction may involve some hazardous materials temporarily but this is considered to be small scale. Impacts would be less than significant.

d. **Hazardous Sites:** The project site is not included on a list of or near any hazardous materials sites pursuant to Government Code section 65962.5 (DTSC, 2015). There would be no impact.

e-f. **Aircraft Hazards, Private Airstrips:** As shown on the El Dorado County Zoning Map, the project is not located within an Airport Safety District combining zone or near a public airport or private airstrip. There would be no impact.

g. **Emergency Plan:** The project was reviewed by the County Transportation Department for traffic and circulation. The Traffic Impact Study (TIS) - Initial Determination were both waived and no further transportation studies are required. The proposed project would not impair implementation of any emergency response plan or emergency evacuation plan. Impacts would be less than significant.

h. **Wildfire Hazards:** The project site is in an area of moderate fire hazard for wildland fire pursuant to Figure 5.8-4 of the 2004 General Plan Draft Environmental Impact Report (EIR). The El Dorado County General Plan Safety Element only precludes development in areas of high wildland fire hazard unless such development can be adequately protected from wildland fire hazards as demonstrated in a Fire Safe Plan. Therefore, the project is not required to prepare a Wildfire Safe Plan. The El Dorado-Diamond Springs Fire Department declined to review this project. Therefore, any potential impacts would be less than significant.

FINDING: For the Hazards and Hazardous Materials category, with the incorporation of standard conditions of approval, any potential impacts would be less than significant.

IX. HYDROLOGY AND WATER QUALITY. Would the project:				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?			**X**	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			**X**	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or -off-site?			**X**	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			**X**	
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			**X**	
f. Otherwise substantially degrade water quality?			**X**	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			**X**	
j. Inundation by seiche, tsunami, or mudflow?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The key sections pertaining to water quality regulation for the Proposed Project are CWA Section 303 and Section 402.

Section 303(d) — Listing of Impaired Water Bodies

Under CWA Section 303(d), states are required to identify "impaired water bodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for the development of control plans to improve water quality. USEPA then approves the State's recommended list of impaired waters or adds and/or removes waterbodies.

Section 402—NPDES Permits for Storm water Discharge

CWA Section 402 regulates construction-related storm water discharges to surface waters through the NPDES, which is officially administered by USEPA. In California, USEPA has delegated its authority to the State Water Resources Control Board (SWRCB), which, in turn, delegates implementation responsibility to the nine RWQCBs, as discussed below in reference to the Porter-Cologne Water Quality Control Act.

The NPDES program provides for both general (those that cover a number of similar or related activities) and individual (activity- or project-specific) permits. General Permit for Construction Activities: Most construction projects that disturb 1.0 or more acre of land are required to obtain coverage under SWRCB's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). The general permit requires that the applicant file a public notice of intent to discharge storm water and prepare and implement a Storm water Pollution Prevention Plan (SWPPP). SWPPP must include a site map and a description of the proposed construction activities, demonstrate compliance with relevant local ordinances and regulations, and present a list of Best Management Practices (BMPs) that will be implemented to prevent soil erosion and protect against discharge of sediment and other construction-related pollutants to surface waters. Permittees are further required to monitor construction activities and report compliance to ensure that BMPs are correctly implemented and are effective in controlling the discharge of construction-related pollutants.

Municipal Storm water Permitting Program

SWRCB regulates storm water discharges from municipal separate storm sewer systems (MS4s) through its Municipal Storm Water Permitting Program (SWRCB, 2013). Permits are issued under two phases depending on the size of the urbanized area/municipality. Phase I MS4 permits are issued for medium (population between 100,000 and 250,000 people) and large (population of 250,000 or more people) municipalities, and are often issued to a group of co-permittees within a metropolitan area. Phase I permits have been issued since 1990. Beginning in 2003, SWRCB began issuing Phase II MS4 permits for smaller municipalities (population less than 100,000).

El Dorado County is covered under two SWRCB Regional Boards. The West Slope Phase II Municipal Separate Storm Sewer Systems (MS4) NPDES Permit is administered by the Central Valley Regional Water Quality Control Board (RWQCB) (Region Five). The Lake Tahoe Phase I MS4 NPDES Permit is administered by the Lahontan RWQCB (Region Six). The current West Slope MS4 NPDES Permit was adopted by the SWRCB on February 5, 2013. The Permit became effective on July 1, 2013 for a term of five years and focuses on the enhancement of surface water quality within high priority urbanized areas. The current Lake Tahoe MS4 NPDES Permit was adopted and took effect on December 6, 2011 for a term of five years. The Permit incorporated the Lake Tahoe Total Maximum Daily Load (TMDL) and the Lake Clarity Crediting Program (LCCP) to account for the reduction of fine sediment particles and nutrients discharged to Lake Tahoe.

On May 19, 2015 the El Dorado County Board of Supervisors formally adopted revisions to the Storm Water Quality Ordinance (Ordinance 4992). Previously applicable only to the Lake Tahoe Basin, the ordinance establishes legal authority for the entire unincorporated portion of the County. The purpose of the ordinance is to 1) protect health,

safety, and general welfare, 2) enhance and protect the quality of Waters of the State by reducing pollutants in storm water discharges to the maximum extent practicable and controlling non-storm water discharges to the storm drain system, and 3) cause the use of Best Management Practices to reduce the adverse effects of polluted runoff discharges on Waters of the State.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities complying with FEMA regulations that limit development in floodplains. The NFIP regulations permit development within special flood hazard zones provided that residential structures are raised above the base flood elevation of a 100-year flood event. Non-residential structures are required either to provide flood proofing construction techniques for that portion of structures below the 100-year flood elevation or to elevate above the 100-year flood elevation. The regulations also apply to substantial improvements of existing structures.

State Laws, Regulations, and Policies

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (known as the Porter–Cologne Act), passed in 1969, dovetails with the CWA (see discussion of the CWA above). It established the SWRCB and divided the state into nine regions, each overseen by an RWQCB. SWRCB is the primary State agency responsible for protecting the quality of the state's surface water and groundwater supplies; however, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 401, 402, and 303[d]. In general, SWRCB manages water rights and regulates statewide water quality, whereas RWQCBs focus on water quality within their respective regions.

The Porter–Cologne Act requires RWQCBs to develop water quality control plans (also known as basin plans) that designate beneficial uses of California's major surface-water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a waterbody (i.e., the reasons that the waterbody is considered valuable). Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter–Cologne Act, basin plans must be updated every three-years.

Discussion: A substantial adverse effect on Hydrology and Water Quality would occur if the implementation of the project would:

- Expose residents to flood hazards by being located within the 100-year floodplain as defined by the Federal Emergency Management Agency;
- Cause substantial change in the rate and amount of surface runoff leaving the project site ultimately causing a substantial change in the amount of water in a stream, river or other waterway;
- Substantially interfere with groundwater recharge;
- Cause degradation of water quality (temperature, dissolved oxygen, turbidity and/or other typical storm water pollutants) in the project area; or
- Cause degradation of groundwater quality in the vicinity of the project site.

a. **Water Quality Standards:** No waste discharge will occur as part of the Tentative Parcel Map project. Erosion control would be required as part of any future building or grading permit. Storm water runoff from potential development would contain water quality protection features in accordance with a potential National Pollutant Discharge Elimination System (NPDES) storm water permit, as deemed applicable. The project would not be anticipated to violate water quality standards. Impacts would be less than significant.

b. **Groundwater Supplies:** The geology of the Western Slope portion of El Dorado County is principally hard, crystalline, igneous, or metamorphic rock overlain with a thin mantle of sediment or soil. Groundwater in

this region is found in fractures, joints, cracks, and fault zones within the bedrock mass. These discrete fracture areas are typically vertical in orientation rather than horizontal as in sedimentary or alluvial aquifers. Recharge is predominantly through rainfall infiltrating into the fractures. Movement of this groundwater is very limited due to the lack of porosity in the bedrock. Wells are typically drilled to depths ranging from 80 to 300-feet in depth. There is no evidence that the project will substantially reduce or alter the quantity of groundwater in the vicinity, or materially interfere with groundwater recharge in the area of the proposed project. An existing well on the parcel produced 30-gallons per minute of water when it was drilled. This well will remain the primary source of water for proposed parcel A. Further, septic system is proposed for Parcel B. There are no indications of shallow ground water, no slopes greater than 30%, and no wells within 100-feet of proposed sewage disposal areas. For the final map, the applicant would need to prove that all parcels have a safe and reliable water source that meets the minimum criteria of EDC policy 800-02. The project is not anticipated to affect potential groundwater supplies above pre-project levels. Impacts would be less than significant.

c-f. **Drainage Patterns:** A grading permit would be required to address grading, erosion and sediment control for any future construction. Construction activities would be required to adhere to the El Dorado County Grading, Erosion Control and Sediment Ordinance. This includes the use of Best Management Practices (BMPs) to minimize degradation of water quality during construction. With the application of these standard requirements, impacts would be less than significant.

g-j. **Flood-related Hazards:** The project site is not located within any mapped 100-year flood areas and would not result in the construction of any structures that would impede or redirect flood flows (FEMA, 2008). The risk of exposure to seiche, tsunami, or mudflows would be remote. Impacts would be less than significant.

FINDING: The project would be required to address any potential changes to the drainage pattern on site during the building permit review process for future construction of single-family residences, accessory dwellings, or accessory structures. No significant hydrological impacts are expected as a result of such development, and impacts would be less than significant.

X. LAND USE PLANNING. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact

a.	Physically divide an established community?				**X**
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				**X**
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?				**X**

Regulatory Setting:

California State law requires that each City and County adopt a general plan "for the physical development of the City and any land outside its boundaries which bears relation to its planning." Typically, a general plan is designed to address the issues facing the City or County for the next 15-20 years. The general plan expresses the community's development goals and incorporates public policies relative to the distribution of future public and private land uses. The El Dorado County General Plan was adopted in 2004. The 2013-2021 Housing Element was adopted in 2013.

Discussion: A substantial adverse effect on Land Use would occur if the implementation of the project would:

- Result in the conversion of Prime Farmland as defined by the State Department of Conservation;
- Result in conversion of land that either contains choice soils or which the County Agricultural Commission has identified as suitable for sustained grazing, provided that such lands were not assigned urban or other nonagricultural use in the Land Use Map;
- Result in conversion of undeveloped open space to more intensive land uses;
- Result in a use substantially incompatible with the existing surrounding land uses; or
- Conflict with adopted environmental plans, policies, and goals of the community.

a. **Established Community:** The project is located within the Rural Region of El Dorado County near the El Dorado Hills Community Region. The project is surrounded by similar large-lot single family residential development. The Tentative Parcel Map project would not conflict with the existing land use pattern in the area or physically divide an established community. Therefore, there will be no impacts.

b. **Land Use Consistency:** The parcel has a General Plan Land Use Designation of Low Density Residential (LDR) and a zoning designation of Residential Estate, Five-Acres (RE-5). The LDR land use designation establishes areas for single-family residential development in a rural setting. The maximum allowable density shall be one dwelling unit per five-acres. Parcel size will range from five to ten- acres. As shown on the site plan, the two parcels would range in size from five-acres (Parcel B) to ten-acres (Parcel A). The proposed project is compatible with the General Plan land use designation and the zone district. There would be no impacts.

c. **Habitat Conservation Plan:** The project site is not within the boundaries of an adopted Natural Community Conservation Plan or any other conservation plan. As such, the proposed project would not conflict with an adopted conservation plan. Therefore, there will be no impacts.

FINDING: The proposed use of the land would be consistent with the Zoning Ordinance and General Plan. There would be no impact to land use goals or standards resulting from the project. Impacts would be less than significant.

XI. MINERAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				**X**
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				**X**

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to mineral resources and the Proposed Project.

State Laws, Regulations, and Policies

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) requires that the State Mining and Geology Board identify, map, and classify aggregate resources throughout California that contain regionally significant mineral resources. Designations of land areas are assigned by CDC and California Geological Survey following analysis of geologic reports and maps, field investigations, and using information about the locations of active sand and gravel mining operations. Local jurisdictions are required to enact planning procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans.

The California Mineral Land Classification System represents the relationship between knowledge of mineral deposits and their economic characteristics (grade and size). The nomenclature used with the California Mineral Land Classification System is important in communicating mineral potential information in activities such as mineral land classification, and usage of these terms are incorporated into the criteria developed for assigning mineral resource zones. Lands classified MRZ-2 are areas that contain identified mineral resources. Areas classified as MRZ-2a or MRZ-2b (referred to hereafter as MRZ-2) are considered important mineral resource areas.

Local Laws, Regulations, and Policies

El Dorado County in general is considered a mining region capable of producing a wide variety of mineral resources. Metallic mineral deposits, including gold, are considered the most significant extractive mineral resources. Exhibit 5.9-6 shows the MRZ-2 areas within the county based on designated Mineral Resource (-MR) overlay areas. The -MR overlay areas are based on mineral resource mapping published in the mineral land classification reports referenced above. The majority of the county's important mineral resource deposits are concentrated in the western third of the county.

According to General Plan Policy 2.2.2.7, before authorizing any land uses within the -MR overlay zone that will threaten the potential to extract minerals in the affected area, the County shall prepare a statement specifying its reasons for considering approval of the proposed land use and shall provide for public and agency notice of such a statement consistent with the requirements of Public Resources Code section 2762. Furthermore, before finally approving any such proposed land use, the County shall balance the mineral values of the threatened mineral resource area against the economic, social, or other values associated with the proposed alternative land uses. Where the affected minerals are of regional significance, the County shall consider the importance of these minerals to their market region as a whole and not just their importance to the County.

Where the affected minerals are of Statewide significance, the County shall consider the importance of these minerals to the State and Nation as a whole. The County may approve the alternative land use if it determines that the benefits of such uses outweigh the potential or certain loss of the affected mineral resources in the affected regional, Statewide, or national market.

Discussion: A substantial adverse effect on Mineral Resources would occur if the implementation of the project would:

- Result in obstruction of access to, and extraction of mineral resources classified MRZ-2x, or result in land use compatibility conflicts with mineral extraction operations.

a-b. **Mineral Resources.** The project site has not been delineated in the El Dorado County General Plan as a locally important mineral resource recovery site (2003, Exhibits 5.9-6 and 5.9-7). Review of the California Department of Conservation Geologic Map data showed that the project site is not within a mineral resource zone district. There would be no impact.

FINDING: No impacts to mineral resources are expected either directly or indirectly. For this mineral resources category, there would be no impacts.

XII. NOISE. *Would the project result in:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			**X**	
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			**X**	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise level?				**X**
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				**X**

Regulatory Setting:

No federal or state laws, regulations, or policies for construction-related noise and vibration that apply to the Proposed Project. However, the Federal Transit Administration (FTA) Guidelines for Construction Vibration in Transit Noise and Vibration Impact Assessment state that for evaluating daytime construction noise impacts in outdoor areas, a noise threshold of 90 dBA Leq and 100 dBA Leq should be used for residential and commercial/industrial areas, respectively (FTA 2006).

For construction vibration impacts, the FTA guidelines use an annoyance threshold of 80 VdB for infrequent events (fewer than 30 vibration events per day) and a damage threshold of 0.12 inches per second (in/sec) PPV for buildings susceptible to vibration damage (FTA 2006).

Discussion: A substantial adverse effect due to Noise would occur if the implementation of the project would:

- Result in short-term construction noise that creates noise exposures to surrounding noise sensitive land uses in excess of 60dBA CNEL;
- Result in long-term operational noise that creates noise exposures in excess of 60 dBA CNEL at the adjoining property line of a noise sensitive land use and the background noise level is increased by 3dBA, or more; or
- Results in noise levels inconsistent with the performance standards contained in Table 130.37.060.1 and Table 130.37.060.2 of the El Dorado County Zoning Ordinance.

TABLE 6-2
NOISE LEVEL PERFORMANCE PROTECTION STANDARDS
FOR NOISE SENSITIVE LAND USES
AFFECTED BY NON-TRANSPORTATION* SOURCES

Noise Level Descriptor	Daytime 7 a.m. - 7 p.m.		Evening 7 p.m. - 10 p.m.		Night 10 p.m. - 7 a.m.	
	Community/ Rural Centers	Rural Regions	Community/ Rural Centers	Rural Regions	Community/ Rural Centers	Rural Regions
Hourly L_{eq}, dB	55	50	50	45	45	40
Maximum level, dB	70	60	60	55	55	**50**

a. **Noise Exposures:** The proposed project will not expose people to noise levels in excess of standards established in the General Plan or Zoning Ordinance. Future construction may require the use of trucks and other equipment, which may result in short-term noise impacts to surrounding neighbors. These activities would require grading and building permits and would be restricted to construction hours pursuant to the General Plan. There could be additional noise associated with potential future residential development. However, the project is not expected to generate noise levels exceeding the performance standards contained within the Zoning Ordinance. The noise associated with the project would be less than significant.

b. **Groundborne Shaking:** The site is already developed with one residence. Any future construction may generate short-term ground borne vibration or shaking events during project construction. Impacts would be considered less than significant.

c. **Permanent Noise Increases:** The project does not propose new development; however each parcel by right would have the potential for future residential development (i.e. primary, secondary dwelling, and/or junior ADM). The long term noise associated with additional homes would not be expected to exceed the noise standards contained in the General Plan. Impacts would be considered less than significant.

d. **Short Term Noise:** The construction noise resulting from any future development may result in short-term noise impacts. These activities would require grading and building permits and would be restricted to

construction hours. All construction and grading operations would be required to comply with the noise performance standards contained in the General Plan. Impacts would be less than significant.

e-f. **Aircraft Noise:** The project site is not located within an airport land use plan or within two-miles of a public airport or public use airport. There would be no impact.

FINDING: As conditioned and with adherence to County Code, no significant direct or indirect impacts to noise levels are expected. Impacts would be less than significant.

XIII. POPULATION AND HOUSING. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (i.e., by proposing new homes and businesses) or indirectly (i.e., through extension of roads or other infrastructure)?			**X**	
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				**X**
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				**X**

Regulatory Setting:

No federal or state laws, regulations, or policies apply to population and housing and the proposed project.

Discussion: A substantial adverse effect on Population and Housing would occur if the implementation of the project would:

- Create substantial growth or concentration in population;
- Create a more substantial imbalance in the County's current jobs to housing ratio; or
- Conflict with adopted goals and policies set forth in applicable planning documents.

a. **Population Growth:** The 15-acre parcel is currently partially developed. The proposed project would result in the creation of two parcels, each of which would be allowed a primary residence, a secondary dwelling, and a junior ADU by right. This potential additional housing and population would not be considered a significant population growth. Impacts would be less than significant.

b. **Housing Displacement:** The 15-acre parcel is currently partially developed. The proposed project would result in the creation of two parcels. No existing housing would be displaced by the project. There would be no impact.

c. **Replacement Housing:** The proposed project could provide up to a total of six residences possible (two primary dwellings/two secondary dwellings/two junior ADU's). No persons would be displaced by the proposed project necessitating for the construction of housing elsewhere. There would be no impact.

FINDING: The project would not displace housing and there would be no potential for a significant impact due to substantial growth, either directly or indirectly. The impacts would be less than significant.

XIV. PUBLIC SERVICES. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Fire protection?			**X**	
b. Police protection?			**X**	
c. Schools?			**X**	
d. Parks?			**X**	
e. Other government services?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

California Fire Code

The California Fire Code (Title 24 CCR, Part 9) establishes minimum requirements to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings. Chapter 33 of CCR contains requirements for fire safety during construction and demolition.

Discussion: A substantial adverse effect on Public Services would occur if the implementation of the project would:

- Substantially increase or expand the demand for fire protection and emergency medical services without increasing staffing and equipment to meet the Department's/District's goal of 1.5 firefighters per 1,000 residents and 2 firefighters per 1,000 residents, respectively;
- Substantially increase or expand the demand for public law enforcement protection without increasing staffing and equipment to maintain the Sheriff's Department goal of one sworn officer per 1,000 residents;
- Substantially increase the public school student population exceeding current school capacity without also including provisions to adequately accommodate the increased demand in services;
- Place a demand for library services in excess of available resources;
- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Be inconsistent with County adopted goals, objectives or policies.

a. **Fire Protection:** The El Dorado Hills Fire Protection District provides fire protection to the site. The project must adhere to applicable requirements for emergency vehicle access including roadway widths and turning radii, fire flow and sprinkler requirements, and vehicle ingress/egress. Compliance with these requirements will assure adequate emergency access and evacuation routes. If any additional dwelling units are proposed

in the future, the Fire District would review the building permit application(s) and include any fire protection measures at that time. Impacts would be less than significant.

b. **Police Protection:** Police services would continue to be provided by the El Dorado County Sheriff's Department (EDSO). Any future residential construction are not anticipated to significantly increase demand for law enforcement protection. Impacts would be less than significant.

c-e. **Schools:** As a result of project approval, potential new dwelling units constructed in the future could add a small number of additional students. The impact would be less than significant.

d. **Parks.** Any additional residents from future construction would not substantially increase the local population and therefore not substantially increase the use of parks and recreational facilities. The dedication of land, the payment of fees in lieu thereof or a combination of both for park and recreational purposes would be required, pursuant to the provisions of Sections 120.12.090 through 120.12.110, as a condition of approval for any parcel map which creates parcels less than 20-acres in size. With the payment of park in-lieu fees, impacts would be less than significant.

e. **Government Services.** There are no government services that would be significantly impacted as a result of the project. Impacts would be less than significant.

FINDING: The project would not result in a significant increase of public services to the project. Increased demand to services would be addressed through the payment of established impact fees. For this Public Services category, impacts would be less than significant.

XV. RECREATION.				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			**X**	
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			**X**	

Regulatory Setting:

National Trails System

The National Trails System Act of 1968 authorized The National Trails System (NTS) in order to provide additional outdoor recreation opportunities and to promote the preservation of access to the outdoor areas and historic resources of the nation. The Appalachian and Pacific Crest National Scenic Trails were the first two components, and the System has grown to include 20 national trails.

The National Trails System includes four classes of trails:

1. National Scenic Trails (NST) provide outdoor recreation and the conservation and enjoyment of significant scenic, historic, natural, or cultural qualities. The Pacific Coast Trail falls under this category. The PCT

passes through the Desolation Wilderness area along the western plan area boundary.

2. National Historic Trails (NHT) follow travel routes of national historic significance. The National Park Service has designated two National Historic Trail (NHT) alignments that pass through El Dorado County, the California National Historic Trail and the Pony Express National Historic Trail. The California Historic Trail is a route of approximately 5,700 miles including multiple routes and cutoffs, extending from Independence and Saint Joseph, Missouri, and Council Bluffs, Iowa, to various points in California and Oregon. The Pony Express NHT commemorates the route used to relay mail via horseback from Missouri to California before the advent of the telegraph.
3. National Recreation Trails (NRT) are in, or reasonably accessible to, urban areas on federal, state, or private lands. In El Dorado County there are 5 NRTs.

State Laws, Regulations, and Policies

The California Parklands Act

The California Parklands Act of 1980 (Public Resources Code Section 5096.141-5096.143) recognizes the public interest for the state to acquire, develop, and restore areas for recreation and to aid local governments to do the same. The California Parklands Act also identifies the necessity of local agencies to exercise vigilance to see that the parks, recreation areas, and recreational facilities they now have are not lost to other uses.

The California state legislature approved the California Recreational Trail Act of 1974 (Public Resources Code Section 2070-5077.8) requiring that the Department of Parks and Recreation prepare a comprehensive plan for California trails. The California Recreational Trails Plan is produced for all California agencies and recreation providers that manage trails. The Plan includes information on the benefits of trails, how to acquire funding, effective stewardship, and how to encourage cooperation among different trail users.

The 1975 Quimby Act (California Government Code Section 66477) requires residential subdivision developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act gave authority for passage of land dedication ordinances to cities and counties for parkland dedication or in-lieu fees paid to the local jurisdiction. Quimby exactions must be roughly proportional and closely tied (nexus) to a project's impacts as identified through traffic studies required by CEQA. The exactions only apply to the acquisition of new parkland; they do not apply to the physical development of new park facilities or associated operations and maintenance costs.

The County implements the Quimby Act through §16.12.090 of the County Code. The County Code sets standards for the acquisition of land for parks and recreational purposes, or payments of fees in lieu thereof, on any land subdivision. Other projects, such as ministerial residential or commercial development, could contribute to the demand for park and recreation facilities without providing land or funding for such facilities.

Local Laws, Regulations, and Policies

The 2004 El Dorado County General Plan Parks and Recreation Element establishes goals and policies that address needs for the provision and maintenance of parks and recreation facilities in the county, with a focus on providing recreational opportunities and facilities on a regional scale, securing adequate funding sources, and increasing tourism and recreation-based businesses. The Recreation Element describes the need for 1.5-acres of regional parkland, 1.5-acres of community parkland, and 2-acres of neighborhood parkland per 1,000-residents. Another 95-acres of park land are needed to meet the General Plan guidelines.

Discussion: A substantial adverse effect on Recreational Resources would occur if the implementation of the project would:

- Substantially increase the local population without dedicating a minimum of 5-acres of developed parklands for every 1,000-residents; or
- Substantially increase the use of neighborhood or regional parks in the area such that substantial physical deterioration of the facility would occur.

a. **Parks.** Any additional units from future construction would not increase the local population substantially, and therefore would not substantially increase the use of parks and recreational facilities. The dedication of land, the payment of fees in lieu thereof or a combination of both for park and recreational purposes would be required, pursuant to the provisions of Sections 120.12.090 through120.12.110, as a condition of approval for any parcel map which creates parcels less than 20-acres in size. With the payment of park in-lieu fees, impacts would be less than significant.

b. **Recreational Services.** The project would not include additional recreation services or sites as part of the project. Impacts would be less than significant.

FINDING: No significant impacts to open space or park facilities would result as part of the project. Impacts would be less than significant.

XVI. TRANSPORTATION/TRAFFIC. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Conflict with an applicable program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			**X**	
b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (Vehicle Miles Traveled)?			**X**	
c. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			**X**	
d. Result in inadequate emergency access?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to transportation/traffic and the Proposed Project.

State Laws, Regulations, and Policies

Caltrans manages the state highway system and ramp interchange intersections. This state agency is also responsible for highway, bridge, and rail transportation planning, construction, and maintenance.

Local Laws, Regulations, and Policies

The Transportation and Circulation Element of the County General Plan relies on automobile delay and Level of Service (LOS) as performance measures to determine impacts on County-maintained roads and state highways within the unincorporated areas of the county.

County General Plan Policy TC-Xd states that Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions. Level of Service is calculated using the methodologies in the latest edition of the Highway Capacity Manual (Transportation Research Board, National Research Council). There are some roadway segments that are except from these standards and are allowed to operate at LOS F and are listed in Table TC-2. According to Policy TC-Xe, "worsen" is defined as any of the following number of project trips using a road facility at the time of issuance of a use and occupancy permit for the development project:

A. A two percent increase in traffic during a.m., p.m. peak hour, or daily
B. The addition of 100 or more daily trips, or
C. The addition of 10 or more trips during the a.m. or p.m. peak hour.

Starting on July 1, 2020, automobile delay and level of service (LOS) may no longer be used as the performance measure to determine the transportation impacts of land development under CEQA. Instead, an alternative metric that supports the goals of SB 743 legislation will be required. The use of vehicle miles traveled (VMT) has been recommended by the Governor's Office of Planning and Research (OPR) and is cited in the CEQA Guidelines as the most appropriate measure of transportation impacts (Section 15064.3(a)).

The intent of SB743 is to bring CEQA transportation analysis into closer alignment with other statewide policies regarding greenhouse gases, complete streets, and smart growth. Using VMT as a performance measure, instead of LOS, is intended to discourage suburban sprawl, reduce greenhouse gas emissions, and encourage the development of smart growth, complete streets, and multimodal transportation networks.

Current direction regarding methods to identify VMT and comply with state requirements is provided by the California Governor's Office of Planning and Research (OPR) December 2018 publication, Technical Advisory on Evaluating Transportation Impacts in CEQA. This advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. OPR provides this Technical Advisory as a resource for the public to use at their discretion. OPR is not enforcing or attempting to enforce any part of the recommendations contained herein. (Government Code Section 65035 ["It is not the intent of the Legislature to vest in the Office of Planning and Research any direct operating or regulatory powers over land use, public works, or other state, regional, or local projects or programs."].)

OPR's Technical Advisory provides this direction for small projects:

Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.

Per OPR's Technical Advisory, this determination is based on the following:

CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).). Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000-square-feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

El Dorado County Department of Transportation (DOT) has not yet adopted VMT screening thresholds. However, consistent with El Dorado General Plan Policy TC-Xe, cited above, transportation impact studies (TIS) are required of development when development "worsens" travel conditions. The threshold criteria for worsening conditions include 2 percent increase in overall volumes, 100 daily trips, or 10 peak hour trips. The threshold of 100 trips generated by the project is more conservative than the recommended exemption threshold of 110 trips suggested by the OPR.

Further, DOT's current criteria for determining uses that are typically exempt from preparation of a transportation impact study (TIS) include industrial uses with footprints of 10,000-square-feet or less, which is reflective of the direction in OPR's Technical Advisory for evaluating traffic impacts for small projects. Access to the project site would be provided by construction of future driveways for each resulting parcel.

Discussion: A substantial adverse effect on Transportation would occur if the implementation of the project would:

- Conflict with an applicable program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (Vehicle Miles Traveled); or
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

a. **Conflicts with a Transportation Plan, Policy or Ordinance:** No substantial traffic increases would result from the proposed project, as the total potential new development would be limited to one new primary single family residential unit, one accessory residential unit and two junior accessory units. Access to Parcel A would be from an existing driveway off Salmon Falls Lane. Parcel B would require a new encroachment from Salmon Falls Road. The project is conditioned to obtain an encroachment permit. The project area is in an area of similar rural large-lot parcels. Trip generation from the project using the ITE Trip Generation Manual, 10th Edition would be 2 trips in the AM and PM Peak hours and 9 trips daily. This is less than the thresholds set by El Dorado County General Plan Policy TC-Xe. The proposed project site is not on a main roadway and there are very low traffic volumes. Potential construction activities that may result from the proposed project would temporarily generate additional vehicle traffic in the project area. Once construction has been completed, at maximum buildout, traffic is anticipated to increase by 9 trips daily or 2 trips in the peak hour. However, this long term increase will remain below the thresholds discussed above. The project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Impacts would be less than significant.

b. **Vehicle Miles Travelled (VMT):** The proposed project would create two parcels. Trip generation from the properties (two (2) primary residences) using the ITE Trip Generation Manual, 10th Edition is less than 100 trips daily. This is presumed to have less than significant transportation impacts, per El Dorado County Resolution 141-2020. Impacts would be less than significant.

c. **Design Hazards**: The design and location of the project is not anticipated to create any significant hazards. The existing project site is partially developed. Any future road or driveway improvements for access to the newly created parcels would require a grading permit. Parcel A would be served by an existing permitted driveway. Parcel B would require a new encroachment onto Salmon Falls Road. DOT has reviewed the project, and has conditioned the project to obtain an encroachment permit for the development of Parcel B. The impact for design hazards would be less than significant.

d. **Emergency Access:** The existing project site is partially developed. Future road or driveway improvements for access to the newly created parcels would require a grading permit and would be required to be compliant with fire and building code emergency access requirements. The El Dorado Hills Fire Protection District declined to comment on this project. Impacts would be less than significant.

FINDING: The project would not conflict with applicable General Plan policies regarding effective operation of the County circulation system and the project would not exceed the level of service thresholds for traffic identified within the General Plan. Further, the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) (Vehicle Miles Traveled). The project would not create any road hazards or affect road safety and would not result in inadequate emergency access. For this Transportation category, the threshold of significance would not be exceeded and impacts would be less than significant.

XVII. TRIBAL CULTURAL RESOURCES. *Would the project: Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			**X**	
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies
No federal laws, regulations, or policies apply to Tribal Cultural Resources (TCRs) and the Proposed Project.

State Laws, Regulations, and Policies

Assembly Bill (AB) 52

AB 52, which was approved in September 2014 and effective on July 1, 2015, requires that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so requested by the tribe. The bill, chaptered in CEQA Section 21084.2, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment.

Defined in Section 21074(a) of the Public Resources Code, TCRs are:

1. Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either of the following:
    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources; or
    b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074 as follows:

a. A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and

b. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a TCR if it conforms with the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TRCs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

Discussion:

In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a TCR significant or important. To be considered a TCR, a resource must be either: (1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or: (2) a resource that the lead agency chooses, in its discretion, to treat as a TCR and meets the criteria for listing in the state register of historic resources pursuant to the criteria set forth in Public Resources Code Section 5024.1(c). A substantial adverse change to a TCR would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a TCR such that the significance of the resource would be materially impaired

a, b. **Tribal Cultural Resources.** The County notified eight Tribes: Colfax-Todds Valley Consolidated Tribe, Ione Band of Miwok Indians, Nashville Enterprise Miwok-Maidu-Nishinam Tribe, Shingle Springs Band of Miwok Indians, T'si-Akim Maidu, United Auburn Indian Community of the Auburn Rancheria, and the Washoe Tribe of California and Nevada, which requested to be notified of proposed projects for consultation in the project area. Staff received a consultation initiation request from the Shingle Springs Band of Miwok Indians on September 22, 2021. Staff sent the SSBMI all cultural resource related documents associated with the project on September 27, 2021. Staff sent a follow-up on November 1, 2021 to the SSBMI inquiring on consultation progress. Due to 60-days of no response from the SSBMI, staff closed-out AB52 consultation. The United Auburn Indian Community sent correspondence stating they will defer any review to the SSBMI. However, if the SSBMI should decline consultation, then a condition regarding cultural resource finds was recommended. Pursuant to the records search conducted at the North Central Information Center on November 5, 2020, the proposed project area contains zero prehistoric-period resources and one historic-period cultural resources. Additionally, one cultural resources study report is on file covering a portion of the subject property. Outside of the project area, but within the ¼ mile radius of the geographic area, a broader search area contains zero known prehistoric-period resources and three known historic-period cultural resources. There is low potential for locating prehistoric-period cultural resources in the immediate vicinity. There is low potential for locating historic-period cultural resources in the immediate vicinity. The project site is not known to contain neither Tribal Cultural Resources (TCRs) nor historic-period resources. The impacts would be less than significant.

FINDING: No Tribal Cultural Resources (TCRs) are known to exist on the project site and conditions of approval have been included to ensure protection of TCRs if discovered during future construction activities. As a result, the proposed project would not cause a substantial adverse change to any known TCRs. The impacts would be less than significant.

XVIII. UTILITIES AND SERVICE SYSTEMS. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			**X**	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			**X**	
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			**X**	
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			**X**	
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			**X**	
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			**X**	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

Energy Policy Act of 2005

The Energy Policy Act of 2005, intended to reduce reliance on fossil fuels, provides loan guarantees or tax credits for entities that develop or use fuel-efficient and/or energy efficient technologies (USEPA, 2014). The act also increases the amount of biofuel that must be mixed with gasoline sold in the United States (USEPA, 2014).

State Laws, Regulations, and Policies

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Public Resources Code, Division 30) requires all California cities and counties to implement programs to reduce, recycle, and compost wastes by at least 50 percent by 2000 (Public Resources Code Section 41780). The state, acting through the California Integrated Waste Management Board (CIWMB), determines compliance with this mandate. Per-capita disposal rates are used to determine whether a jurisdiction's efforts are meeting the intent of the act.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act of 1991 (Public Resources Code Sections 42900-42911) requires that all development projects applying for building permits include adequate, accessible areas for collecting and loading recyclable materials.

California Integrated Energy Policy

Senate Bill 1389, passed in 2002, requires the California Energy Commission (CEC) to prepare an Integrated Energy Policy Report for the governor and legislature every 2-years (CEC 2015a). The report analyzes data and provides policy recommendations on trends and issues concerning electricity and natural gas, transportation, energy efficiency, renewable energy, and public interest energy research (CEC 2015a). The 2014 Draft Integrated Energy Policy Report Update includes policy recommendations, such as increasing investments in electric vehicle charging infrastructure at workplaces, multi-unit dwellings, and public sites (CEC 2015b).

Title 24–Building Energy Efficiency Standards

Title 24 Building Energy Efficiency Standards of the California Building Code are intended to ensure that building construction, system design, and installation achieve energy efficiency and preserve outdoor and indoor environmental quality (CEC 2012). The standards are updated on an approximately 3-year cycle. The 2013 standards went into effect on July 1, 2014.

Urban Water Management Planning Act

California Water Code Sections 10610 *et seq.* requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet per year (AFY), prepare an urban water management plan (UWMP).

Other Standards and Guidelines

Leadership in Energy & Environmental Design

Leadership in Energy & Environmental Design (LEED) is a green building certification program, operated by the U.S. Green Building Council (USGBC) that recognizes energy efficient and/or environmentally friendly (green) components of building design (USGBC, 2015). To receive LEED certification, a building project must satisfy prerequisites and earn points related to different aspects of green building and environmental design (USGBC, 2015). The four levels of LEED certification are related to the number of points a project earns: (1) certified (40–49 points), (2) silver (50–59 points), (3) gold (60–79 points), and (4) platinum (80+ points) (USGBC, 2015). Points or credits may be obtained for various criteria, such as indoor and outdoor water use reduction, and construction and demolition (C&D) waste management planning. Indoor water use reduction entails reducing consumption of building fixtures and fittings by at least 20% from the calculated baseline and requires all newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling to be WaterSense labeled (USGBC, 2014). Outdoor water use reduction may be achieved by showing that the landscape does not require a permanent irrigation system beyond a maximum 2.0-year establishment period, or by reducing the project's landscape water requirement by at least 30% from the calculated baseline for the site's peak watering month (USGBC, 2014). C&D waste management points may be obtained by diverting at least 50% of C&D material and three material streams, or generating less than 2.5 pounds of construction waste per square foot of the building's floor area (USGBC, 2014).

Discussion: A substantial adverse effect on Utilities and Service Systems would occur if the implementation of the project would:

- Breach published national, state, or local standards relating to solid waste or litter control;
- Substantially increase the demand for potable water in excess of available supplies or distribution capacity without also including provisions to adequately accommodate the increased demand, or is unable to provide an adequate on-site water supply, including treatment, storage and distribution;

- Substantially increase the demand for the public collection, treatment, and disposal of wastewater without also including provisions to adequately accommodate the increased demand, or is unable to provide for adequate on-site wastewater system; or
- Result in demand for expansion of power or telecommunications service facilities without also including provisions to adequately accommodate the increased or expanded demand.

a. **Wastewater Requirements**: The El Dorado County Environmental Management Department reviewed the project and verified that each parcel is required to have a soil percolation rate of 120-minutes per inch or lower and must have an adequately sized effluent dispersal area. A test pit (test trench) and soil percolation rate testing is required on the proposed five-acre lot to demonstrate adequate soil depth and suitability for a leach field. Upon building permit submittal, each parcel must have confirmed adequate soil depth, a soil percolation rate below 120 minutes per inch, and a dispersal area identified. Impacts would be less than significant.

b. **Construction of New Facilities:** No development is proposed as a part of the Tentative Parcel Map project and no construction of new facilities is required. Each parcel is required to provide its own wastewater treatment system, connection to public water service or private well, and utilities/electricity services by Pacific Gas & Electric (PG&E). Private well developments for each parcel currently exist. The impact would be less than significant.

c. **New Storm Water Facilities:** Any possible drainage facilities needed for any future construction would be built in conformance with the County of El Dorado Drainage Manual, as determined by Development Services standards, during the grading and building permit processes. The impact would be less than significant.

d. **Sufficient Water Supply:** Water for each parcel would be provided by connection to private wells. The El Dorado County Environmental Management Department reviewed the project and found a report in their records for an existing well. This report shows that the well produced 30-gallons of water per minute. No additional information was needed to demonstrate an adequate water supply for the two proposed parcels. The impact would be less than significant.

e. **Adequate Wastewater Capacity:** The project would require each parcel to provide its own onsite wastewater treatment system. As discussed in (a.), the Environmental Management Department must review any future building permit submittals to confirm that the parcels can be served by an onsite wastewater treatment system. Impacts would be less than significant.

f-g. **Solid Waste Disposal and Requirements:** El Dorado Disposal distributes municipal solid waste to Forward Landfill in Stockton and Kiefer Landfill in Sacramento. Pursuant to El Dorado County Environmental Management Solid Waste Division staff, both facilities have sufficient capacity to serve the County. Recyclable materials are distributed to a facility in Benicia and green wastes are sent to a processing facility in Sacramento. County Ordinance No. 4319 requires that new development provide areas for adequate, accessible, and convenient storing, collecting and loading of solid waste and recyclables. This project does not propose to add any activities that would generate substantial additional solid waste, as future additional housing units would generate minimal amounts of solid waste for disposal. Project impacts would be less than significant.

FINDING: No significant utility and service system impacts would be expected with the project, either directly or indirectly. Impacts would be less than significant.

XX. WILDFIRE. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?			**X**	
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			**X**	
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			**X**	
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			**X**	

DISCUSSION: The project site is within a State Responsibility Area (SRA) and is within a very high fire hazard severity zone (CAL FIRE 2009).

a. **Emergency Response or Evacuation Plans:** The project is surrounded by a mixture of rural residential parcels with existing residential uses and undeveloped, natural parcels. Implementation of the proposed project would not alter any roadways, access points, or otherwise substantially hinder access to the area in such a way that would interfere with an emergency response or evacuation plan. There is no development proposed as a part of the project, and project approval would not notably increase the risk of wildfire on the project site. The project was reviewed by CALFIRE along with the El Dorado County Sheriff's Office for emergency response and evacuation circulation. Neither agency expressed any concerns regarding the project impairing the implementation of any emergency response plan or emergency evacuation plan. Any potential impact would be **less than significant**.

b. **Exacerbate Wildfire Risks**: Implementation of the proposed project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The project is required to adhere to all fire prevention and protection requirements and regulations of El Dorado County including the El Dorado County Fire Hazard Ordinance and the Uniform Fire Code, as applicable. Pertinent measures include, but are not limited to, the use of equipment with spark arrestors and non-sparking tools during any proposed future development activities. A Wildland Fire Safe Plan was submitted to the El Dorado County Fire Protection District and CALFIRE, both agencies approved of the plan date November 2, 2021. CALFIRE has included Conditions of Approval intended to reduce wildland fire risks. The project would be required to adhere to all requirements regarding fire prevention, the project would not exacerbate wildfire risk. This impact would be **less than significant**

c. **Installation or Maintenance of Associated Infrastructure**: No new infrastructure is being proposed as a part of this project. Should the proposed parcels be developed, water and sewer service will be provided by on-site wells and septic systems. The proposed Tentative Parcel Map would not exacerbate fire risk or result in temporary or ongoing impacts to the environment that would necessitate installation additional infrastructure. Any potential impacts would be **less than significant**.

d. **Runoff, Post-Fire Slope Instability, or Drainage Changes**: The proposed project would divide an approximately 15-acre parcel into two (2) parcels of approximately 10 and five (5)-acres respectively. The

project has been reviewed by the El Dorado Water District/Fire Department and CALFIRE and is not anticipated to exacerbate wildfire risks. The project area is relatively flat and does not have steep sloping terrain that would expose people or structures to significant risk from downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Any potential impact would be **less than significant**.

FINDING: As conditioned and with adherence to El Dorado County Code of Ordinances, for this wildfire category, any potential impacts would be **less than significant**

XIV. MANDATORY FINDINGS OF SIGNIFICANCE. *Does the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		**X**		
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			**X**	
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			**X**	

Discussion

a. No substantial evidence contained in the project record has been found that would indicate that this project would have the potential to significantly degrade the quality of the environment. As conditioned and mitigated to perform pre-construction bird and rare plant surveys, and with adherence to County permit requirements, this project would not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of California history or pre-history. Any impacts from the project would be less than significant due to the design of the project and required standards that would be implemented prior to recording the final Parcel Map or with the building permit processes and/or any required project specific improvements on the property.

b. Cumulative impacts are defined in Section 15355 of the California Environmental Quality Act (CEQA) Guidelines as *two or more individual effects, which when considered together, would be considerable or which would compound or increase other environmental impacts.*

The project would not involve development or changes in land use that would result in an excessive increase in population growth. Impacts due to increased demand for public services associated with the project would be offset by the payment of fees as required by service providers to extend the necessary infrastructure services. The project would not be anticipated to contribute substantially to increased traffic in the area and the project would not require an increase in the wastewater treatment capacity of the County. Due to the small size of the proposed project, types of activities proposed, and site-specific environmental conditions, which have been disclosed in the Project Description and analyzed in Items I through XIV, there would be no significant impacts anticipated related to agriculture resources, air quality, biological resources, cultural resources, geology/soils, hazards/hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, traffic/transportation, or utilities/service systems that would combine with similar effects such that the project's contribution would be cumulatively considerable. For these issue areas, either no impacts, or less than significant impacts would be anticipated.

As outlined and discussed in this document, as conditioned and with compliance with County Codes, this project would be anticipated to have a less than significant project-related environmental effect which would cause substantial adverse effects on human beings, either directly or indirectly. Based on the analysis in this study, it has been determined that the project would have less than significant cumulative impacts.

c. Based on the discussion contained in this document, no potentially significant impacts to human beings are anticipated to occur with respect to potential project impacts. The project would not include any physical changes to the site, and any future development or physical changes would require review and permitting through the County. Adherence to these standard conditions would be expected to reduce potential impacts to a less than significant level.

FINDINGS: It has been determined that the proposed project would not result in significant environmental impacts. The project would not exceed applicable environmental standards, nor significantly contribute to cumulative environmental impacts.

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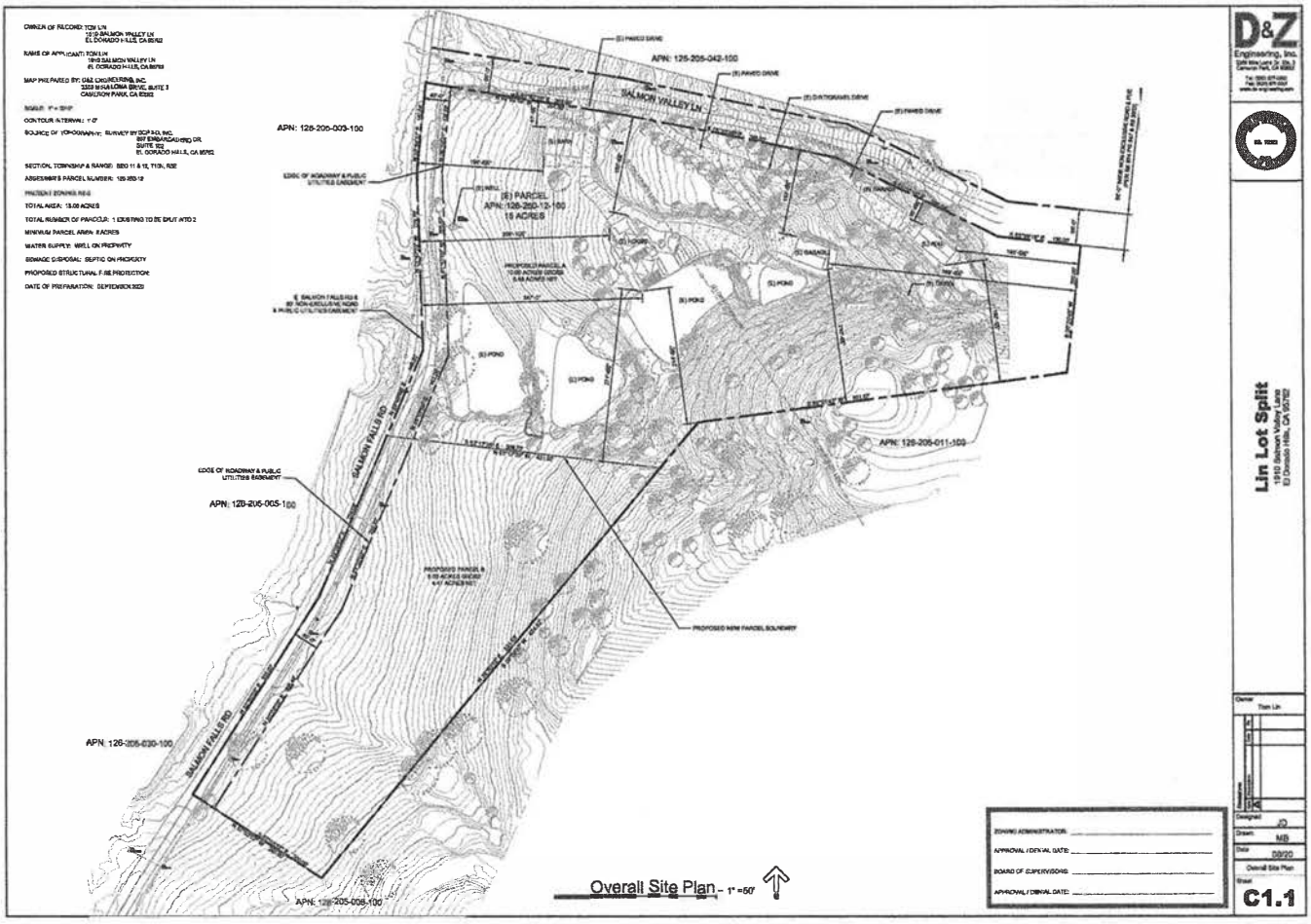
APN: 126-205-042-100
SALMON VALLEY LN
APN: 126-205-003-100
(E) PARCEL
APN: 126-250-12-100
15 ACRES
APN: 126-205-011-100
SALMON FALLS RD
APN: 126-205-005-100
APN: 126-205-030-100
APN: 126-205-008-100
Overall Site Plan - 1" =50'
D&Z
Engineering, Inc.
Lin Lot Split
1910 Salmon Valley Lane
El Dorado Hills, CA 95762
Owner
Tom Lin
Designed
JD
Drawn
MB
Date
09/20
Sheet
Overall Site Plan
C1.1

Biological Resources Evaluation
and
Botanical Inventory Report

for the

Lin Lot Split Project

El Dorado County, CA

Prepared by:

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August 2021

Biological Resources Evaluation and Botanical Survey
for the
Lin Lot Split (APN 126-250-012)

El Dorado County, CA

Table of Contents

Figures

Tables

Appendices

I. SUMMARY OF FINDINGS AND CONCLUSIONS

This biological resources evaluation (BRE) documents baseline biological resources for the Lin Lot Split (APN 126-250-012) Project (Project) near in unincorporated El Dorado County, CA. The 15-acre Biological Study Area (BSA) is located in the foothills of the Sierra Nevada and contains California annual grassland, nonnative annual grassland, blue oak pine, interior live oak pine, a drainage with four impoundments, an ephemeral channel, and a roadside ditch.

A general biological survey, wetland survey, and protocol botanical survey were completed on May 19, 2021. A potential western pond turtle was observed in an impoundment within the BSA during biological survey. No other special-status species were observed during the survey. No special-status plants were observed in the BSA during the floristic botanical survey conducted during the evident and identifiable period.

The BSA provides potential habitat for the following special-status wildlife species: foothill yellow-legged frog (*Rana boylii*; State endangered); California red-legged frog (*Rana draytonii*; Federal threatened); western spadefoot (*Spea hammondi*; CDFW species of special concern), western pond turtle (*Emys marmorata*; CDFW species of concern); tricolored blackbird (*Agelaius tricolor*; State threatened), grasshopper sparrow (*Ammodramus savannarum*; CDFW species of special concern), golden eagle (*Aquila chrysaetos*; CDFW fully protected species); burrowing owl (*Athene cunicularia*; CDFW species of special concern); Swainson's hawk (*Buteo swainsoni*; State threatened); white-tailed kite (*Elanus leucurus*; CDFW fully protected species); bald eagle (*Haliaeetus leucocephalus*; State endangered); nesting birds (regulated by the Migratory Bird Treaty Act and/or CDFW), pallid bat (*Antrozous pallidus*; State species of special concern); and American badger (*Taxidea taxus*; State species of special concern).

The BSA provides potential habitat for the following special-status plant species: Big-scale balsamroot (*Balsamorhiza macrolepis*; CNPS Rank 1B.2); Boggs Lake hedge-hyssop (*Gratiola heterosepala*; State endangered; CNPS Rank 1B.2); and Sanford's arrowhead (*Sagittaria sanfordii*; CNPS Rank 1B.2).

El Dorado County parcel data information from the County Planning Services online database lists the APN within Rare Plant Mitigation Area (RPMA) 0. The RPMA Google Earth file provided by El Dorado County shows only a small (± 0.01 acre) portion of the BSA along Salmon Valley Lane is in RPMA 0.

Sensitive natural communities in the BSA include 1.01 acres of impoundments, 0.10 acre of channels, and 4.28 acres of oak woodland.

II. INTRODUCTION

A. Purpose of Report

The purpose of this Biological Resources Evaluation (BRE) report is to document biological resources with potential to occur within the study area for the Lin Lot Split Project (Project).

B. Project Location

The approximately 15-acre Biological Study Area (BSA) is located on the east side of Salmon Falls Road, just south of Salmon Valley Lane, in unincorporated El Dorado County, CA. The BSA consists of assessor's parcel number (APN) 126-250-012. The BSA is on the Clarksville USGS topographic quad (Section 21, T7N, R6E, 14 Mt. Diablo Base & Meridian; Figure 1) and is in the Lower South Fork American River Hydrologic Unit (Hydrologic Unit Code 1802012907). The geographic coordinates of the BSA are 38.442062° north, -121.33816° west (WGS84), and the UTM coordinates are 674,542 meters east, 4,256,810 meters north, Zone 10 N (WGS84). Figure 2 is a 17 June 2020 aerial photo of the BSA and surrounding area.

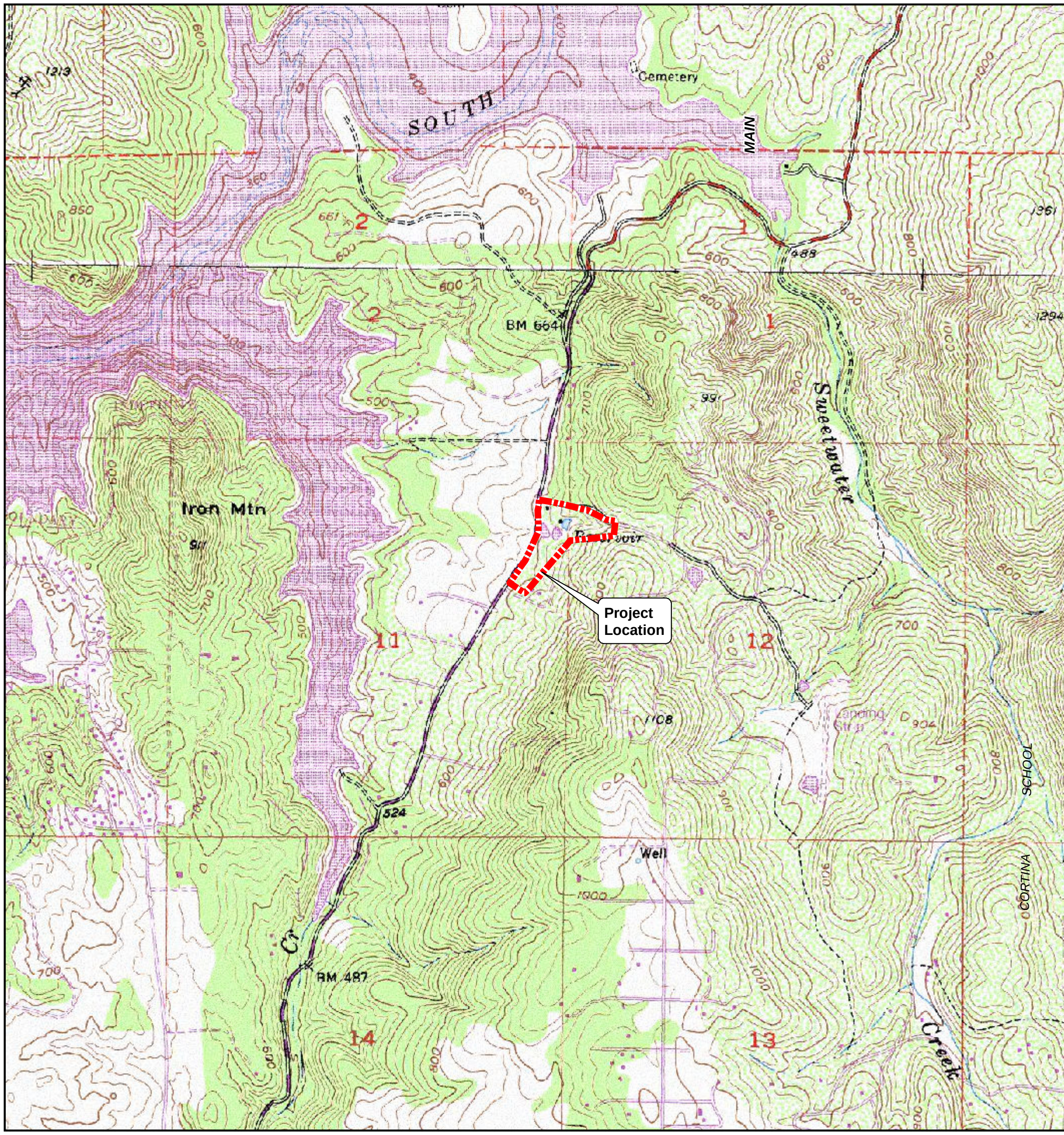
El Dorado County parcel data information from the County Planning Services online database lists the APN within Rare Plant Mitigation Area (RPMA) 0. The RPMA 0 kmz layer provided by Lillian Macloud with El Dorado County Planning in July 2003 shows only a small (± 0.1 acre) of the BSA along Salmon Valley Lane is located in County Pine Hill Endemic Rare Plant Mitigation Area 0. The remainder of the BSA is not shown within a RPMA. Areas within RPMA 0 are also considered within one of the five Ecological Preserve (EP) overlay zones (El Dorado County 2018). Development within Rare Plant Mitigation Area 0 requires mitigation as detailed in El Dorado County Code Section 130.71.050. The BSA is outside the U.S. Fish and Wildlife Service (USFWS) recovery boundary for the Pine Hill plants (USFWS August 2002). The BSA is located outside the El Dorado County Important Biological Corridor (IBC; El Dorado County 2018).

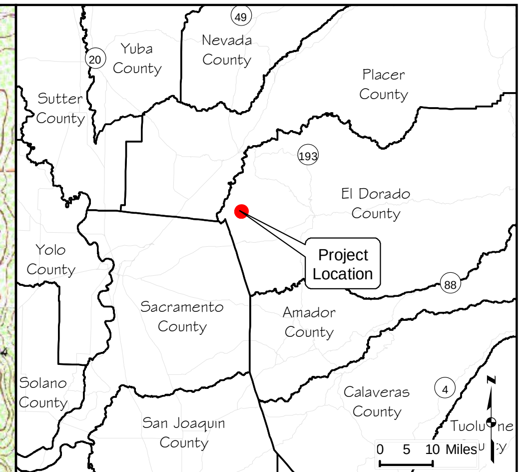
C. Project Applicant

Applicant:	**Engineer:**
Tom Lin 1910 Salmon Valley Lane El Dorado Hills, CA 95762 Phone: 925.216.8574	D&Z Structural Engineering, inc. 3389 Mira Loma Drive, Suite 3 Cameron Park, CA 95682 Phone: 530.677.0900 Email: mbrehmer@dz-engineering.com

D. Project Description

The Project is a proposed lot split into a 10-acre parcel and a 5-acre parcel. The owner is contemplating a residential development on the 5-acre parcel.





Lin Lot Parcel Split
El Dorado County, CA
17 June 2021

Figure 1. Project Location Map

Project Location

2,000 1,000 0 2,000 Feet

Scale: 1 inch = 2,000 feet

N

USGS 7.5' Quadrangle Topo Basemap:
Shingle Springs, CA (Revised 1973)
CASIL California USGS Digital Raster Graphics (DRG),
7.5 Minute (C) Series, Albers Nad83 Mosaics (MrSID)
o_nw0201.sid & o_nw0202.sid

20087LinLotSplit_Fig1LocationMap.mxd

Lin Lot Parcel Split
El Dorado County, CA
17 June 2021

Biological Study Area (BSA)

Aerial Photograph: 17 June 2020
WV02 Metro Maxar Imagery
ESRI ArcMap Basemap layer

Figure 2. Aerial Photograph

20087LinLotSplit_Fig2AerialPhoto.mxd

III. STUDY METHODS

A. Studies Conducted

An evaluation of biological resources was conducted to determine whether any special-status plant or wildlife species, their habitat, or sensitive habitats occur in the BSA. Data on known special-status species and habitats in the area was obtained from state and federal agencies. Maps and aerial photographs of the BSA and surrounding area were reviewed. A field survey was conducted to determine the habitats present. The field surveys, map review, and a review of the biology of evaluated species and habitats were used to determine the special-status species and sensitive habitats that could occur in the BSA.

Special-status species in this report are those listed under the federal or state endangered species acts; under the California Native Plant Protection Act; as a California species of special concern or fully protected by the California Department of Fish and Wildlife (CDFW); species that are Ranked 1 or 2 by the California Native Plant Society, Inventory of Rare and Endangered Plants of California (CNPS 2021); or are rare plants listed in the El Dorado County Ordinance Code §130.71.030. Special-status natural communities are waters, wetlands, riparian communities, any natural community ranked S1, S2, or S3 by CDFW (2020), and any community identified as sensitive in the El Dorado County General Plan (2018).

B. Literature and Database Review

SWCA obtained an online list from the U.S. Fish and Wildlife Service (USFWS) that identifies federal-listed species that could potentially occur in or be affected by a project in the BSA. The California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) Inventory were queried for the Clarksville quad and eight surrounding USGS quads to determine known records of special-status species that occur in the vicinity of the BSA. The results of the database queries are in Appendix A. Table 1 lists the nine USGS quads evaluated. Appendix B contains a table evaluating special-status species returned in database queries.

Table 1. USGS Quads Evaluated.

Rocklin	Pilot Hill	Coloma
Folsom	**Clarksville**	Shingle Springs
Buffalo Creek	Folsom SE	Latrobe

Information on the biology, distribution, taxonomy, legal status, and other aspects of the special-status species was obtained from documents on file in the library of SWCA. Standard references used for the biology and taxonomy of plants included Baldwin et al.,

eds. (2012). On-line references included California Native Plant Society (2021); CalPhotos (2021); Consortium of California Herbaria (CCH 2021); Jepson eFlora (2021); and Flora of North America (FNA 1993+). References pertaining to natural communities include California Natural Community List (CDFW 2020).

Two special-status species lists produced by CDFW were reviewed: 1) Special Vascular Plants, Bryophytes, and Lichens List; and 2) State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2021b).

C. Survey Methods

1. Survey Dates and Personnel

Biological and botanical and wetland delineation fieldwork was conducted by Mike Bower, M.S., on May 19, 2021. Mr. Bower is a biologist/botanist and wetland delineator with 13 years of experience conducting biological, botanical and wetland surveys. He is familiar with the local flora, has conducted numerous surveys in El Dorado County, and has direct experience with all rare Pine Hill plants.

2. Biological Survey

The general biological survey consisted of walking through the BSA while assessing potential habitat for special-status species and sensitive communities. Wildlife species and vegetation communities were identified and recorded. A list of plant and wildlife species observed in the BSA is in Appendix C. Photographs are in Appendix D.

3. Botanical Survey

The botanical survey was conducted in accordance with botanical survey guidelines from California Department of Fish and Wildlife (CDFW 2018) and U.S. Fish & Wildlife Service (USFWS 1996b); and California Native Plant Society (CNPS 2007). The botanical survey was "floristic," meaning that every plant taxon found was identified to the taxonomic level necessary to determine rarity and listing status. Scientific nomenclature follows Baldwin, et al., eds. (2012).

Natural communities were identified and mapped. Vegetation in these communities was classified according to methods and vegetation alliance membership rules in *A Manual of California Vegetation, 2nd edition* (Sawyer et al. 2009). The CDFW (2020) *California Natural Community List* was reviewed to verify vegetation rarity ranks and determine if any sensitive vegetation alliances or associations occur.

The May 19, 2021 fieldwork was conducted during the published blooming period of special-status plants with potential to occur in the BSA. On May 24, 2021, a nearby reference population of Red Hills soaproot (*Chlorogalum grandiflorum*) was visited. The

reference population is about 7.5 miles southeast of the BSA. Red Hills soaproot plants were evident and identifiable (observed in bud and in early flower).

The botanical survey was conducted using systematic transects. The botanist searched for and recorded all plant species observed while surveying the BSA on foot. The survey was intuitively controlled, with more survey time spent in microhabitats with higher potential for rare plants (openings in chaparral, mesic areas, rocky outcrops, serpentine soils, etc.). Approximately 8 person-hours were spent in the field during the May 2021 survey. All vascular plants found in the BSA were identified to the taxonomic level necessary to determine legal status. Plant species were identified on-site or collected and identified later with the aid of a microscope and using dichotomous keys in The Jepson manual: Vascular plants of California, 2nd ed. (Baldwin, et al. 2012) or the Jepson eFlora (2021). A list of vascular plants observed in the BSA is in Appendix C. Scientific nomenclature follows the Baldwin et al. (2012).

D. Mapping

An aerial photograph acquired from ESRI ArcMap provided the base layer for Figures 2 and 4. Data collected with a sub-meter accurate Trimble Nomad 5 GPS unit equipped with an Empower Module, and a review of aerial photographs and field notes, were used to estimate the boundaries of biological communities. Areas mapped as oak woodlands in the BSA have a minimum of 10% cover of oak tree canopy, consistent with the County Oak Resources Management Plan (ORMP) adopted by El Dorado County in 2017. Acreages of plant communities and other features were calculated using ArcMap functions.

E. Problems Encountered and Limitations That May Influence Results

The general biological survey conducted for this report may not necessarily have detected cryptic, fossorial, migratory, aestivating, or nocturnal wildlife species. Such species with habitat in the BSA could be present in or periodically utilize suitable habitat in the BSA even if not observed during a general biological survey. Sign of such species (feathers, excrement, carcasses, etc.) were recorded if observed.

The botanical survey was conducted following a period of below-normal precipitation. Drought and low precipitation can negatively influence detectability and abundance of rare plants. Despite dry conditions, plant vigor, phenology, and abundance observed in the BSA did not appear substantially different from past normal years in El Dorado County. The reference population of Red Hills soaproot visited on May 24, 2021, was evident and identifiable. There is no evidence that ongoing drought or dry conditions adversely affected the ability of the botanist to detect rare plants during the survey.

IV. ENVIRONMENTAL SETTING

The BSA is located in a rural residential area located east of Folsom Lake. Salmon Valley Lane borders the BSA immediately to the north. Salmon Falls Road borders the BSA immediately to the west. Areas to the north, south, and west of the BSA consist of low-density residential developments. Areas to the east of the BSA are largely undeveloped. Vegetation in the surrounding area consists of oak woodlands, pine-oak forests, and chaparral. A drainage flows through the BSA from east to west, draining ultimately to Folsom Lake. The drainage has been modified with impoundments. Several residential buildings occur in the BSA north of the drainage. The southern portion of the parcel is an undeveloped grassland area with few trees. The elevation in the BSA ranges from approximately 590 to 766 feet above sea level (NAVD 88).

A. Soils

Mapped soil units in the BSA are Auburn Very Rocky Silt Loam, 2 to 30 Percent Slopes and Auburn Very Rocky Silt Loam, 30 to 50 Percent Slopes (Figure 3). The soils are part of the Auburn Series, which is summarized below (NRCS 1974, NRCS 2021a; 2021b).

Auburn Series

The Auburn series soils are on foothills with 2 to 75 percent slopes. The soils formed in material weathered from metabasic or metasedimentary rock. Rock outcrops are common. The soils are shallow to moderately deep. This series is well drained. A typical profile of the Auburn Series is as follows (reported colors are for moist soil):

A1—0 to 2 inches; strong brown (7.5YR 5/6) silt loam, reddish brown (5YR 4/4) moist; massive; slightly hard, friable, slightly sticky and non-plastic; many very fine roots; many very fine and fine tubular pores; slightly acid (pH 6.4); clear smooth boundary.

A2—2 to 9 inches; yellowish red (5YR 5/6) silt loam, reddish brown (5YR 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine and medium roots; many very fine and medium tubular pores; slightly acid (pH 6.4); gradual smooth boundary.

Bw—9 to 14 inches; yellowish red (5YR 5/8) silt loam, yellowish red (5YR 4/6) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; few thin clay films line pores; slightly acid (pH 6.5); abrupt wavy boundary.

R—14 to 24 inches; very pale brown (10YR 7/4) partly weathered amphibolite schist with reddish brown (2.5YR 4/4) colloidal stains in fracture planes; few roots in cracks; slightly acid (pH 6.5).

B. Weather Conditions

Fieldwork for the botanical survey was conducted on May 19, 2021. From October 1, 2020 through May 18, 2021, the nearby Folsom Point gauge (FLD) received 9.04 inches of precipitation (39% of normal; CDEC 2021). The FLD gauge is located approximately 4.6 miles southwest of the BSA at similar elevation, and would be expected to receive similar amounts of precipitation as the BSA. Hydrologic conditions preceding the May 2021 survey were drier than normal.

Lin Lot Parcel Split
El Dorado County, CA
12 July 2021

Figure 3. Soils Map

Botanical Study Area (BSA)

Soil Boundary

Soil Mapping Unit

Symbol	Name
AxD	Auburn very rocky silt loam, 2 to 30 percent slopes
AxE	Auburn very rocky silt loam, 30 to 50 percent slopes

1,667 0 1,667 Feet

N

Scale: 1 inch = 1,667 feet

Soil Survey Geographic (SSURGO) database for
El Dorado Area, California, USDA, NRCS
URL:http://SoilDataMart.nrcs.usda.gov/

Aerial Photograph: 17 June 2020
Maxar 2000 Imagery
Google Earth Pro

20087LinLotSplit_Fig3SoilsMap.mxd

C. Natural Communities

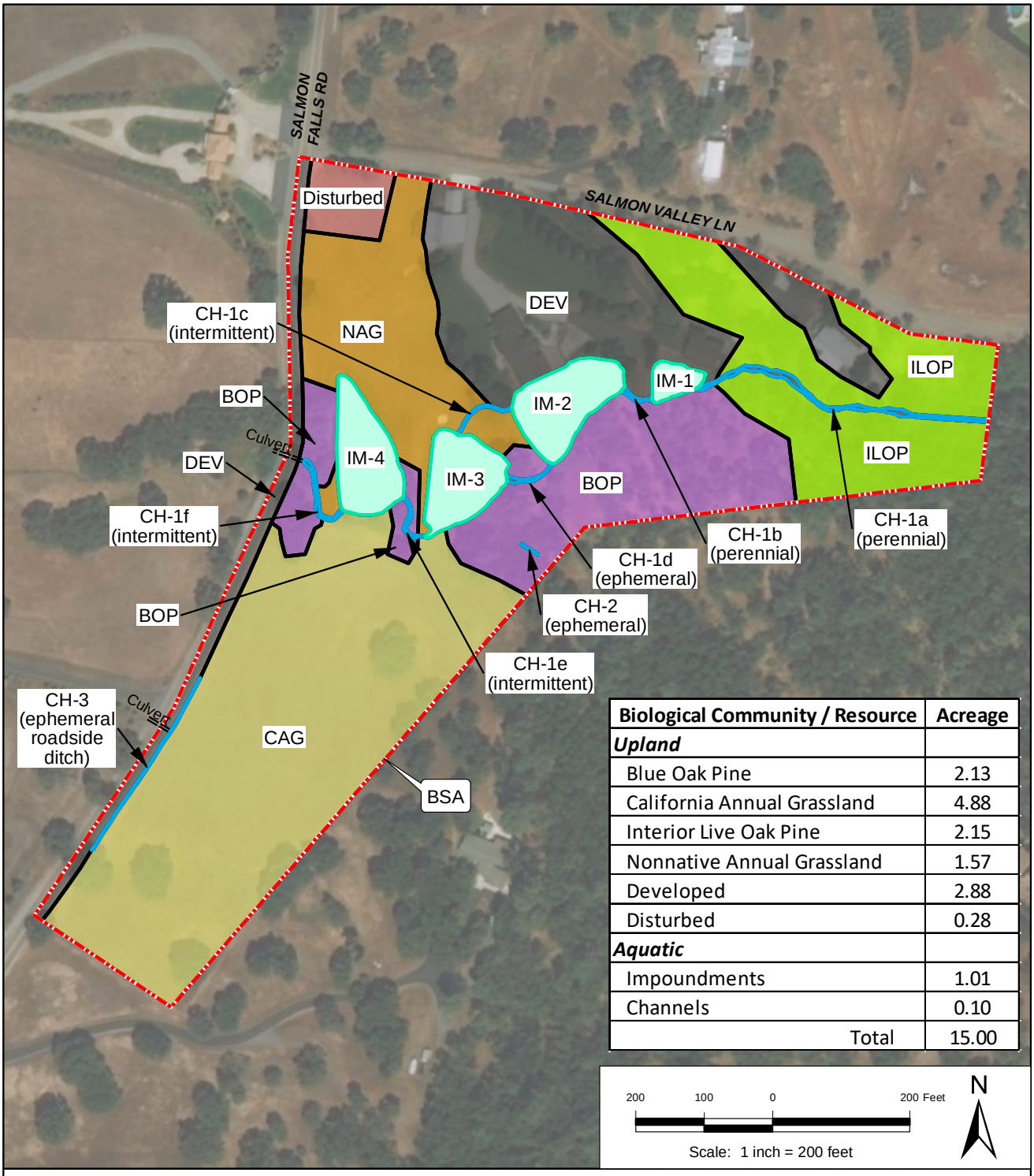
Natural communities are defined by species composition and relative abundance. The Natural Communities described below correlate with the California Natural Community List (CDFW 2020) and the El Dorado County General Plan EIR (2018). No sensitive vegetation alliances or associations are present in the BSA. Natural communities are shown on Figure 4 and listed in Table 2. Photographs of the BSA are in Appendix D.

Table 2. Natural Communities.

Natural Community	Vegetation Alliance and Association (CDFW Association Code / Rarity Rank) [1]	El Dorado County Major Habitat Type	Acreage [2]
Upland			
Blue Oak Pine	Blue Oak Woodland and Forest Alliance *Quercus douglasii – Pinus sabiniana* Association (71.020.02 / G4 S4)	Blue Oak Woodland	2.13
Interior Live Oak Pine	Interior Live Oak Woodland and Forest Alliance *Quercus wislizeni – Quercus douglasii - Pinus sabiniana* / grass Association (71.080.01/ G4 S4)	Blue Oak Woodland	2.15
California Annual Grassland	None recognized – This community is dominated by nonnative grasses with some natives forbs	Annual Grassland	4.88
Nonnative Annual Grassland	None recognized – This community is dominated by nonnative grasses	Annual Grassland	1.57
Aquatic			
Impoundments	None recognized	--	1.01
Channels	None recognized	--	0.10
Other Features			
Developed	None recognized	--	2.88
Disturbed	None recognized	--	0.28
		TOTAL:	**15.00**

[1] Vegetation alliances based on descriptions and classification methods in Sawyer et al. (2009). Alliance codes are from CDFW (2020). Rarity ranks of State (S) 1-3 are considered highly imperiled by CDFW (2021b). Communities may lack recognized vegetation alliances if they lack vegetation, occupy a small area, or are dominated by nonnatives.

[2] Acreages were calculated using AutoCAD or ArcMap functions.



Biological Community / Resource	Acreage
Upland	
Blue Oak Pine	2.13
California Annual Grassland	4.88
Interior Live Oak Pine	2.15
Nonnative Annual Grassland	1.57
Developed	2.88
Disturbed	0.28
Aquatic	
Impoundments	1.01
Channels	0.10
Total	15.00

Lin Lot Parcel Split
El Dorado County, CA
9 August 2021

Figure 4.
Biological Resources Map

Biological Study Area (BSA; 15 ac)
Biological Community Boundary
Impoundment (IM)
Channel (CH)
Existing Culvert

Blue Oak Pine (BOP)
California Annual Grassland (CAG)
Interior Live Oak Pine (ILOP)
Nonnative Annual Grassland (NAG)
Developed (DEV)
Disturbed

Aerial Photograph: 17 June 2020
WV02 Metro Maxar Imagery
ESRI ArcMap Basemap layer

20087LinLotSplit_Fig3BioresMap.mxd

1. Blue Oak Pine

A total of 2.13 acres of blue oak pine occurs in the BSA (Figure 4). This community occurs on dry slopes and terraces in the northern portion of the BSA. The overstory of this community is dominated by blue oak (*Q. douglasii*) and foothill pine (*Pinus sabiniana*) with lesser amounts of interior live oak (*Quercus wislizeni*), California black walnut (*Juglans hindsii*), and California buckeye (*Aesculus californica*). When present, the shrub layer is dominated by poison oak (*Toxicodendron diversilobum*). The herb layer is dominated by nonnative annual grasses including slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), bristly dogtail grass (*Cynosurus echinatus*), rye grass (*Festuca perennis*), and rattail sixweeks fescue (*Festuca myuros*). Native forbs present in the understory include goldback fern (*Pentagramma triangularis*), sanicle (*Sanicula* spp.), mule's ears (*Wyethia angustifolia*), common fiddleneck (*Amsinckia menziesii*), and morning-glory (*Calystegia occidentalis*). Vegetation in this community may be classified as *Q. douglasii – P. sabiniana* Association (CDFW Code 71.020.02 / Rarity Rank G4S4). This vegetation association is not highly imperiled in California. Impacts to oaks and oak woodlands are regulated by the County (see Section V.E).

2. Interior Live Oak – Pine

A total of 2.15 acres of interior live oak – pine occurs in the BSA (Figure 4). This forested community occurs in the easternmost portion of the BSA. This community is dominated by interior live oak and foothill pine with lesser amounts of interior blue oak, and edible fig (*Ficus carica*). When present, the shrub layer is dominated by poison oak. The herb layer is dominated by nonnative annual grasses including ripgut brome, bristly dogtail grass, and rye grass. Native forbs present in the understory include goldback fern, sanicle, and morning-glory, and leather root (*Hoita macrostachya*). Vegetation in this community may be classified as *Quercus wislizeni – Pinus sabiniana* / annual grass Association (CDFW Code 71.080.01/ Rarity Rank G4S4). This vegetation association is not highly imperiled in California. Impacts to oaks and oak woodlands are regulated by the County (see Section V.E).

3. California Annual Grassland

A total of 4.88 acres of California annual grassland occurs in the BSA. This community occurs in the open pasture in the southern portion of the BSA (Figure 4; Appendix D, Photos 1, 2, 3 and 4). This community is dominated by nonnative annual grasses including slender wild oat, ripgut brome, soft chess (*Bromus hordeaceus*), bristly dogtail grass, rye grass, and rattail sixweeks fescue, Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and hare barley (*H. murinum* ssp. *leporinum*). Native forbs occur at approximately 10% relative cover and include miniature lupine (*Lupinus bicolor*), deervetch (*Acmispon americanus* var. *americanus*), harvest brodiaea (*Brodiaea elegans* ssp. *elegans*), navarretia (*Navarretia* sp.), willowherb (*Epilobium ciliatum*), and common fiddleneck. Vegetation in this community is periodically mowed. The California annual grassland was previously used for cattle grazing

and alfalfa crops (pers. comm., Tom Lin, owner). No native vegetation associations were recognized within this community. California annual grassland is not a sensitive natural community. Some scattered blue oak trees occur in this community at around 5% cover. Impacts to oaks and oak woodlands are regulated by the County (see Section V.E).

4. Nonnative Annual Grassland

A total of 1.57 acres of nonnative annual grassland occurs in the BSA (Figure 4). This community occurs in the northwestern portion of the BSA. This community is dominated by nonnative annual grasses including slender wild oat, ripgut brome, soft chess, bristly dogtail grass, rye grass, and rattail sixweeks fescue, and hare barley. Native forbs are generally absent. Vegetation in this community was classified as Vegetation in this community is periodically mowed. No native vegetation associations were recognized within this community. Nonnative annual grassland is not a sensitive natural community. One ornamental juniper (*Juniperus* sp.) occurs within this community along the western edge of the BSA near Salmon Falls Road.

5. Impoundments

Four man-made impoundments (IM-1 through IM-4) occur along a single east-west drainage in the northern portion of the BSA the BSA (Appendix D, Photos 8, 9, 11, and 12; Figure 4). The impoundments were delineated during a concurrently prepared aquatic resources delineation and occupy a collective 1.01 acres in the BSA (SWCA 2021). The impoundments consist of earthen berms placed across a natural drainage. They appear to have been constructed by 1973 (SWCA 2021). IM-1 and IM-2 are permanently flooded features fed by a perennial stream that enters the BSA from the east. The drainage is intermittent by the time it reaches IM-3 and IM-4 and as it exits the BSA to the west, ultimately draining to Folsom Lake. IM-3 and IM-4 may dry up completely in some years. Vegetation below the ordinary high water mark (OHWM) of the impoundments generally consists of a mixture of cattails (*Typha* sp.), rabbitfoot grass (*Polypogon monspeliensis*), and monkeyflower (*Mimulus guttatus*). No riparian vegetation occurs along the impoundments. Some horticultural plantings have been installed adjacent to the impoundments. There are no riparian corridors or wetlands associated with the impoundments. The impoundments are potential Clean Water Act jurisdictional waters and waters of the state (SWCA 2021). No vegetation associations were recognized in this community. The impoundments are a sensitive natural community. Predatory American bullfrogs (*Lithobates catesbeianus*) and warm water game fish including bass (*Micropterus* sp.) and sunfish (*Centrarchidae*) were observed in the impoundments during the biological survey.

6. Channels

Three channels (CH) occupy 0.10 acre occur in the BSA (Figure 4; Appendix D, Photos 5, 6, 7, 9, and 10). Perennial and intermittent channels (CH-1a, CH1-b, CH-1c, CH-1e, and CH-1f) are sensitive natural communities regulated as waters of the U.S. and waters of the state (SWCA 2021). The ephemeral channels within the BSA (CH-1d, CH-2, and CH-3) are

not regulated under the current definition of waters of the U.S. (SWCA 2021). The ephemeral channels may be regulated by the state.

Channel 1

CH-1 is a modified natural drainage that passes through the four impoundments described above (Figure 4; Appendix D, Photos 7, 9, and 10). The reaches of CH-1 separated by impoundments were mapped separately as CH-1a-f. The concurrently prepared aquatic resource delineation classified channel hydrology as follows (SWCA 2021):

- CH 1a – Perennial (flowing during fieldwork)
- CH 1b – Perennial (flowing during fieldwork)
- CH 1c – Intermittent (flowing during fieldwork)
- CH 1d – Ephemeral
- CH 1e – Intermittent
- CH 1f – Intermittent
- CH 2 – Ephemeral
- CH 3 – Ephemeral

CH-1a occurs on natural rock substrate. CH-1b occurs on a combination of natural and imported rock substrate. CH-1c, CH-1e, and portions of CH-1f are lined with imported rock and appear to be realigned portions of the natural channel. CH-f has scoured down to bedrock as it returns the natural channel downstream. Vegetation on the bed of CH-1a and CH-1b consists mainly of rabbitfoot grass, monkeyflower, bent grass (*Agrostis* sp.), and sedge (*Carex* sp.). Vegetation on the bed of CH-1c consists of rabbitfoot grass. Vegetation on the beds of CH-1d consists of upland nonnative grasses. Vegetation on the bed of CH-1e and CH-1f is generally absent. CH-1f flows from the southwestern end of IM-4 to the west, out of the BSA and through a culvert under Salmon Falls Road. CH-1f ultimately flows west into Folsom Lake. No wetlands, sensitive vegetation types, or riparian vegetation occur in or along CH-1. Some trees typical of the surrounding uplands occur near the channels. Some horticultural plantings have been installed along the channels.

Channel 2

CH-2 is an ephemeral channel in a gentle swale located roughly 50 feet southeast of IM-3 (Appendix D, Photo 6). The 26-foot segment of CH-2 mapped in the BSA receives sheet flow from the surrounding uplands and then redeposits the water as sheet flow once more at its northwest end. The sheet flow from CH-2 flows over uplands into IM-3, outside any defined channel. CH-2 is heavily shaded by oaks and generally contained sparse annual grassland vegetation similar to the surrounding uplands. The channel bed is earthen. No wetlands, sensitive vegetation types, or riparian vegetation occur in or along CH-2.

Channel 3

CH-3 is an ephemeral roadside ditch along the east side of Salmon Falls Road in the southern portion of the BSA (Appendix D, Photo 5). CH-3 flows into a culvert that passes beneath Salmon Falls Road. Water in CH-3 ultimately flows to Folsom Lake. Vegetation was generally absent in CH-3. The channel bed is earthen. No wetlands, sensitive vegetation types, or riparian vegetation occur in or along CH-3.

7. Disturbed

A total of 0.28 acres of disturbed land occurs within animal enclosures in the northwest corner of the BSA (Figure 4). The disturbed area generally lacks vegetation. Nonnative weeds and nonnative annual grasses may occur briefly in the spring, or when grazing animals are not present. No native vegetation associations were recognized within this community. Nonnative annual grassland is not a sensitive natural community.

8. Developed

A total of 2.88 acres of developed land occurs in the northern portion of the BSA (Figure 4). Buildings and associated driveways, pads, awnings, and landscaping occur in the area classified as developed. A portion of Salmon Falls Road at the western edge of the BSA was also classified as developed land. Developed land lacks natural vegetation. Developed land is not a sensitive natural community.

D. The Existing Level of Disturbance

Several buildings occur in the northern portion of the BSA, each with a paved driveway connecting to Salmon Valley Lane. Landscaping and lawns occur adjacent to some of the buildings. The main drainage that flows east to west through the property has been heavily modified with impoundments and engineered spillways lined with imported rock. Ornamental trees have been planted around the impoundments. According to the owner, the southern 5-acre portion of the parcel was previously used for cattle grazing and alfalfa crops. The majority of the open grassland in the BSA has been mowed.

V. BIOLOGICAL RESOURCES IN THE STUDY AREA

A. Determination of Special-Status Species in the Study Area

USFWS file data, CNDDB/CNPS records, and field surveys were used to determine the special-status species that could occur in the BSA (Appendix A). A field survey was conducted to determine whether habitat for special-status species identified in the file data is present in the BSA. Special-status species for which suitable habitat is present in the BSA are listed in Table 3.

Table 3. Special-Status Species and Natural Communities with Potential to Occur.

Special-Status Species	Common Name	Federal Status [a]	State Status [a] & other codes [b]	Source [c]	Habitat Present? / Species Observed?
Amphibians					
Rana boylii	Foothill yellow-legged frog	--	E	2	Yes/No
Rana draytonii	California red-legged frog	T, CH	--	1, 2	Yes/No
Spea hammondi	Western spadefoot	--	SSC	2	Yes/No
Reptiles					
Emys marmorata	Western pond turtle	--	SSC	2	Yes/**Yes**
Birds					
Agelaius tricolor	Tricolored blackbird	--	T	2	Yes/No
Ammodramus savannarum	Grasshopper sparrow	--	SSC	2	Yes/No
Aquila chrysaetos	Golden eagle	--	FP	2	Yes/No
Athene cunicularia	Burrowing owl	--	SSC	2	Yes/No
Buteo swainsoni	Swainson's hawk	--	T	2	Yes/No
Elanus leucurus	White-tailed kite	--	FP	2	Yes/No
Haliaeetus leucocephalus	Bald eagle	D	E	2	Yes/No
Nesting Birds (MBTA or CA Fish & Game Code regulated)		--	--	3	Yes/**Yes**
Mammals					
Antrozous pallidus	Pallid bat	--	SSC	2	Yes/No
Taxidea taxus	American badger	--	SSC	2	Yes/No
Plants			**/ CNPS List [b]**		
Balsamorhiza macrolepis	Big-scale balsamroot	--	--/1B.2	2	Yes/No
Gratiola heterosepala	Boggs Lake hedge-hyssop	--	E/1B.2	2	Yes/No
Sagittaria sanfordii	Sanford's arrowhead	--	--/1B.2	2	Yes/No

[a] **Listing Status:** Federal status determined from USFWS letter. State status determined from CDFW (2021). Codes used in table are: **E** = Endangered; **T** = Threatened; **P** = Proposed; **C** = Candidate; **R** = California Rare; ***** = Possibly extinct.

[b] **Other Codes:** Other codes determined from USFWS letter; CDFW (2021). Codes used in table are as follows:

SSC = CDFW Species of Special Concern; **FP** = CDFW Fully Protected; **Prot** = CDFW Protected; **CH =** Critical habitat designated.

CNPS List (plants only): **1A** = Presumed Extinct in CA; **1B** = Rare or Endangered (R/E) in CA and elsewhere; **2** = R/E in CA and more common elsewhere; **3** = Need more information; **4** = Plants of limited distribution

CNPS List Decimal Extensions: .1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); **.2** = Fairly endangered in CA (20-80% of occurrences threatened); **.3 =** Not very endangered in CA (< 20% of occurrences threatened or no current threats known).

[c] **Source:** **1** = USFWS letter. **2** = CNDDB. **3 =** Observed or included by SWCA.

B. Special-Status Species not in the Project Study Area

Special-status species for which suitable habitat is not present, or whose distributional limits preclude the possibility of their occurrence in the BSA, are not discussed in Section V of this report. An evaluation of these species is in Appendix B.

C. Evaluation of Special-Status Wildlife Species

1. Amphibians

Foothill yellow-legged frog (*Rana boylii*)

HABITAT AND BIOLOGY: The clade of foothill yellow-legged frog (FYLF) that occurs in El Dorado County is listed as state endangered (CDFW 2021b). FYLF is primarily stream dwelling and requires shallow, flowing water in streams and rivers with at least some cobble-sized substrate (Thompson et al. 2016). FYLF are found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley foothill riparian, Ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types. Adults often bask on exposed rock surfaces near streams and take refuge under submerged rocks or sediments when disturbed. During periods of inactivity, individuals seek cover under rocks in the streams or on shore within a few meters of water (CWHR 2021). FYLF are highly aquatic and spend most or all of their life in or near streams (Ashton et al. 1998; Jennings and Hayes 1994). FYLF require permanent streams in which to reside and are rarely found far from permanent water (CWHR 2021).

Adult FYLF are primarily diurnal with high site fidelity and small home ranges. FYLF may be active all year in the warm localities, but may become inactive or hibernate in colder areas. Eggs are laid in low velocity stream margins, generally attached to cobble and pebble, but may also be attached to aquatic vegetation, woody debris, and gravel (Ashton et al.1998). Egg deposition generally occurs from late March to early June, after streams have slowed from winter runoff (Jennings and Hayes 1994). Tadpoles require water for at least 3 or 4 months while completing their aquatic development (CWHR 2021). FYLF are infrequent or absent in habitats where introduced predators (i.e., various fishes, bullfrogs [*Lithobates catesbeianus*]) are present (Jennings and Hayes 1994). FYLF rarely occur far from the water's edge.

RANGE: Historically, foothill yellow-legged frog was known from most Pacific drainages from the Santiam River system (Marion County, OR) to the San Gabriel River system (Los Angeles County, CA). This species has not been observed south of the Transverse Ranges since 1970. Currently, FYLF are known primarily from the north and south Coast Ranges, the Klamath Mountains, and the west slope of the Sierra Nevada, from sea level to 6,370 feet (Jennings and Hayes 1994).

KNOWN RECORDS: There are five CNDDB records of this species within the nine-quad area surrounding the BSA. The closest (Occurrence #1913), occurs approximately 2 miles southwest of the BSA. The record is based on a 1972 collection. The population associated with the Occurrence #1913 is presumed extirpated. The only record within the nine-quad

area surrounding the BSA that is presumed extant occurs approximately 10.3 miles northeast of the BSA. The extant record is based on 100 individuals of all ages observed in Indian Creek in October 2003. In July 2004, 14 tadpoles and 1 adult were observed at the same location.

HABITAT PRESENT IN THE BSA: CH-1 is a rocky, intermittent to perennial stream that provides suitable habitat for FYLF. IM-1 and IM-2 provide perennial sources of water.

DISCUSSION: FYLF was not observed in the BSA during the biological survey in 2021. FYLF could occur in CH-1 and in IM-1 through IM-4. Breeding is unlikely due to the lack of cobble-sized rock substrate in the channel, low flows within the channel, presumed high water temperatures, and the presence of introduced predators including American bullfrog and predatory bass and sunfish in the impoundments. There are no known populations of FYLF within dispersal distance of the BSA. It is unlikely that FYLF occurs in the BSA.

California red-legged frog (*Rana draytonii*)

HABITAT AND BIOLOGY: CRLF was listed as a federal-threatened species on 23 May 1996 (FR 61:25813-25833). Critical habitat was designated for CRLF in April 2006 (FR 71:19244-19346) and revised in March 2010 (FR 51:12816-12959). CRLF inhabits ponds and quiet pools of streams and marshes (CWHR 2021). Adults typically require dense, shrubby, or emergent riparian vegetation closely associated with deep (2+ feet), still, or slowly moving water. Deep-water pools with dense stands of overhanging willows intermixed with cattails support the highest densities of CRLF. Well-vegetated terrestrial areas within a riparian corridor may provide important sheltering habitat during the winter (USFWS 1996a). Frogs spend considerable time resting and feeding in riparian vegetation when it is present (USFWS 2002a).

CRLF requires water to breed. Breeding sites may contain water only seasonally, but sufficient water must persist into the summer for tadpoles to reach a size sufficient for metamorphosis. CRLF typically breeds from mid-December through early April, earlier than other ranids within its range (Barry and Fellers 2013). The timing of breeding is likely influenced by local precipitation and ambient temperature. CRLF typically breed after significant rainfall and after the cold periods of winter have passed (Cook 1997).

RANGE: CRLF are endemic to California and Baja California, Mexico. Its known elevation range extends from near sea level to approximately 5,200 feet. Nearly all sightings have occurred below 3,500 feet (USFWS 2002a). CRLF historically occurred through pacific slope drainages from the vicinity of Redding (Shasta County) inland, and to Point Reyes (Marin County) southward to the Santo Domingo River drainage in Baja California, Mexico (Jennings and Hayes 1994). CRLF is now known only from isolated localities in the Sierra Nevada, northern coast, and northern transverse ranges (USFWS 2002a).

KNOWN RECORDS: There is one CNDDB record of this species within the nine-quad area surrounding the BSA. The record occurs approximately 1.2 miles west of the BSA. One

juvenile was observed in 2005 in a small watercourse that drains into Folsom Lake. The watercourse was vegetated with sedges and Himalayan blackberry (*Rubus armeniacus*).

HABITAT PRESENT IN THE BSA: CH-1 is a rocky, intermittent to perennial stream that provides suitable foraging and dispersal habitat for CRLF. The impoundments provide marginal breeding habitat. IM-1 and IM-2 provide perennial sources of water.

DISCUSSION: CRLF was not observed in the BSA during the biological survey. Potentially suitable aquatic habitat occurs in CH-1 and in IM-1 through IM-4. Breeding is unlikely due to the presence of introduced predators including American bullfrog and predatory bass and sunfish in the impoundments. There are no known populations of CRLF within dispersal distance of the BSA. It is unlikely that CRLF occurs in the BSA.

Western spadefoot (*Spea hammondi*)

HABITAT AND BIOLOGY: Western spadefoot is a CDFW species of special concern (CDFW 2021b). Grasslands with shallow temporary pools are optimal habitats for western spadefoots. Western spadefoots occur primarily in grasslands, but occasionally populations also occur in valley-foothill hardwood woodlands. Some populations persist for a few years in orchard or vineyard habitats (CWHR 2021). They are primarily found in the lowlands frequenting washes, floodplains of rivers, alluvial fans, playas, and alkali flats. Western spadefoots prefer areas of open vegetation and short grasses with sandy or gravelly soil (Stebbins 2003). They are rarely found on the surface, spending most of the year in underground burrows up to 36 inches deep, which they construct themselves. Some individuals use mammal burrows. Most surface movements by adults are associated with rains or high humidity at night. Few movements occur during most of the year, and movements to and from breeding ponds are rarely extensive (CWHR 2021).

Rainfall is important in the formation and maintenance of breeding ponds. Western spadefoots breed and lay eggs almost exclusively in shallow, temporary pools formed by heavy winter rains (CWHR 2021). They also breed in quiet streams (Stebbins 2003). Egg masses are attached to plant material or the upper surfaces of small, submerged rocks. Breeding activities normally conclude by the end of March. Tadpoles transform during late spring. Recently metamorphosed juveniles seek refuge in the immediate vicinity of breeding ponds for up to several days after transformation. Dispersal of post-metamorphic juveniles from breeding ponds often occurs without rainfall. They hide in drying mud cracks, and under boards and other surface objects (CWHR 2021).

RANGE: Western spadefoot ranges throughout the Central Valley and adjacent foothills. In the Coast Ranges the species is found from Point Conception, Santa Barbara County, south to the Mexican border. Occurrences are known from near sea level to 4,460 feet in the southern Sierra foothills (CWHR 2021).

KNOWN RECORDS: There are three CNDDB records of this species within the nine-quad area surrounding the BSA. The closest (Occurrence #498) occurs approximately 4 miles

southwest of the BSA. One western individual was heard calling at night during audio surveys at Mormon Island Wetland Preserve in February 2008.

HABITAT PRESENT IN THE BSA: CH-1 is a rocky, intermittent to perennial stream that provides suitable foraging and dispersal habitat for Western spadefoot. The impoundments provide marginal breeding habitat.

DISCUSSION: Western spadefoot was not observed in the BSA during the biological survey. The BSA does not contain shallow, temporary pools formed by heavy winter rains, and thus it is unlikely that western spadefoot would breed in the BSA. Breeding in the impoundments (which are estimated to be 3-15 feet deep) is unlikely due to the presence of introduced predators including American bullfrog and predatory bass and sunfish. There are no known populations of western spadefoot within dispersal distance of the BSA. It is unlikely that western spadefoot occurs in the BSA.

2. Reptiles

Western pond turtle (*Emys marmorata*)

HABITAT AND BIOLOGY: Western pond turtle (WPT) is a CDFW species of special concern (CDFW 2021b). WPT prefers aquatic habitats with abundant vegetative cover and exposed basking sites such as logs. WPT is associated with permanent or nearly permanent water in a wide variety of habitat types, normally in ponds, lakes, streams, irrigation ditches, or permanent pools along intermittent streams (CWHR 2021). They are omnivorous generalists and opportunistic predators that prey upon small insects, aquatic invertebrates, fish, frogs, snakes, and small mammals. They also eat aquatic plant material and carrion (Stebbins 2003).

Two distinct habitats may be used for oviposition. Along large, slow-moving streams, eggs are deposited in nests constructed in sandy banks. Along foothill streams, females may climb hillsides, sometimes traveling over 330 feet to find a suitable nest site. Soil must usually be at least 4 inches deep for nesting. Generally, 3 to 11 eggs are laid from March to August depending on local conditions and are incubated for approximately 73 to 80 days (CWHR 2021).

RANGE: WPT occur throughout northern CA west of the Sierra Nevada (Stebbins 2003) from sea level to 6,000 feet (CWHR 2021).

KNOWN RECORDS: There are thirteen CNDDB records of this species within the nine-quad area surrounding the BSA. The closest (Occurrence #1359) occurs approximately 4.5 miles southwest of the BSA. Thirteen individuals were caught and released at Mormon Island Wetland Preserve over a period of 29 trap days in 2009. Most recently, one adult female and one juvenile were captured in April 2016.

HABITAT PRESENT IN THE BSA: The impoundments and channels provide suitable habitat for western pond turtle.

DISCUSSION: One turtle was observed in IM-3 during the biological survey. The turtle could not be identified before it quickly retreated and concealed itself. The turtle may have been a WPT. WPT could occur in any of the impoundments or channels within the BSA. The impoundments contain some emergent vegetation that would provide cover, as well as open, rocky areas suitable for basking. Potential prey such as small fish and frogs were observed in the channels during the survey. WPT could nest on the banks bordering CH-1 and the impoundments.

3. Birds

Tricolored blackbird (*Agelaius tricolor*)

HABITAT AND BIOLOGY: Tricolored blackbird is a state threatened species (CDFW 2021b). Tricolored blackbirds form the largest breeding colonies of any North American inland bird species (Shuford and Gardali 2008). Colonies vary in size from a minimum of about 50 nests to over 20,000 in an area of 10 acres or less (CWHR 2021).

Basic breeding site requirements are open, accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few kilometers of the nesting colony. Historically, most colonies nested in freshwater marshes dominated by cattails or tules, while some colonies nested in nettles, thistles, and willows. However, the use of freshwater marshes as breeding colony sites has decreased. An increasing percentage of colonies since the 1970s have been reported in Himalayan blackberry and thistles, and some of the largest recent colonies were in silage and grain fields near dairies in the San Joaquin Valley. Other less commonly used substrates include safflower, tamarisk, elderberry, western poison oak, giant reed, riparian scrublands, and riparian forests.

Ideal foraging conditions for this species are created when shallow flood irrigation, mowing, or grazing keeps the vegetation less than 6 inches tall. Preferred foraging habitats include crops such as rice, alfalfa, irrigated pastures, and ripening or cut grain fields, as well as annual grasslands, cattle feedlots, and dairies. Tricolored blackbirds also forage in native habitats, including wet and dry vernal pools and other seasonal wetlands, riparian scrub habitats, and open marsh borders. Proximity to suitable foraging habitat appears important for the establishment of colony sites (Shuford and Gardali 2008).

RANGE: In California, tricolored blackbird breeding occurs in the Sacramento and San Joaquin valleys, the foothills of the Sierra Nevada south to Kern County, the coastal slope from Sonoma County south to the Mexican border, and sporadically, the Modoc Plateau. Tricolored blackbirds are a permanent resident in California, but make extensive migrations and movements within their range, both in the breeding season and in winter. Individuals usually move north after first nesting efforts (March-April) in the San Joaquin Valley and Sacramento County to new breeding locations in the Sacramento Valley, northeastern California, and rarely Oregon, Nevada, and Washington (Shuford and Gardali 2008).

KNOWN RECORDS: There are 23 CNDDB record of tricolored blackbird within the 9-quad area surrounding the BSA. The closest record (Occurrence #102) is approximately 3.8 miles northeast of the BSA. A nesting colony of about 400 pairs were observed in May of 1971. No birds were observed at the site in 1992, 2000, or 2014.

HABITAT PRESENT IN THE BSA: The emergent vegetation in the impoundments provides potentially suitable nesting habitat for a tricolored blackbird colony. Grasslands in the BSA provide suitable foraging habitat.

DISCUSSION: Tricolored blackbird was not observed in the BSA during the survey and there was no evidence of tricolored blackbird nesting in 2021. Red-winged blackbirds (*Agelaius phoeniceus*) successfully nested in the cattails in IM-3 in 2021. There may be enough cattails to support a tricolored blackbird nesting colony in the future. No other potential nesting habitat was observed in the BSA.

Grasshopper sparrow (*Ammodramus savannarum*)

HABITAT AND BIOLOGY: Grasshopper sparrow is a state species of special concern (2021b). Grasshopper sparrow occurs in California primarily as a summer resident from March to September (Shuford and Gardali 2008). Most migrate south in August or September. Grasshopper sparrows that winter in California are secretive and chiefly occur along the southern coast (CWHR 2021). The grasshopper sparrow's ecology varies substantially from region to region within its wide range, and has received very little study in California. In general, grasshopper sparrows in California prefer short to middle height, moderately open grasslands with scattered shrubs. These sparrows are generally absent from areas with extensive shrub cover. Patchy bare ground has also been noted as an important habitat component. Grasshopper sparrows are more likely to be found in large tracts of habitat than in small ones (Shuford and Gardali 2008).

Grasshopper sparrows breed from early April to mid-July, with a peak in May and June. A thick cover of grasses and forbs is essential for concealment. Pairs generally nest solitarily and build a nest of grasses and forbs in a slight depression in the ground, hidden at the base of an overhanging clump of grasses or forbs. They search for food on the ground and in low foliage within relatively dense grasslands (CWHR 2021).

RANGE: In California, grasshopper sparrow is an uncommon and local, summer resident and breeder in foothills and lowlands west of the cascade-Sierra Nevada crest from Mendocino and Trinity counties south to San Diego County (CWHR 2021). Agriculture and urbanization have greatly reduced numbers of grasshopper sparrows in the Central Valley, but anecdotal evidence indicates they still breed very locally, primarily at the edges of and in low foothills, but also very sparingly on the valley floor (Shuford and Gardali 2008).

KNOWN RECORDS: There is one CNDDB record of grasshopper sparrow within the nine-quad area surrounding the BSA. The record (Occurrence #15) is approximately 14 miles south of the BSA. Two adults were observed in foothill grassland and swale habitat in the Prairie City State Vehicle Recreation Area in May 2007.

HABITAT PRESENT IN THE BSA: The grasslands in the BSA provide suitable foraging habitat.

DISCUSSION: Grasshopper sparrow was not observed in the BSA during the biological survey. Grasslands in the BSA are sparsely vegetated and mowed regularly. The grasslands do not provide suitable nesting habitat. Grasshopper sparrow could forage in the BSA.

Golden eagle (*Aquila chrysaetos*)

HABITAT AND BIOLOGY: Golden eagle is a species considered fully-protected by CDFW (2021b). Golden eagles are generally found in rolling foothills, mountain areas, sage-juniper flats, desert; open country of prairies, arctic and alpine tundra, open wooded country, and barren areas, especially in hilly or mountainous regions (NatureServe 2021). Golden eagles need open terrain for hunting such as grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats. Golden eagles use secluded cliffs with overhanging ledges and large trees for cover. Golden eagles nest on cliffs of all heights and in large trees in rugged, open areas with canyons and escarpments. Alternative nest sites are maintained and old nests are reused. Golden eagles breed from late January through August with a peak from March through July (CWHR 2021). Nesting and nonbreeding/wintering sites are of concern to CDFW (2021).

RANGE: Golden eagles are an uncommon permanent resident and migrant throughout California, except the center of the Central Valley. This species is perhaps more common in southern California than in the north. Golden eagles range from sea level to 11,500 feet (CWHR 2021).

KNOWN RECORDS: There are two CNDDB record of golden eagle within the nine-quad area surrounding the BSA. The closest record (Occurrence #322) is approximately 5 miles south of the BSA. Two adults were observed near a nest tree in El Dorado Hills in February 2015.

HABITAT PRESENT IN THE BSA: Large foothill pine trees provide marginal nesting habitat for golden eagle. Grasslands provide suitable foraging habitat.

DISCUSSION: Golden eagle was not observed in the BSA during the biological survey. No potential raptor nests were observed in the BSA. Large trees in the BSA could be used for nesting, however this is considered unlikely due to adjacent development and the lack of canyons and escarpments in the area. Grasslands in the BSA provide potential foraging habitat.

Burrowing owl (*Athene cunicularia*)

HABITAT AND BIOLOGY: Burrowing owl is a CDFW species of special concern (2021b). Nesting site are of concern to CDFW (2021). Burrowing owls primarily inhabit open, dry grassland and desert habitats, such as grasses, forbs, and open shrub stages of pinyon-juniper and ponderosa pine habitats (CWHR 2021, Shuford and Gardali 2008). Main habitat components include burrows for roosting and nesting, and relatively short vegetation with

sparse shrubs and taller vegetation (Shuford and Gardali 2008). Burrowing owls most commonly use ground squirrel burrows, but they may also use badger, coyote, and fox holes or dens; or human-made structures such as culverts, piles of concrete rubble, pipes and nest boxes (CWHR 2021; Shuford and Gardali 2008). An active nest chamber is often lined with excrement, pellets, debris, grass and feathers (CWHR 2021). This species also thrives in highly altered human landscapes. In agricultural areas, owls nest along roadsides, under water conveyance structures, and near and under runways and similar structures. In urban areas, burrowing owls persist in low numbers in highly developed parcels, busy urban parks, and adjacent to roads with heavy traffic (Shuford and Gardali 2008).

Burrowing owls are a semi-colonial species that breed in California from March through August, though breeding can begin as early as February and extend into December (Shuford and Gardali 2008; CWHR 2021). A large proportion of adults show strong nest site fidelity. Burrowing owls typically feed on a broad range of insects, but also on small rodents, birds, amphibians, reptiles, and carrion. Foraging usually occurs close to their burrow (Shuford and Gardali 2008).

RANGE: Burrowing owls are a year-round resident in most of California, particularly in the Central Valley, San Francisco Bay region, Carrizo Plain, and Imperial Valley (Shuford and Gardali 2008). This species is generally absent from the coastal counties north of Marin and mountainous areas above 5,300 feet. Burrowing owl has declined along the central and southern coast, but large populations remain in agricultural areas in the Central and Imperial valleys (Shuford and Gardali 2008; CWHR 2021). Burrowing owl winter range extends east to the western portion of El Dorado County. The BSA is located within winter range of burrowing owl (CWHR 2021).

KNOWN RECORDS: There are no records of burrowing owl in El Dorado County. There are eight CNDDB records of burrowing owl within the nine-quad area surrounding the BSA. The closest record (Occurrence #1166) is approximately 7 miles south of the BSA in Sacramento County. Two owls were observed at a burrow site in annual grassland foothills in December 2006. The owls were nesting in a rock outcropping instead of a burrow.

HABITAT PRESENT IN THE BSA: The grassland provides suitable wintering habitat for burrowing owl.

DISCUSSION: No burrowing owl or sign of burrowing owl was observed during the biological survey. No small mammals or small mammal burrows were observed during the survey. The BSA is outside the summer breeding range of burrowing owl. The BSA is within the winter range of burrowing owl. Non-breeding owls could forage in the BSA during the winter. Burrows occupied by burrowing owl are not expected to occur.

Swainson's hawk (*Buteo swainsoni*)

HABITAT AND BIOLOGY: Swainson's hawk is a state threatened species (CDFW 2021b). Swainson's hawks nest in open riparian habitat, in scattered trees, or in small groves in sparsely vegetated flatlands. Nesting areas are usually located near water, but are

occasionally found in arid regions. Typical habitat includes open desert, grassland, or cropland containing scattered, large trees or small groves (CWHR 2021). Swainson's hawk breeds from late March to late October (CWHR 2021). They forage in adjacent grasslands, suitable grain or alfalfa fields, or in livestock pastures, feeding on rodents, small mammals, small birds, reptiles, large arthropods, amphibians, and, rarely, fish (Bloom 1980; CWHR 2021).

RANGE: Swainson's hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Swainson's hawks breed and forage in the California's Central Valley in spring and summer. Migrating individuals move south through the southern and central interior of California in September and October, some migrating as far as South America (CWHR 2021).

KNOWN RECORDS: There are eight CNDDB record of Swainson's hawk within the nine-quad area surrounding the BSA. The closest record (Occurrence #2662) is approximately 6.3 miles southwest of the BSA. An active nest was observed near Folsom in 1962 and again in 1979.

HABITAT PRESENT IN THE BSA: Large trees provide potential nesting habitat for Swainson's hawk. The grassland provides suitable foraging habitat.

DISCUSSION: Swainson's hawk was not observed in the BSA during the biological survey. No potential raptor nests were observed during the survey. The BSA is 3 miles outside of Swainson's hawk range and predicted habitat modeling (CDFW 2021a). Since repeated breeding has occurred just 6.3 miles to the southwest in the past (CNDDB Occurrence #2662), it is possible that Swainson's hawks could establish a nest in the large trees within the BSA. Potential nest trees also occur in the land surrounding the BSA. Grasslands in the BSA provide suitable foraging habitat for Swainson's hawk.

White-tailed kite (*Elanus leucurus*)

HABITAT AND BIOLOGY: White-tailed kite is a CDFW fully protected species (CDFW 2021b). Nesting sites are of concern to CDFW (2021a). White-tailed kite inhabit herbaceous and open stages of most habitats, mostly in cismontane California. They forage in undisturbed, open grasslands, meadows, farmlands and emergent wetlands. Trees with dense canopies are used for cover. Areas with substantial groves of dense, broad-leafed deciduous trees are generally used for nesting and roosting. Nests are typically located from 20 to 100 feet above the ground near the top of dense oak, willow, or other tree, and are often located near an open foraging area with a dense population of voles. They are rarely found away from agricultural areas. White-tailed kite prey mostly on voles and other small, diurnal mammals, occasionally on birds, insects, reptiles, and amphibians. White-tailed kites breed from February to October, with peak activity from May to August (CWHR 2021).

RANGE: White-tailed kite is a year-round resident of coastal and valley lowlands in cismontane California. They are absent from higher elevations in the Sierra Nevada, the Modoc Plateau, and from most desert regions. The eastern extent of the white-tailed kite range includes the western portion of El Dorado County (CWHR 2021).

KNOWN RECORDS: There are 10 CNDDB record of white-tailed kite within the nine-quad area surrounding the BSA. The closest record (Occurrence #149) approximately 4.7 miles southwest of the BSA. Two adults were observed at a nest just south of Sophia Parkway in El Dorado Hills in August 2008.

HABITAT PRESENT IN THE BSA: Large trees provide potential nesting habitat for white-tailed kite. The grassland provides suitable foraging habitat.

DISCUSSION: White-tailed kite was not observed in the BSA during the biological survey. The area surrounding the BSA is either undeveloped or residential. White-tailed kite is more likely to nest closer to agricultural fields that provide ample foraging habitat. White tailed kite could nest in the large trees and forage in the grassland in the BSA.

Bald eagle (*Haliaeetus leucocephalus*)

HABITAT AND BIOLOGY: Bald eagle is a state endangered species (CDFW 2021b). Bald eagles occur along coasts, rivers, and large, deep lakes and reservoirs inland. They require large bodies of water, or free-flowing rivers with abundant fish, and adjacent snags or other perches. Bald eagles perch in high, large, stoutly limbed trees, snags, broken topped trees, or high rock ledges. They roost communally in winter in dense, sheltered, remote conifer stands. They nest in large, old growth, or dominant live trees with open branch work, especially Ponderosa pines. Bald eagles nest most frequently in stands with less than 40% canopy. Bald eagles breed from February through July, with peak activity from March to June. Bald eagles usually do not begin nesting if human disturbance is evident (CWHR 2021).

RANGE: Bald eagles are a permanent resident, and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity counties. About half of the wintering population is in the Klamath basin. Bald eagles are more common at lower elevations and are not found in the high Sierra Nevada (CWHR 2021).

KNOWN RECORDS: There are four CNDDB records of bald eagle within the nine-quad area surrounding the BSA. The closest record (Occurrence #359) is approximately 0.8 mile northwest of the BSA. At least one chick was observed in a nest in a Ponderosa pine along Folsom Lake in El Dorado Hills. Two adults were observed in the area.

HABITAT PRESENT IN THE BSA: Large trees provide potential nesting habitat for bald eagle.

DISCUSSION: Bald eagle was not observed in the BSA during the biological survey. Bald eagle could nest in the large trees within the BSA.

Nesting Birds Listed Under the MBTA or Regulated by CA Fish and Game Code

California Fish and Game Code (FGC) § 3503 protects most birds and their nests. FGC § 3503.5 further protects all birds in the orders Falconiformes and Strigiformes (collectively known as birds of prey). Birds of prey include raptors, falcons, and owls. The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) also protects most birds and their nests, including most non-migratory birds in California. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any bird listed in 50 CFR Part 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations. Any disturbance that causes direct injury, death, nest abandonment, or forced fledging of migratory birds, is restricted under the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a 'take' of the species under federal law.

HABITAT PRESENT IN THE BSA: The BSA provides potential nesting habitat for birds listed under the MBTA and/or regulated by FGC. Depending on the species, birds may nest on trees, shrubs, in or on the ground, and on artificial structures such as buildings, poles, and signs.

DISCUSSION: Several birds listed under the MBTA or regulated by CA Fish and Game Code were observed during the survey (Appendix C). Suspected active nests of house finch (*Carpodacus mexicanus*) were observed in the ornamental juniper tree at the northwest corner of the BSA. House finch is not a protected MBTA bird or bird regulated by the FGC. Nests of protected birds could become established during future nesting seasons in any part of the BSA.

4. Mammals

Pallid bat (*Antrozous pallidus*)

HABITAT AND BIOLOGY: Pallid bat is a CDFW species of special concern (CDFW 2021b). Pallid bat occupies a wide variety of habitats including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. Pallid bat feeds on a wide variety of insects and arachnids, foraging over open ground, usually 1.6 to 8 feet above level ground. This species day roosts in caves, crevices, mines, and occasionally buildings and in hollow trees (CWHR 2021). Pallid bat has also been observed roosting in wide, tall, mature stands of live trees in coniferous forests of California (Baker et al. 2008); and tree cavities in oaks, ponderosa pine, coast redwood and giant sequoia (Bolster 1998). Roost must protect bats from high temperatures. Night roosts may be in more open sites, such as porches and open buildings. Few hibernation sites are known, but rock crevices are probably used. Pallid bats prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Maternity colonies form in early April, and may have a dozen to 100 individuals. Males may roost separately or in the nursery colony. This species is known to roost with other bats. Pallid bats are very sensitive to disturbance of roosting sites (CWHR 2021).

RANGE: Pallid bat is locally common in low elevations in California. This species occurs throughout California except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County. Pallid bat is a yearlong resident in most of the range (CWHR 2021).

KNOWN RECORDS: There are two CNDDB records of pallid bat within the nine-quad area surrounding the BSA. The record (Occurrence #233) is approximately 7.5 miles southwest of the BSA. One female was collected 2 miles northwest of Folsom in June 1941.

HABITAT PRESENT IN THE BSA: Open cavities in the oak trees provide suitable roosting habitat for pallid bat. The woodlands and grasslands in the BSA provide suitable foraging habitat.

DISCUSSION: Pallid bat was not observed in the BSA during the biological survey. The BSA does not provide rocky outcrops, cliffs or crevices preferred by pallid bat. Pallid bat could roost in cavities of the oak trees within the BSA.

American badger (*Taxidea taxus*)

HABITAT AND BIOLOGY: The American badger is a CDFW species of special concern (CDFW 2021b) that occupies grasslands and open stages of shrub and forest habitats with friable soils. Badgers can be active at any hour but are primarily nocturnal. When inactive, badgers dig and occupy underground burrows, sometimes reusing existing burrows but often digging new burrows nightly (Messick and Hornocker 1981). Burrows are dug in areas with dry, often sandy, soils with sparse overstory cover. Badgers feed primarily on fossorial rodents such as ground squirrels and pocket gophers, which they hunt by digging. They also take voles, mice, birds, eggs, reptiles, and insects (CWHR 2021).

Mating occurs in summer and early fall, with delayed implantation. Some females are able to breed in their first year, but males do not sexually mature until their second year. Two to five young are born in natal dens in March and April. Females and kits occupy natal dens until May. Young badgers disperse from the natal den between July and August of their first or second year, sometimes staying within the range of their mother, other times dispersing up to 70 miles from the natal den (Messick and Hornocker 1981). Home ranges sizes of between 0.46 up to 6.83 square miles were documented in Monterey County, California (Quinn 2008). Family members may share the same territory as females, but males are generally solitary except during the breeding season. This species is tolerant of human activities, but is threatened by agricultural and urban development, road-kill, indiscriminate predator trapping, and poisoning (Williams 1986, Kinley and Newhouse 2009).

RANGE: American badger can be found throughout California, except for the northern coast area (CWHR 2021).

KNOWN RECORDS: There are two CNDDB records of American badger within the nine-quad area surrounding the BSA. The closest record (Occurrence #489) is approximately 5.5

miles southwest of the BSA. One dead adult badger was observed in the center median of East Natoma Street in May 2015.

HABITAT PRESENT IN THE BSA: The woodlands and grasslands in the BSA provide suitable foraging and denning habitat.

DISCUSSION: American badger was not observed in the BSA during the biological survey. No medium-sized mammal burrows were observed during the survey. American badger could establish burrows in the woodland or grassland habitat in the BSA.

D. Evaluation of Special-Status Plants

Three special-status plants identified as having potential to occur in the BSA are discussed below. No special-status plants were observed in the BSA during the protocol botanical survey in May 2021, during the evident and identifiable period for all special-status plant species with potential to occur. There are no known records of special-status plants in the BSA.

Big-scale balsamroot (*Balsamorhiza macrolepis*)

HABITAT AND BIOLOGY: Big-scale balsamroot is a perennial herbaceous species found in valley and foothill grasslands, chaparral, cismontane woodlands, and sometimes on serpentinite soils from 295 to 5,102 feet. It blooms March through July (CNPS 2021; Jepson eFlora 2021).

RANGE: Big-scale balsamroot is endemic to California. It is known from Almeda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties (CNPS 2021).

KNOWN RECORDS: There is one CNDDB record of big-scale balsamroot in the nine-quad area surrounding the BSA. The record (Occurrence #14) is from 1997, approximately 5.2 miles northwest of the BSA. The records location is 'Rattlesnake Bend' in Placer County. The occurrence is based on a historic collection with no date or other information. This occurrence is noted as possibly extirpated.

HABITAT PRESENT IN THE BSA: The woodlands and grasslands in the BSA provide potential habitat for Big-scale balsamroot.

DISCUSSION: Big-scale balsamroot was not observed in the BSA during the botanical survey conducted in May 2021 during the evident and identifiable period.

Boggs Lake hedge-hyssop (*Gratiola heterosepala*)

HABITAT AND BIOLOGY: Boggs Lake hedge-hyssop is an annual herb found in shallow water near marshes and swamps and vernal pools from 33 to 7,792 feet. It blooms April through September (CNPS 2021; Jepson eFlora 2021).

RANGE: Boggs Lake hedge-hyssop is known from Fresno, Lake, Lassen, Madera, Mendocino, Merced, Modoc, Placer, Sacramento, San Joaquin, Shasta, Siskiyou, Solano, Sonoma, and Tehama counties (CNPS 2021).

KNOWN RECORDS: There are five CNDDB records for Boggs Lake hedge-hyssop in the nine-quad area surrounding the BSA. The closest CNDDB record of Boggs Lake hedge-hyssop (Occurrence #48) is from 1995, approximately 9.4 miles southwest of the BSA. The record location is northwest of the Prairie City Road and White Rock Road intersection, at the Aerojet property. The record is for plants seen in ponds with *Downingia bicornuta*, *Eleocharis palustris*, *Gratiola ebracteata*, *Lasthenia glaberrima*, and *Psilocarphus brevissimus*.

HABITAT PRESENT IN THE BSA: The edges of impoundments and CH-1 provide potential habitat for Boggs Lake hedge-hyssop.

DISCUSSION: Boggs Lake hedge-hyssop was not observed in the BSA during the botanical survey conducted in May 2021, during the evident and identifiable period.

Sanford's arrowhead (*Sagittaria sanfordii*)

HABITAT AND BIOLOGY: Sanford's arrowhead is a perennial rhizomatous herb found in ponds, marshes and swamps, and ditches from 0 to 2,133 feet. It blooms May through November (CNPS 2021; Jepson eFlora 2021).

RANGE: Sanford's arrowhead endemic to California. It is known from Butte, Del Norte, El Dorado, Fresno, Madera, Marin, Mariposa, Merced, Napa, Sacramento, San Bernardino, San Joaquin, Shasta, Solano, Sutter, Tehama, Tulare, Ventura, and Yuba counties (CNPS 2021).

KNOWN RECORDS: There are two CNDDB records for Sanford's arrowhead in the nine-quad area surrounding the BSA. The closest record (Occurrence #64) is 7.7 miles south of the BSA. The record location is near tributaries to Carson Creek, south of White Rock and east of Malby Crossing. The record based on 100 plants observed in 2005 in a wetland swale on extensive, degraded grasslands with vernal pool complexes conveying waters into Carson Creek.

HABITAT PRESENT IN THE BSA: The impoundments and CH-1 provide potential habitat for Sanford's arrowhead.

DISCUSSION: Sanford's arrowhead was not observed in the BSA during the botanical survey conducted in May 2021, during the evident and identifiable period.

E. Evaluation of Sensitive Natural Communities

Oak Woodlands

There are 4.28 acres of oak woodland in the BSA (2.13 acres of interior live oak – pine and 2.15 acres of blue oak pine; see full descriptions of these communities in Section IV.C). Isolated oak trees also occur in the California annual grassland in the southern portion of the BSA.

The El Dorado County Oak Resources Management Plan (ORMP), adopted in September 2017, regulates oak woodlands and individual oak trees outside of oak woodlands. The ORMP requires 1:1 mitigation ratio of impacted oak woodland for projects that impact less than 50.1 % of onsite oak woodland. The ORMP requires a 3:1 mitigation ratio at $153 per inch of diameter at breast height (dbh) for impacted Heritage trees. Retained trees may be affected by project activities such as clearing, grading, and pruning for clearance.

Wetlands and Waters

This BRE incorporates the results of a concurrently prepared aquatic resource delineation report prepared to U.S. Army Corps of Engineers minimum standards (SWCA 2021). A total of 1.11 acres of waters in the BSA (Figure 4). The impoundments and CH-1 (with exception of ephemeral CH-1d) are potential Clean Water Act § 404 jurisdictional features (SWCA 2021). These features are also waters of the state regulated by the Regional Water Quality Control Board (RWQCB), and part of a stream regulated by the CDFW State Fish and Game Code §1600 Streambed Alteration Agreement (SAA) Program.

The ephemeral channels within the BSA (CH-1d, CH-2, and CH-3) are not regulated under the current definition of waters of the U.S. (SWCA 2021). The ephemeral channels may still be regulated by the RWQCB or by SAA.

Placement of fill in potential waters of the U.S. requires a Section 404 permit from the U.S. Army Corps of Engineers. Impacts to the waters may be regulated under State Fish and Game Code §1600 Streambed Alteration Program.

County Zoning Code §130.30.050(G) establishes standards for avoidance and minimization of impacts to wetlands and sensitive riparian habitat as provided in General Plan Policies 7.3.3.4 and 7.4.2.5. The standards apply to most waterbodies, wetlands, and riparian areas, but not to ephemeral channels. Setbacks of 25 feet are typically required for intermittent streams, wetlands, or sensitive riparian habitat. Setbacks of 50 feet are typically required for perennial streams.

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U.S. Fish and Wildlife Service (USFWS). Accessed June 2021. Unofficial species list for the Lin Lot Split Project. Information for Planning and Conservation (IPaC). Sacramento Fish and Wildlife Office, Sacramento, CA. http://ecos.fws.gov/ipac/

Williams, D. F. 1986. Mammalian Species of Special Concern in California. California Department of Fish and Game Wild. Manag. Admin. Div. Rep. 86-1, Sacramento, CA.

VII. PREPARERS

Jeffery Little, Director. Over 29 years of experience working with environmental review, permitting, biological, and cultural issues. Mr. Little evaluates environmental and regulatory constraints to assist his clients determine realistic schedules of permits and entitlements. He prepares and manages CEQA/ NEPA documents and technical studies. He develops project design recommendations to achieve regulatory compliance with the numerous applicable local, state, and federal environmental laws and regulations.

Responsibilities: QA/QC

Michael Bower, M.S., Ecology, University of California, Davis, CA. Over 13 years of experience as a biologist/ botanist with Sycamore Environmental and SWCA. Mr. Bower serves as both field biologist and technical report writer. He conducts wetland delineations and surveys for special-status plants and wildlife. He prepares reports used in CEQA/NEPA that quantify resources, identify impacts, and recommend mitigation measures. He prepares restoration, weed management, and monitoring plans. He is a certified Ecologist and Professional Wetland Scientist (#2230).

Responsibilities: Fieldwork, plant identification, report preparation

Monica E. Coll, B.A., Environmental Science and Conservation Biology, Clark University, Worcester, MA. Two years of experience as a biologist. Her background is in conservation biology and she has accumulated a range of knowledge including project management skills and wildlife survey experience. Ms. Coll serves as both field biologist and technical report writer. She conducts construction monitoring and wildlife surveys, writes biological resource evaluations, and assists with plant surveys and wetland delineations.

Responsibilities: Report preparation

Alex V. Jamal, B.S., Wildlife Conservation and Management, Humboldt State University, Arcata, CA. Two years of experience as a biologist. He serves as both field biologist and technical report writer. He conducts plant and wildlife surveys, performs preconstruction and construction monitoring, and prepares environmental documents such as, biological resource reports and preconstruction reports. His background is in wildlife biology and biological surveys and has accumulated a range of knowledge and skills in wildlife surveys.

Responsibilities: Report preparation

Aramis Respall, GIS Analyst/ CAD Operator. Over 25 years of experience in drafting and spatial analysis using AutoCAD map and ArcGIS for public and private projects. He prepares figures for biological and permitting documents such as project location maps, aerial photograph exhibits, biological resource maps, wetlands/waters delineation maps, project impact maps, and other supporting graphics. Mr. Respall provides geospatial analysis and support for projects involving geodesy, hydrology, watershed studies, project impact and mitigation analyses, listed species, and designated critical habitat. Primary experience evolved from conventional surveying and civil engineering practices to advanced GPS and GIS based technology.

Responsibilities: Figure preparation, spatial analysis

APPENDIX A.

Database Queries

IPaC **U.S. Fish & Wildlife Service**

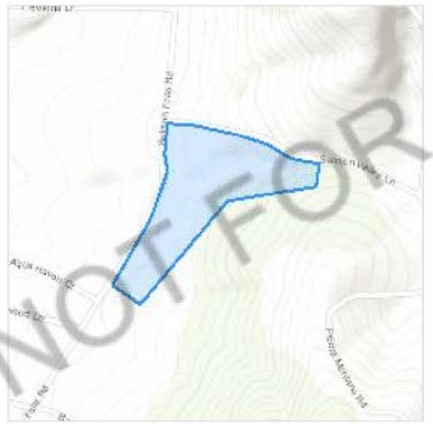
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

El Dorado County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS

Giant Garter Snake Thamnophis gigas — Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4482

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2076

Fishes

NAME	STATUS

Delta Smelt Hypomesus transpacificus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
El Dorado Bedstraw Galium californicum ssp. sierrae Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5209	Endangered
Layne's Butterweed Senecio layneae Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4062	Threatened
Pine Hill Ceanothus Ceanothus roderickii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3293	Endangered
Pine Hill Flannelbush Fremontodendron californicum ssp. decumbens Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4818	Endangered
Stebbins' Morning-glory Calystegia stebbinsii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3991	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES

	THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
California Thrasher Toxostoma redivivum This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch Carduelis lawrencei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Lewis's Woodpecker Melanerpes lewis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Nuttall's Woodpecker Picoides nuttallii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse Baeolophus inornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15

Rufous Hummingbird selasphorus rufus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Song Sparrow Melospiza melodia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
Spotted Towhee Pipilo maculatus clementae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243	Breeds Apr 15 to Jul 20
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any

week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

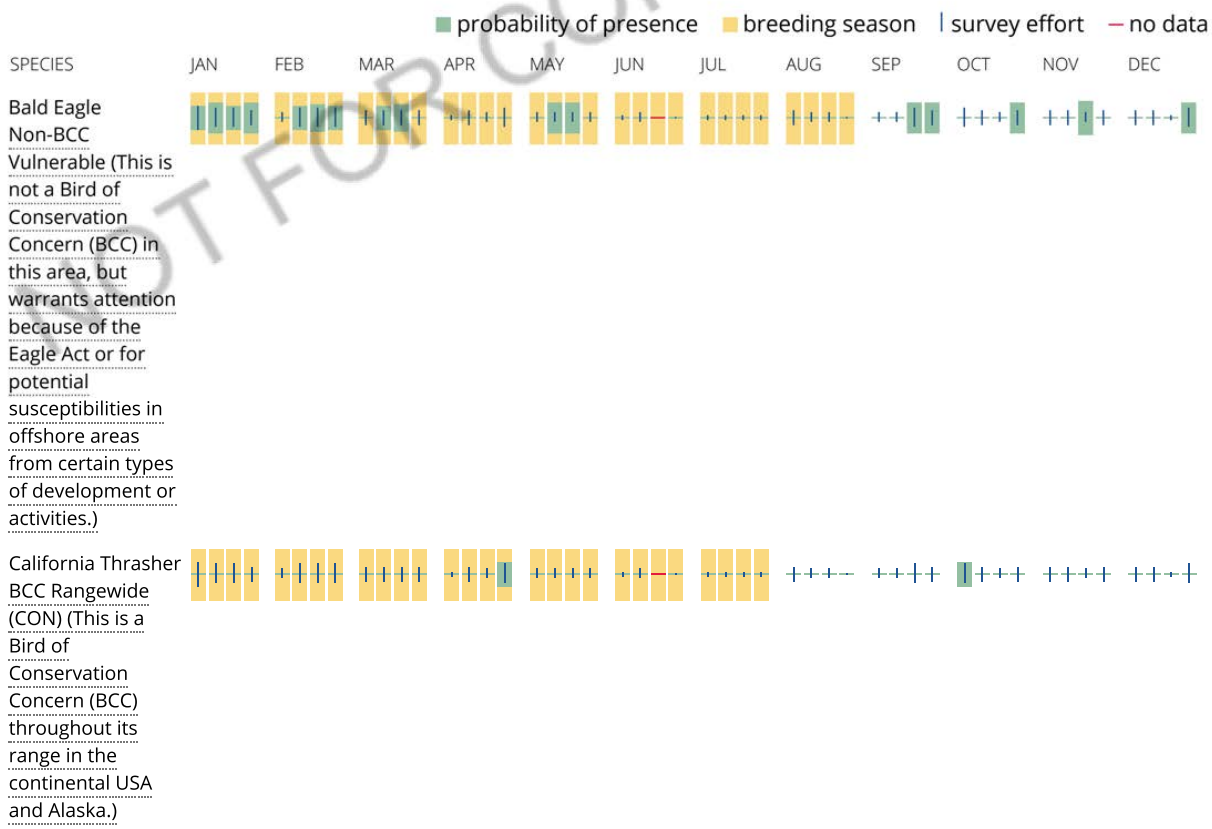
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

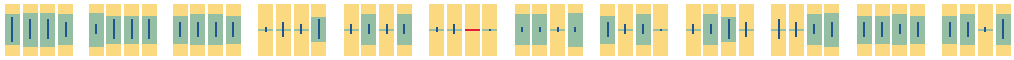
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

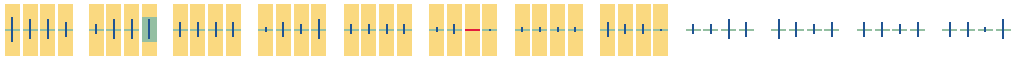
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



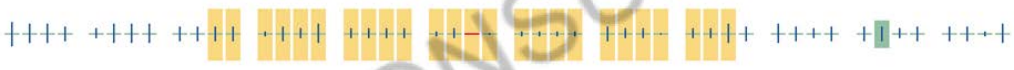
Clark's Grebe BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



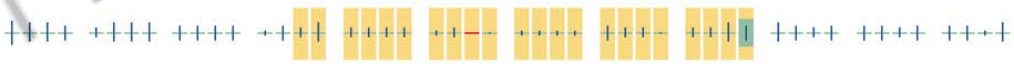
Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



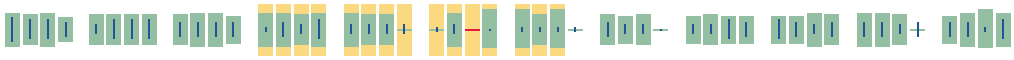
Lawrence's Goldfinch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



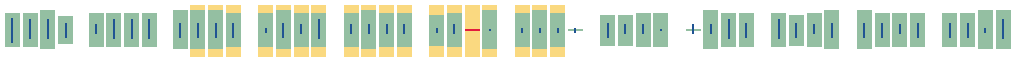
Lewis's Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

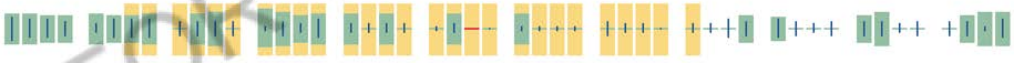


Oak Titmouse BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

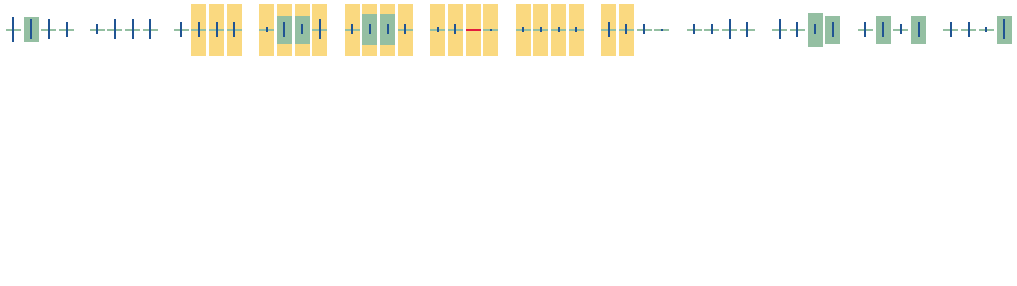


Rufous Hummingbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Spotted Towhee BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1A

FRESHWATER FORESTED/SHRUB WETLAND

PFOA

FRESHWATER POND

PUBFh

PUBHh

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Rocklin (3812172) OR Pilot Hill (3812171) OR Coloma (3812078) OR Folsom (3812162) OR Folsom SE (3812151) OR Clarksville (3812161) OR Shingle Springs (3812068) OR Buffalo Creek (3812152) OR Latrobe (3812058))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Allium jepsonii Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Andrena blennospermatis Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S2	
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Banksula californica Alabaster Cave harvestman	ILARA14020	None	None	GH	SH	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Calystegia stebbinsii Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Carex xerophila chaparral sedge	PMCYP03M60	None	None	G2	S2	1B.2
Ceanothus roderickii Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
Central Valley Drainage Hardhead/Squawfish Stream Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
Chlorogalum grandiflorum Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
Clarkia biloba ssp. brandegeeae Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
Cosumnoperla hypocrena Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
Crocanthemum suffrutescens Bisbee Peak rush-rose	PDCIS020F0	None	None	G2?Q	S2?	3.2
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S3	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Dumontia oregonensis hairy water flea	ICBRA23010	None	None	G1G3	S1	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Eryngium pinnatisectum Tuolumne button-celery	PDAPI0Z0P0	None	None	G2	S2	1B.2
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Fremontodendron decumbens Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
Galium californicum ssp. sierrae El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
Gratiola heterosepala Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Hydrochara rickseckeri Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Juncus leiospermus var. ahartii Ahart's dwarf rush	PMJUN011L1	None	None	G2T1	S1	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Navarretia myersii ssp. myersii pincushion navarretia	PDPLM0C0X1	None	None	G2T2	S2	1B.1
Northern Hardpan Vernal Pool Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
Northern Volcanic Mud Flow Vernal Pool Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	G1	S1.1	
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Orcuttia tenuis slender Orcutt grass	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
Orcuttia viscida Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Packera layneae Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Pekania pennanti Fisher	AMAJF01020	None	None	G5	S2S3	SSC
Phalacrocorax auritus double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Wyethia reticulata El Dorado County mule ears	PDAST9X0D0	None	None	G2	S2	1B.2

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Scientific Name | Common Name | Family | Lifeform | Blooming Period | Fed List | State List | Global Rank | State Rank | CA Rare Plant Rank | General Habitats | Micro Habitats | Lowest Elevation | Highest Elevation | CA Endemic | Date Added | Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	GENERAL HABITATS	MICRO HABITATS	LOWEST ELEVATION	HIGHEST ELEVATION	CA ENDEMIC	DATE ADDED	PHOTO
Allium jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		300	1320	Yes	1994-01-01	No Photo Available
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland		45	1555	Yes	1974-01-01	 ©1998 Dean Wm. Taylor
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	FE	CE	G1	S1	1B.1	Chaparral, Cismontane woodland		185	1090	Yes	1980-01-01	No Photo Available
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		440	770	Yes	2016-06-06	No Photo Available
Ceanothus roderickii	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	FE	CR	G1	S1	1B.1	Chaparral, Cismontane woodland		245	1090	Yes	1974-01-01	No Photo Available
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	None	None	G3	S3	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		245	1690	Yes	1974-01-01	No Photo Available
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2	Valley and foothill grassland, Vernal pools		1	445		1980-01-01	No Photo Available

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	GENERAL HABITATS	MICRO HABITATS	LOWEST ELEVATION	HIGHEST ELEVATION	CA ENDEMIC	DATE ADDED	PHOTO
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual/perennial herb	May-Aug	None	None	G2	S2	1B.2	Cismontane woodland, Lower montane coniferous forest, Vernal pools		70	915	Yes	1974-01-01	No Photo Available
Fremontodendron decumbens	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	FE	CR	G1	S1	1B.2	Chaparral, Cismontane woodland		425	760	Yes	1974-01-01	No Photo Available
Galium californicum ssp. *sierrae*	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	FE	CR	G5T1	S1	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		100	585	Yes	1974-01-01	No Photo Available
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2	Marshes and swamps, Vernal pools		10	2375		1974-01-01	No Photo Available
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	None	None	G2T1	S1	1B.2	Valley and foothill grassland		30	229	Yes	1984-01-01	No Photo Available
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	Vernal pools		1	880	Yes	1974-01-01	No Photo Available
Navarretia myersii ssp. *myersii*	pincushion navarretia	Polemoniaceae	annual herb	Apr-May	None	None	G2T2	S2	1B.1	Vernal pools		20	330	Yes	1994-01-01	No Photo Available
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	G2	S2	1B.1	Vernal pools		35	1760	Yes	1974-01-01	No Photo Available
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	G1	S1	1B.1	Vernal pools		30	100	Yes	1974-01-01	No Photo Available
Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	FT	CR	G2	S2	1B.2	Chaparral, Cismontane woodland		200	1085	Yes	1974-01-01	No Photo Available
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Marshes and swamps		0	650	Yes	1984-01-01	No Photo Available
Wyethia reticulata	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		185	630	Yes	1974-01-01	No Photo Available

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APPENDIX B.

Species Evaluated Table

APPENDIX B

Species Evaluated Table

Special-Status Species from USFWS Letter, CNDDB Data, CNPS Data

Special-Status Species/ Common Name	Federal Status [a]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Invertebrates					
Branchinecta lynchi Vernal pool fairy shrimp	T, CH	--	1, 2	Exist only in vernal pools or vernal pool-like habitats. Have never been found in riverine, marine, or other permanent bodies of water. Water movement within complexes allows movement between individual pools. Currently found in 28 counties across the Central Valley and coast ranges of California. Most commonly found in small (< 0.05 ac), clear to tea-colored vernal pools with mud, grass, or basalt bottoms in unplowed grasslands (USFWS 2005).	No. There are no vernal pools in the BSA. This species is known from only one location in El Dorado Co (USFWS 2006), near the El Dorado Hills/Folsom area at the Sacramento Co line. The BSA is not in critical habitat.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	T, CH	--	1, 2	Requires an elderberry shrub (*Sambucus* sp.) as a host plant (USFWS 1999). Females lay their eggs on the bark of elderberry, and larvae hatch and burrow into the stems and feed on the pith (USFWS 2006). The range extends throughout the Central Valley and associated foothills from about the 3,000-ft elevation contour on the east and the watershed of the Central Valley on the west (USFWS 1999), from southern Shasta Co to Fresno Co. (USFWS 2006). The elderberry stems must be greater than 1.0 inches in diameter to support larvae (USFWS 1999).	No. There are no elderberry shrubs in the BSA. The BSA is not in critical habitat.
Lepidurus packardi Vernal pool tadpole shrimp	E, CH	--	1, 2	Occurs in vernal pools and sometimes other areas of similar hydrology across the Central Valley of California and in the San Francisco Bay area. Requires a minimum of about 25 days to mature, and usually inhabits large, deep vernal pools that pool continuously for many months (USFWS 2005). They can also make use of smaller pools that are present as part of a larger vernal pool complex (Witham *et al.* 1998), and they may be able tolerate temporary dry conditions (USFWS 2005).	No. There are no vernal pools in the BSA. The BSA is outside the current distribution of this species. This species is not known to occur in El Dorado Co (USFWS 2006). The BSA is not in critical habitat.
Fish					
Hypomesus transpacificus Delta smelt	T, CH	T	1	Euryhaline (tolerant of a wide salinity range) species that spawns in freshwater dead-end sloughs and shallow edge-waters of channels of the Delta (USFWS 1994).	No. There is no suitable aquatic habitat in the BSA. The BSA is not in critical habitat.
Oncorhynchus mykiss California Central Valley steelhead DPS	T, CH	--	2	Anadromous *O. mykiss* (steelhead) originating below natural and manmade impassable barriers from the Russian River to and including Aptos Creek, and all drainages of San Francisco and San Pablo Bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin Rivers. Includes steelhead from two artificial propagation programs: Don Clausen Fish Hatchery Program, and Kingfisher Flat Hatchery Program (Monterey Bay Salmon and Trout Project) (NMFS 2014). Require loose gravels at pool tails for spawning (Moyle et al. 2008).	No. There is no suitable habitat within the BSA. There are no streams or rivers that support salmonids in the BSA. The BSA is not in critical habitat.

Amphibians					
Ambystoma californiense California tiger salamander (central population)	T, CH	T	1, 2	Occurs in grassland, oak savannah, and edges of mixed woodland and lower elevation coniferous forest. Spends much time underground in mammal burrows. The Central California DPS occurs in Alameda, Amador, Calaveras, Contra Costa, Fresno, Kern, Kings, Madera, Mariposa, Merced, Monterey, Sacramento, San Benito, San Mateo, San Joaquin, San Luis Obispo, Santa Clara, Santa Cruz, Stanislaus, Solano, Tulare, Tuolumne, and Yolo cos. (USFWS 2017a). Usually breeds in temporary ponds such as vernal pools but may also breed in slower parts of streams and some permanent waters (Stebbins 2003). Requires long-lasting vernal pools to complete larval development lasting 10+ weeks (Jennings and Hayes 1994).	No. The BSA is outside the CWHR range, predicted habitat, and connectivity modeling for this species (CWHR 2021; CDFW 2021b). The BSA is not in critical habitat.
Rana boylii Foothill yellow-legged frog	--	E	2	Found in or near rocky streams in a variety of habitats, including valley-foothills hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types. Egg clusters are attached to gravel or rocks in moving water near stream margins. This species is rarely encountered (even on rainy nights) far from permanent water. Its elevation range extends from near sea level to 6,370 ft in the Sierra (CWHR 2021).	Yes. See text.
Rana draytonii California red-legged frog	T, CH	SSC	1, 2	Inhabits quiet pools of streams, marshes, and occasionally ponds with dense, shrubby, or emergent vegetation. Requires permanent or nearly permanent pools for larval development (CWHR 2021; USFWS 2010). The range of CA red-legged frog extends from near sea level to approximately 5,200 ft, though nearly all sightings have occurred below 3,500 ft. California red-legged frog was probably extirpated from the floor of the Central Valley before 1960 (USFWS May 2002).	Yes. See text.
Spea hammondi Western spadefoot	--	SSC	2	Ranges throughout the Central Valley and adjacent foothills and is usually quite common where it occurs. Occurs primarily in grasslands, but occasionally occurs in valley-foothill hardwood woodlands (CWHR 2021). Primarily found in the lowlands frequenting washes, floodplains of rivers, alluvial fans, playas, and alkali flats. Prefers areas of open vegetation and short grasses with sandy or gravelly soil (Stebbins 2003). Spends most of the year in underground burrows up to 36 inches deep, which they generally construct themselves. Most surface movements by adults are associated with rains or high humidity at night. Breeding and egg laying occur almost exclusively in shallow, temporary pools formed by heavy winter rains (CWHR 2021).	Yes. See text.
Reptiles					
Emys marmorata Western pond turtle	--	SSC	2	Prefers aquatic habitats with abundant vegetative cover and exposed basking sites such as logs. Associated with permanent or nearly permanent water in a wide variety of habitat types, normally in ponds, lakes, streams, irrigation ditches, or permanent pools along intermittent streams (CWHR 2021).	Yes. See text.

Phrynosoma blainvillii Coast (California) horned lizard	--	SSC	2	Occurs in valley and foothill hardwood, conifer, and riparian habitats, as well as in pine-cypress, juniper and annual grasslands up to 4,000 ft in the Sierra Nevada and 6,000 ft in southern California Basks in the early morning. Often associated with sandy or loose soil areas (CWHR 2021). Feeds mostly on native ants. Tends not to persist where the argentine ant invades (Suarez *et al.* 2000, Suarez and Case 2002).	No. There are no sandy soils in the BSA. All four CNDDB records in El Dorado Co are from gabbroic northern mixed chaparral.
Thamnophis gigas Giant garter snake	T	T	1, 2	Endemic to the wetlands of the Sacramento and San Joaquin valleys, inhibiting the tule marshes and seasonal wetlands created by overbank flooding of the rivers and streams. Requires 1) freshwater aquatic habitat with protective emergent vegetative cover that allows foraging; 2) upland habitat near the aquatic habitat that can be used for thermoregulation and summer shelter in burrows; and 3) upland refugia that serve as winter hibernacula (USFWS 2017b).	No. The BSA is outside the range of this species.
Birds					
Agelaius tricolor Tricolored blackbird	--	T	2	Forages on ground in cropland, grassland, and on pond edges. Nests near freshwater, preferably in emergent marsh densely vegetated with cattails or tules, but also in thickets of willow, blackberry, and wild rose. Highly colonial; nesting area must be large enough to support a minimum colony of about 50 pairs (CWHR 2021). Chooses areas with widespread water and large, thick patches of vegetation for colonies to reduce predation (Hamilton 2004).	Yes. See text.
Ammodramus savannarum Grasshopper sparrow	--	SSC	2	An uncommon local summer resident and breeder in foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity cos. south to San Diego Co. Occurs in dry, dense grasslands, especially with scattered shrubs for sitting perches. A thick cover of grasses and forbs is essential for concealment. Nests are built of grasses and forbs in slight depressions in ground hidden by a clump of grasses or forbs. Usually nests solitarily from early April to mid-July. May form semicolonial breeding groups of 3-12 pairs (CWHR 2021).	Yes. See text.
Aquila chrysaetos Golden eagle	--	FP	2	Uncommon permanent resident and migrant throughout CA, except in the central portion of the Central Valley. Ranges from sea level up to 11,500 ft (Grinnell and Miller 1944). Typically inhabits rolling foothills, mountainous areas, sage-juniper flats, and deserts. Uses secluded cliffs with overhanging ledges and large trees for cover. Nest on cliffs of all heights and in large trees in open areas. Rugged, open habitats with canyons and escarpments are used most frequently for nesting. Needs open terrain for hunting (CWHR 2021).	Yes. See text.
Athene cunicularia Burrowing owl	--	SSC	2	Yearlong resident of open, dry grassland and desert habitat, and in grass, forb, and open shrub stages of pinyon-juniper and Ponderosa pine habitats, from sea level to 5,300 ft. Uses small mammal burrows, often those of ground squirrels, for roosting and nesting cover. Nest boxes, pipes, and culverts may be used if burrows are scarce. Occurs throughout CA except the high mountains and northwestern coastal forests (CWHR 2020). Burrow sites and some wintering sites are of concern to CDFW (2020b).	Yes. See text.

Buteo swainsoni Swainson's hawk	--	T	2	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Nests in stands of juniper-sage flats, in riparian areas and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures. Feeds on small birds, rodents, mammals, reptiles, large arthropods, amphibians, and, rarely, fish (CWHR 2021).	Yes. See text.
Elanus leucurus White-tailed kite	--	FP	2	Yearlong resident in coastal and valley lowlands. Rarely found away from agricultural areas. Inhabits herbaceous and open stages of most habitats, mostly in cismontane California. Substantial groves of dense, broad-leafed deciduous trees are used for nesting and roosting. Nest placed near top of dense oak, willow, or other tree stand located near open foraging area. Forages in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands (CWHR 2021).	Yes. See text.
Haliaeetus leucocephalus Bald eagle	D	E/ FP	2	Occurs along coasts, rivers, and large, deep lakes and reservoirs in California. Nests mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity cos. More widespread as a winter migrant. Requires large bodies of water or free flowing rivers with abundant fish and perching sites. Nests in large old growth and dominant live trees with open branchwork. Favors Ponderosa pine (CWHR 2021).	Yes. See text.
Laterallus jamaicensis coturniculus California black rail	--	T	2	Year-long resident of saline, brackish, and fresh emergent wetlands in the San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern CA at Morro Bay and a few other locations, the Salton Sea, and the lower Colorado River area. Occurs most commonly in tidal emergent wetlands dominated by pickleweed, or in brackish marshes supporting bulrushes and pickleweed. Found in immediate vicinity of tidal sloughs. In freshwater habitat, usually found in bulrushes, cattails, and saltgrass. Nests are concealed in dense vegetation near upper limits of tidal flooding. Occasionally found away from wetlands in late summer and autumn. May overwinter in locations where it does not breed (CWHR 2021).	No. Suitable habitat does not occur in the BSA. The ponds in the BSA do not provide enough marsh habitat for this species.
Progne subis Purple martin	--	SSC	2	Widely distributed throughout nearly the entire eastern U.S. In the western U.S, occurs in the Rocky Mountains, Sonoran Desert, Central Mexico, and Pacific Coast states (Shuford and Gardali 2008). Breeding occurs from April into August. In northern CA, an uncommon to rare local breeder on the coast and inland to Modoc and Lassen cos. Absent from high Sierra. Inhabits open forests, woodlands, and riparian areas in breeding season. Found in a variety of open habitats during migration, including grassland, wet meadow, and fresh emergent wetland, usually near water. Nests colonially or singly in natural or human-made cavities (CWHR 2021).	No. The BSA is outside the CWHR range and predicted habitat for this species (CDFW 2021b).
Ripariariparia Bank swallow	--	T	2	Found primarily west of CA deserts in riparian and other lowland habitats during the spring-fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine textured sandy soils, into which it digs nesting holes. About 75% of the breeding population in CA occurs along banks of the Sacramento and Feather Rivers in the northern Central Valley. Other colonies are known from the central coast from Monterey to San Mateo cos., and in northeastern CA in Shasta, Siskiyou, Lassen, Plumas, and Modoc cos. Breeding colonies contain 10 to 1,500 pairs (CWHR 2021).	No. There are no vertical banks, bluffs, or cliffs suitable for nesting in the BSA.

Mammals					
Antrozous pallidus Pallid bat	--	SSC	2	Occupies many habitats including desert, grasslands, shrublands, woodlands, rocky canyons, oak savannah, redwood, open farmland and mixed conifer forest from sea level up to 3,000 ft (Bolster 1998, CWHR 2021). Prefers open, dry habitats with rocky areas for roosting, and rock outcrops, cliffs, and crevices with access to open habitats for foraging. Day roosts in caves, crevices, mines, and occasionally buildings and hollow trees. Night roosts may be more open, such as porches and open buildings. Social, often roosting in groups of 20 or more. Absent in the northwest from Del Norte and western Siskiyou cos. south to northern Mendocino Co. (CWHR 2021). Sometimes found in tree cavities in oak, Ponderosa pine, coast redwood and giant sequoia (Bolster 1998).	Yes. See text.
Pekania pennanti Fisher – West Coast DPS	--	CT/ SSC	2	Permanent resident of the Sierra Nevada, Cascades, Klamath Mountains, and the North Coast Range. Occurs above 3,200 ft in the Sierra Nevada and Cascades (Jameson and Peeters 2004). Occurs in coniferous or deciduous riparian habitats with intermediate to large trees and closed canopies. Dens in protected cavities, brush piles, logs, or under an upturned tree. Hollow logs, trees, and snags are especially important. Mostly nocturnal and crepuscular (CWHR 2021).	No. The BSA is outside the geographic and elevation range.
Taxidea taxus American badger	--	SSC	2	Found throughout most of CA except the northern North Coast. Abundant in drier open stages of many shrub, forest, and herbaceous habitats with friable soils. Feeds on fossorial rodents, some reptiles, insects, earthworms, bird eggs, and carrion (CWHR 2021).	Yes. See text.
Plants		**/ CNPS [d]**			
Allium jepsonii Jepson's onion	--	--/ 1B.2	2	Bulbiferous herb found in serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 984 to 4,331 ft. Known from Butte, El Dorado, Placer, and Tuolumne cos. Blooms April through August (Baldwin et al. 2012; CNPS 2021).	No. There are no suitable soils in the BSA.
Balsamorhiza macrolepis Big-scale balsamroot	--	--/ 1B.2	2	Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils, from 295 to 5,102 ft. Known from the Bay Area, Sacramento Valley, and Sierra foothills. Blooms March through July (Baldwin et al. 2012; CNPS 2021).	Yes. See text.
Calystegia stebbinsii Stebbins' morning-glory	E	E/ 1B.1	1, 2	Perennial rhizomatous herb found in serpentine or gabbroic soils in openings in chaparral and cismontane woodland from 607 to 3,576 ft. Known from El Dorado and Nevada cos. Blooms April through July (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA.
Carex xerophila Chaparral sedge	--	--/1B.2	2	A newly described perennial cespitose herb known from serpentine or gabbro soils (Zika et al. 2014). Occurs in uplands in full sun to partial shade, in open forest or chaparral, from 1,475 to 2,525 ft. Known from Butte, El Dorado, Nevada, and Yuba cos. Although there is no published blooming period, most collections are from April, May, or June (Zika et al. 2014).	No. There are no suitable soils in the BSA. The BSA occurs below 1,400 ft elevation.
Ceanothus roderickii Pine Hill ceanothus	E	R/ 1B.1	1, 2	Perennial evergreen shrub found on serpentine or gabbroic soils in chaparral and cismontane woodland from 804 to 2,067 ft. Known from less than 10 occurrences in El Dorado Co. Blooms April through June (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. The BSA occurs below 804 ft elevation.

Chlorogalum grandiflorum Red Hills soaproot	--	--/ 1B.2	2	Perennial bulbiferous herb found in serpentine, gabbroic, and other soils in chaparral, cismontane woodland, and lower montane coniferous forest from 804 to 4,067 ft. Known from Amador, Butte, Calaveras, El Dorado, Placer, and Tuolumne cos. Blooms May through June (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. This species is known from the gabbro soils of the Pine Hill formation, elsewhere in El Dorado Co. The BSA occurs below 804 ft elevation.
Downingia pusilla Dwarf downingia	--	--/ 2B.2	2	Annual herb found in mesic valley and foothill grassland and vernal pools from 3 to 1,460 ft. Known from the north Coast Range, Bay Area, and Central Valley. Blooms March through May (Baldwin et al. 2012, CNPS 2021).	No. There are no vernal pools or other suitable aquatic habitat in the BSA.
Eryngium pinnatisectum Tuolumne button-celery	--	--/ 1B.2	2	Annual to perennial herb found in mesic areas of cismontane woodland, lower montane coniferous forests, and vernal pools/swales, and intermittent streams from 230 to 3,000 ft. Known from Amador, Calaveras, Sacramento, and Tuolumne cos. Blooms May through August (Baldwin et al. 2012, CNPS 2021).	No. No suitable mesic habitat occurs in the BSA. This species is not known from El Dorado Co.
Fremontodendron decumbens Pine Hill flannelbush	E	R/ 1B.2	1, 2	Perennial evergreen shrub found on rocky, gabbroic, and serpentine soil in chaparral and cismontane woodland from 1,394 to 2,494 ft. Known from 10 occurrences in El Dorado, Nevada, and Yuba cos. Uncertain about distribution or identity in Nevada and Yuba cos. Blooms April through July (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. In El Dorado Co this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the Co. The BSA occurs below 1,394 ft.
Galium californicum ssp. *sierrae* El Dorado bedstraw	E	R/ 1B.2	1, 2	Perennial herb found in gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 330 to 1,920 ft. Known from El Dorado County. Blooms March through July (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. In El Dorado Co this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the Co.
Gratiola heterosepala Boggs Lake hedge-hyssop	--	E/ 1B.2	2	Annual herb found in clay soils in marshes and swamps (lake margins) and vernal pools from 30 to 7,800 ft (CNPS 2021). Known from the Modoc Plateau, Warner Mountains, high Cascade Range, inner north Coast Range, Central Valley, and northern and central Sierra Nevada foothills. Blooms April through August (Jepson eFlora 2021).	Yes. See text.
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	--	--/ 1B.2	2	Annual herb found in mesic areas in valley and foothill grassland from 100 to 750 ft. Known from Butte, Calaveras, Placer, Sacramento, Tehama, and Yuba cos. Blooms March through May (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable mesic habitats in the BSA. The BSA is outside of the species' range.
Legenere limosa Legenere	--	--/ 1B.1	2	Annual herb found in vernal pools from 3 to 2,900 ft. Known from Alameda, Lake, Monterey, Napa, Placer, Sacramento, Santa Clara, Shasta, San Joaquin, San Mateo, Solano, Sonoma, Tehama, and Yuba cos. Presumed extirpated in Stanislaus Co. Blooms April through June (Baldwin et al. 2012, CNPS 2021).	No. There are no vernal pools or other suitable habitat in the BSA. The BSA is outside of the species' range.
Navarretia myersii ssp. *myersii* Pincushion navarretia	--	--/ 1B.1	2	Annual herb found in vernal pools, often with acidic conditions, from 65 to 1,100 ft. Known from Amador, Calaveras, Merced, Placer, and Sacramento cos. Blooms April through May (Stanislaus Co. Blooms April through June (Baldwin et al. 2012, CNPS 2021).	No. There are no vernal pools or other suitable aquatic habitat in the BSA. The BSA is outside of the species' range.

Orcuttia tenuis Slender Orcutt grass	T	E/ 1B.1	2	Annual herb found in vernal pools, often gravelly, from 115 to 5,800 ft. Blooms May through October (CNPS 2021). Found primarily on substrates of volcanic origin in pools classified as northern volcanic ashflow or mudflow vernal pools, but also found on Redding soils in Sacramento County. Known from pools at least 0.2 ac in size (1.6 ac median) and 11.8 inches deep and typically occurs in the deepest area of the pool (USFWS 2003).	No. There are no vernal pools or vernal pool complexes in the BSA. The BSA is outside of the species' range.
Orcuttia viscida Sacramento Orcutt grass	E, CH	E/ 1B.1	2	Annual herb found in vernal pools from 98 to 328 ft. Known only from Sacramento County. Blooms April through September (Baldwin et al. 2012, CNPS 2021). Known from northern hardpan and volcanic mudflow vernal pools. Known only from Sacramento County in pools of at least 0.25 ac (USFWS 2003).	No. There are no vernal pools or vernal pool complexes in the BSA. The BSA is outside of the species' range.
Packera (=Senecio) layneae Layne's ragwort	T	R/ 1B.2	1, 2	Perennial herb found in rocky serpentine or gabbroic soils in chaparral and cismontane woodland from 650 to 3,560 ft. Known from Butte, El Dorado, Placer, Tuolumne, and Yuba cos. Blooms April through August (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. In El Dorado Co this species is known primarily from the gabbro soils of the Pine Hill formation, elsewhere in the Co.
Sagittaria sanfordii Sanford's arrowhead	--	--/ 1B.2	2	A perennial emergent rhizomatous herb found in assorted shallow freshwater marshes and swamps from 0 to 2,130 ft. Known from northwestern CA, Cascade foothills, Central Valley, and South Coast. Blooms May through November (Baldwin et al. 2012, CNPS 2021).	Yes. See text.
Wyethia reticulata El Dorado County mule ears	--	--/ 1B.2	2	Perennial rhizomatous herb found on clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 600 to 2,100 ft. Known from El Dorado and Yuba cos. Blooms April through August (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. In El Dorado Co this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the Co.

Natural Communities					
Central Valley drainage hardhead/ squawfish stream	--	--	2	Hardhead occur in low- to mid-elevation streams in the main Sacramento-San Joaquin drainage and in the Russian River. Their range extends from the Pit River in Modoc Co south to Kern River in Kern Co. In the San Joaquin drainage, the species is scattered in tributary streams and absent from valley reaches of the San Joaquin River. In the Sacramento drainage, hardhead is present in most large tributary streams as well as in the Sacramento River. Hardhead are typically found in undisturbed areas of larger low- to mid-elevation streams, although they are also found in the mainstem Sacramento River at low elevations and in its tributaries to about 4,920 ft. They prefer clear, deep (>32 inches) pools and runs with sand-gravel-boulder substrates and slow velocities. Hardhead are always found in association with Sacramento pikeminnow (squawfish) and usually with Sacramento sucker. They tend to be absent from streams where introduced species, especially centrarchids (sunfish), predominate and from streams that have been severely altered by human activity. Sacramento pikeminnow occurs in clear rivers and creeks of central CA and in small numbers in the Sacramento-San Joaquin Delta. They occur in low- to mid-elevation streams with deep pools, slow runs, undercut banks, and overhanging vegetation. Most abundant in lightly disturbed, tree-lined reaches that also contain other native fish (Moyle 2002).	No. This community does not occur in the BSA.
Northern hardpan vernal pool	--	--	2	A low emergent wetland community dominated by annual herbs and grasses on very acidic soils with an iron-silicon cemented hardpan. Evaporation (not runoff) dries pools in spring creating concentric bands of vegetation. Occurs primarily on old alluvial terraces on the east side of the Great Valley from Tulare or Fresno County north to Shasta County (Holland 1986).	No. This community does not occur in the BSA.
Northern Volcanic Mud Flow Vernal Pool	--	--	2	A very low, open mixture of amphibious annual herbs and grasses. Pools are typically small, covering at most a few square meters. Restricted to irregular depressions in shallow soil in tertiary pyroclastic flows. Pools form in small depressions following winter rains. Characteristic species include: *Downingia bicornuta, Lasthenia glaberrima, Limnanthes douglasii rosea, Navarretia tagetina*. Distribution is scattered on flat-topped mesas along the Sierran foothills, mostly between 500-2,000 ft in blue oak woodland and gray-pine chaparral woodland (Holland 1986).	No. This community does not occur in the BSA.
Valley Needlegrass Grassland	--	--	2	Grassland dominated by the perennial tussock-forming bunchgrass *Stipa pulchra* with annuals occurring between bunches. Usually on fine-textured soils, moist or waterlogged in winter, but very dry in summer. Historically occurred in Sacramento, San Joaquin, and Salinas valleys, as well as the Los Angeles Basin. Present range greatly reduced (Holland 1986).	No. This community does not occur in the BSA.

[a] **Listing Status** **E** = Endangered; **T** = Threatened; **P** = Proposed; **C** = Candidate; **R** = California Rare; **D** = Delisted

[b] **Other Codes** **SSC** = CA Species of Special Concern; **FP** = CA Fully Protected; **Prot** = CA Protected; **CH =** Critical habitat designated.
CNPS Rank (plants only): **1A** = Presumed Extinct in CA; **1B** = Rare or Endangered (R/E) in CA and elsewhere; **2** = R/E in CA and more common elsewhere; **3** = Need more information; **4** = Plants of limited distribution

CNPS List Decimal Extensions:.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); **.2** = Fairly endangered in CA (20-80% of occurrences threatened); **.3 =** Not very endangered in CA (< 20% of occurrences threatened or no current threats known).

[c] **Source: 1** = USFWS letter. **2** =CNDDB/CNPS.**3 =** Observed or included by SWCA.

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APPENDIX C.

Plant and Wildlife Species Observed

Plant Species Observed

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
GYMNOSPERMS				
Cupressaceae	*Juniperus* sp. (ornamental)	Juniper	N	
	Sequoia sempervirens (ornamental)	Coast redwood	N	
Pinaceae	*Pinus sabiniana*	Gray, ghost, or foothill pine	N	
	Pinus sp. (ornamental)	Pine	--	
NYMPHAEALES				
Nymphaeaceae	*Nymphaea odorata*	Fragrant or white waterlily	I	
FERNS				
Pteridaceae	*Pentagramma triangularis*	Goldback fern	N	
MAGNOLIIDS				
Aristolochiaceae	*Aristolochia californica*	Pipevine, birthwort	N	
EUDICOTS				
Altingiaceae	*Liquidambar styraciflua*	Liquidambar, sweet gum	I	
Anacardiaceae	*Toxicodendron diversilobum*	Western poison oak	N	
Apiaceae	*Torilis arvensis*	Tall sock-destroyer	I	Moderate
	Torilis nodosa	Short sock-destroyer	I	
	Sanicula bipinnata	Poison sanicle	N	
	Sanicula bipinnatifida	Purple sanicle, shoe buttons	N	
Asteraceae	*Achillea millefolium*	Yarrow	N	
	Baccharis pilularis	Coyote brush	N	
	Carduus pycnocephalus ssp. *pycnocephalus*	Italian thistle	I	Moderate
	Centaurea solstitialis	Yellow star-thistle	I	High
	Chondrilla juncea	Skeleton weed	I	Moderate
	Cirsium vulgare	Bull thistle	I	Moderate
	Dittrichia graveolens	Stinkwort	I	Moderate
	Erigeron bonariensis	Flax-leaved horseweed	I	
	Lactuca sp.	Lettuce	I	
	Leontodon saxatilis	Hairy hawkbit	I	
	Madia exigua	Tarweed, tarplant	N	
	Pseudognaphalium sp.	Cudweed, everlasting	--	
	Senecio vulgaris	Common groundsel	I	
	Solidago sp.	Goldenrod	N	
	Sonchus asper ssp. *asper*	Prickly sow thistle	I	
	Sonchus oleraceus	Common sow thistle	I	
	Tragopogon dubius	Yellow salsify	I	
	Wyethia angustifolia	Mule's ears	N	
Boraginaceae	*Amsinckia menziesii*	Common fiddleneck, small-flowered fiddleneck	N	
	Eriodictyon californicum	California yerba santa	N	
	Plagiobothrys sp.	Popcorn flower	N	
Brassicaceae	*Capsella bursa-pastoris*	Shepherd's purse	I	
	Cardamine oligosperma	Bitter-cress	N	
Caprifoliaceae	*Lonicera* sp.	Honeysuckle	N	
Caryophyllaceae	*Cerastium glomeratum*	Sticky mouse-ear chickweed	I	

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
	Silene gallica	Small-flower catchfly, windmill pink	I	
	Spergularia rubra	Red sand-spurrey	I	
Convolvulaceae	*Calystegia occidentalis*	Morning-glory	N	
	Convolvulus arvensis	Bindweed, orchard morning-glory	I	
Euphorbiaceae	*Croton setigerus*	Turkey-mullein	N	
	Euphorbia maculata	Spotted spurge	I	
Fabaceae	*Acmispon americanus* var. *americanus*	Deervetch, deerweed	N	
	Cercis occidentalis	Western redbud	N	
	Hoita macrostachya	Leather root	N	
	Lathyrus vestitus	Wild pea	N	
	Lupinus bicolor	Miniature lupine	N	
	Lupinus succulentus	Arroyo lupine	N	
	Medicago polymorpha	California burclover	I	Limited
	Melilotus indicus	Sourclover	I	
	Trifolium sp.	Clover	--	
	Trifolium dubium	Little hop clover	I	
	Trifolium glomeratum	Clustered clover	I	
	Trifolium repens	White clover	I	
	Vicia sativa	Vetch	I	
	Vicia villosa	Hairy vetch, winter vetch	I	
Fagaceae	*Quercus wislizeni*	Interior live oak	N	
	Quercus douglasii	Blue oak	N	
Geraniaceae	*Erodium botrys*	Storksbill, filaree	I	
	Erodium moschatum	Greenstem filaree	I	
	Geranium dissectum	Cranesbill, geranium	I	Limited
	Geranium molle	Cranesbill, geranium	I	
Juglandaceae	*Carya illinoinensis*	Pecan	I	
	Juglans hindsii	Northern California black walnut	N	
Lamiaceae	*Monardella villosa*	Coyote-mint	N	
	Salvia rosmarinus (ornamental)	Rosemary	I	
	Stachys albens	Hedge-nettle	N	
Malvaceae	*Malva* sp.	Mallow	--	
Montiaceae	*Claytonia* sp.	Claytonia	N	
Moraceae	*Ficus carica*	Edible fig	I	Moderate
Myrsinaceae	*Anagallis arvensis*	Scarlet pimpernel	I	
Onagraceae	*Epilobium ciliatum*	Willowherb	N	
	Clarkia purpurea ssp. *quadrivulnera*	Four-spot	N	
	Clarkia unguiculata	Elegant clarkia	N	
Papaveraceae	*Eschscholzia californica*	California poppy	N	
Phrymaceae	*Mimulus guttatus*	Monkeyflower	N	
Plantaginaceae	*Plantago lanceolata*	English plantain	I	Limited
	Veronica sp.	Speedwell, brooklime	--	
Polemoniaceae	*Leptosiphon bicolor*	Leptosiphon	N	
	Navarretia sp. (past flower; likely *N. squarrosa* or similar)	Navarretia	N	

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
Polygonaceae	*Pterostegia drymarioides*	Woodland threadstem	N	
	Rumex crispus	Curly dock	I	Limited
	Rumex dentatus	Dock	I	
	Rumex pulcher	Fiddle dock	I	
Rhamnaceae	*Ceanothus cuneatus*	California-lilac	N	
	Rhamnus ilicifolia	Hollyleaf redberry	N	
Rosaceae	*Adenostoma fasciculatum*	Chamise, greasewood	N	
	Drymocallis sp.	Drymocallis	N	
	Heteromeles arbutifolia	Christmas berry, toyon	N	
	Prunus sp.	Prunus	--	
	Rubus armeniacus	Himalayan blackberry	I	High
	Rubus ursinus	California blackberry	N	
Rubiaceae	*Galium parisiense*	Wall bedstraw	I	
	Galium porrigens	Climbing bedstraw	N	
Salicaceae	*Populus fremontii* ssp. *fremontii* (seedling)	Fremont cottonwood	N	
	Salix gooddingii (sapling)	Goodding's black willow	N	
	Salix laevigata (sapling)	Red willow	N	
Sapindaceae	*Acer* sp. (ornamental)	Maple	I	
	Aesculus californica	California buckeye	N	
Scrophulariaceae	*Verbascum blattaria*	Moth mullein	I	
	Verbascum virgatum	Wand mullein	I	
Solanaceae	*Nicotiana* sp.	Tobacco	--	
	Solanum sp.	Nightshade	--	
Viscaceae	*Arceuthobium campylopodum*	Western dwarf mistletoe	N	
	Phoradendron leucarpum	American mistletoe	N	
Vitaceae	*Vitis californica*	California wild grape	N	
MONOCOTS				
Arecaceae	*Phoenix* sp. (seedlings)	Palm	I	
Agavaceae	*Chlorogalum pomeridianum*	Soaproot	N	
Cyperaceae	*Carex* sp. 1 (likely *C. prae-gracilis*; not *C. xerophila*; not in flower)	Sedge	--	
	Carex sp. 2 (growing in stream, not *C. xerophila*)	Sedge	--	
	Cyperus eragrostis	Nutsedge	N	
	Eleocharis sp.	Spikerush	--	
Iridaceae	*Iris germanica*	Iris	I	
Juncaceae	*Luzula comosa*	Hairy wood rush	N	
Liliaceae	*Calochortus* sp. (likely *C. albus*; in fruit only; fruit pendant)	Calochortus	N	
Poaceae	*Aegilops triuncialis*	Barbed goat grass	I	High
	Agrostis sp.	Bent grass	--	
	Aira caryophyllea	Silver hair grass	I	
	Avena barbata	Slender wild oat	I	Moderate
	Briza minor	Annual quaking grass, small quaking grass	I	
	Bromus carinatus	California brome	N	
	Bromus diandrus	Ripgut grass	I	Moderate

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
	Bromus hordeaceus	Soft chess	I	Limited
	Cynodon dactylon	Bermuda grass	I	Moderate
	Cynosurus echinatus	Bristly dogtail grass	I	Moderate
	Elymus caput-medusae	Medusa head	I	High
	Elymus triticoides	Beardless wild rye	N	
	Festuca perennis	Rye grass	I	Moderate
	Festuca myuros	Rattail sixweeks grass	I	Moderate
	Gastridium phleoides	Nit grass	I	
	Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	I	Moderate
	Hordeum murinum ssp. *leporinum*	Hare barley	I	Moderate
	Melica sp.	Oniongrass, melic	N	
	Muhlenbergia rigens	Deer grass	N	
	Poa pratensis ssp. *pratensis*	Kentucky blue grass	I	Limited
	Polypogon sp.	Beard grass	I	
	Polypogon monspeliensis	Annual beard grass, rabbitfoot grass	I	Limited
Potamogetonaceae	*Potamogeton foliosus*	Leafy pondweed	N	
Themidaceae	*Brodiaea elegans* ssp. *elegans*	Harvest brodiaea	N	
	Dichelostemma capitatum	Blue dicks	N	
	Dichelostemma volubile	Twining brodiaea, snake lily	N	
	Triteleia ixioides ssp. *ixioides*	Golden brodiaea	N	
	Triteleia laxa	Ithuriel's spear, common triteleia	N	
Typhaceae	*Typha domingensis*	Southern cattail	N	

[1] Nomenclature and taxonomy follow *The Jepson manual: Vascular plants of California*, 2nd ed. (Baldwin et al., eds. 2012).

[2] N = Native to California; I = Introduced.

[3] Negative ecological impact ranking by the California Invasive Plant Council (Cal-IPC 2021).

Wildlife Species Observed

Common Name	Scientific Name
MAMMALS	
Mule deer	*Odocoileus hemionus*
BIRDS	
Acorn woodpecker	*Melanerpes formicivorus*
Bald eagle	*Haliaeetus leucocephalus*
Black phoebe	*Sayornis nigricans*
Bushtit	*Psaltriparus minimus*
Cedar waxwing	*Bombycilla cedrorum*
European starling	*Sturnus vulgaris*
Goldfinch	*Carduelis* sp.
Great egret	*Ardea alba*
House finch	*Carpodacus mexicanus*
Hummingbird	Likely *Calypte anna*
Mallard	*Anas platyrhynchos*
Mourning dove	*Zenaida macroura*
Northern mockingbird	*Mimus polyglottos*
Oak titmouse	*Contopus cooperi*
Red-tailed hawk	*Buteo jamaicensis*
Red-winged blackbird	*Agelaius phoeniceus*
Tree swallow	*Tachycineta bicolor*
Turkey vulture	*Cathartes aura*
Spotted towhee	*Pipilo maculatus*
White-breasted nuthatch	*Sitta carolinensis*
Wild turkey	*Meleagris gallopavo*
REPTILES	
Garter snake	*Thamnophis couchii*
Turtle[1]	--
Western fence lizard	*Sceloporus occidentalis*
AMPHIBIANS	
American bullfrog (numerous adults and sub-adults, with vocalizations)	*Lithobates catesbeianus*
FISH	
Bass	*Micropterus* sp.
Sunfish	*Centrarchidae*

[1] The turtle quickly retreated and concealed itself in IM-3 before it could be identified. Likely a western pond turtle (*Emys marmorata*) or red-eared slider (*Trachemys scripta elegans*).

APPENDIX D.

Photographs

Photo 1. View looking south toward California annual grassland (upland) in the southern portion of the BSA adjacent to Salmon Falls Road (on right). 18 May 2021.

Photo 2. View looking north toward California annual grassland in the southern portion of the BSA. A few scattered blue oaks occur in the grassland. 18 May 2021.

Photo 3. View looking southeast toward California annual grassland in the southern portion of the BSA. Oak woodland in the background. 18 May 2021.

Photo 4. View looking northwest toward an upland swale within California annual grassland in the southern portion of the BSA. 18 May 2021.

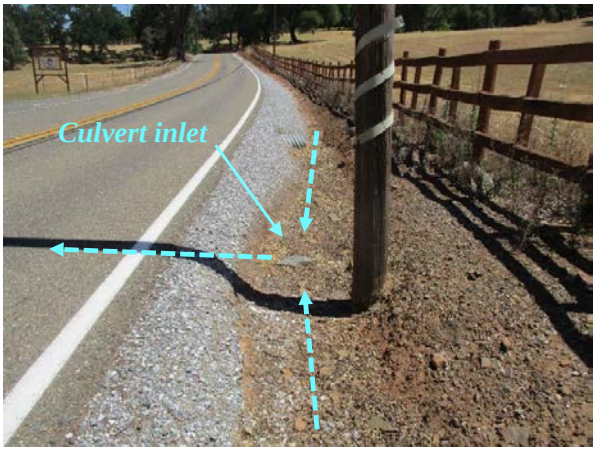

Photo 5. View looking northeast toward CH-3, an ephemeral roadside ditch in the southern portion of the BSA, and ultimately drains to Folsom Lake. 18 May 2021.

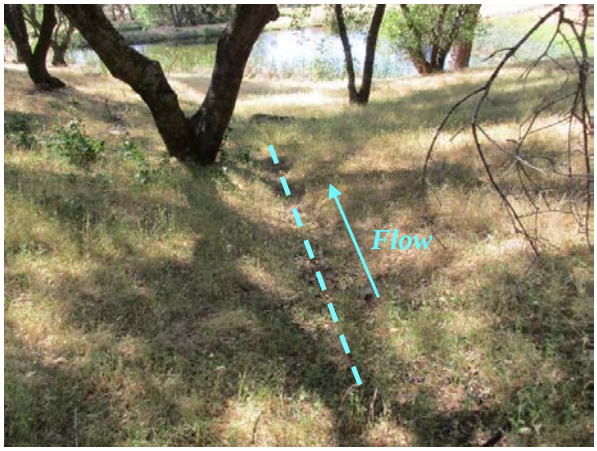

Photo 6. View looking northwest toward ephemeral CH-2 as it flows toward IM-3. An OHWM is present only in the segment labeled in blue. 18 May 2021.

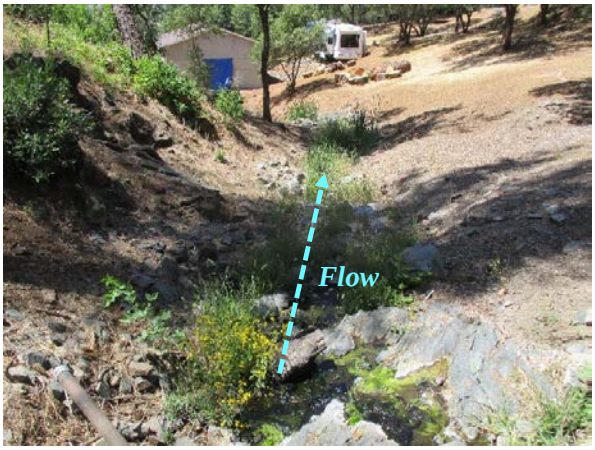

Photo 7. View looking northwest toward CH-1a (facing downstream) as it flows toward IM-1. Water is flowing over bedrock in the channel. 18 May 2021.

Photo 8. View looking southwest toward IM-1. Some cattails (*Typha* sp.) are present in the center of the pond along with floating algae. 18 May 2021.

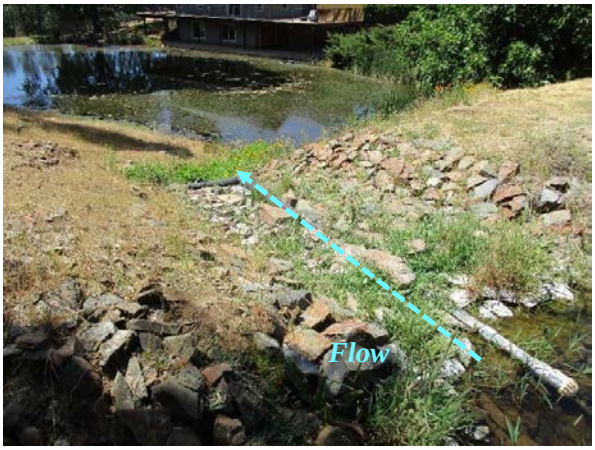

Photo 9. View toward CH-1b, the connection between IM-1 (bottom right) and IM-2 (top left). Water is flowing in the channel. The small pipe delivers water from IM-1 to a fountain that flows into IM-2. 18 May 2021.

Photo 10. View looking northeast toward CH-1c, facing upstream. Water is flowing in the channel. The channel is a created channel on an impoundment and has been lined with rocks. 18 May 2021.

Photo 11. View looking south toward IM-3. Cattails occur in the shallow edgewaters within IM-3. Large trees provide potential raptor nesting opportunities. 18 May 2021.

Photo 12. View looking southeast toward IM-4. Nonnative annual grassland in foreground. No water was observed flowing into or out of IM-4 during fieldwork. 18 May 2021.

Revised

Biological Resources Evaluation
and
Botanical Inventory Report

for the

Lin Lot Split Project

El Dorado County, CA

Prepared by:

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August 2021

Biological Resources Evaluation and Botanical Survey
for the
Lin Lot Split (APN 126-250-012)

El Dorado County, CA

Table of Contents

Figures

Tables

Appendices

I. SUMMARY OF FINDINGS AND CONCLUSIONS

This biological resources evaluation (BRE) documents baseline biological resources for the Lin Lot Split (APN 126-250-012) Project (Project) near in unincorporated El Dorado County, CA. The 15-acre Biological Study Area (BSA) is located in the foothills of the Sierra Nevada and contains California annual grassland, nonnative annual grassland, blue oak pine, interior live oak pine, a drainage with four impoundments, an ephemeral channel, and a roadside ditch.

A general biological survey, wetland survey, and protocol botanical survey were completed on May 19, 2021. A potential western pond turtle was observed in an impoundment within the BSA during biological survey. No other special-status species were observed during the survey. No special-status plants were observed in the BSA during the floristic botanical survey conducted during the evident and identifiable period.

The BSA provides potential habitat for the following special-status wildlife species: foothill yellow-legged frog (*Rana boylii*; State endangered); California red-legged frog (*Rana draytonii*; Federal threatened); western spadefoot (*Spea hammondi*; CDFW species of special concern), western pond turtle (*Emys marmorata*; CDFW species of concern); tricolored blackbird (*Agelaius tricolor*; State threatened), grasshopper sparrow (*Ammodramus savannarum*; CDFW species of special concern), golden eagle (*Aquila chrysaetos*; CDFW fully protected species); burrowing owl (*Athene cunicularia*; CDFW species of special concern); Swainson's hawk (*Buteo swainsoni*; State threatened); white-tailed kite (*Elanus leucurus*; CDFW fully protected species); bald eagle (*Haliaeetus leucocephalus*; State endangered); nesting birds (regulated by the Migratory Bird Treaty Act and/or CDFW), pallid bat (*Antrozous pallidus*; State species of special concern); and American badger (*Taxidea taxus*; State species of special concern).

The BSA provides potential habitat for the following special-status plant species: Big-scale balsamroot (*Balsamorhiza macrolepis*; CNPS Rank 1B.2); Boggs Lake hedge-hyssop (*Gratiola heterosepala*; State endangered; CNPS Rank 1B.2); and Sanford's arrowhead (*Sagittaria sanfordii*; CNPS Rank 1B.2).

The project parcel is not located within any County rare plant mitigation areas.

Sensitive natural communities in the BSA include 1.01 acres of impoundments, 0.10 acre of channels, and 4.28 acres of oak woodland.

II. INTRODUCTION

A. Purpose of Report

The purpose of this Biological Resources Evaluation (BRE) report is to document biological resources with potential to occur within the study area for the Lin Lot Split Project (Project).

B. Project Location

The approximately 15-acre Biological Study Area (BSA) is located on the east side of Salmon Falls Road, just south of Salmon Valley Lane, in unincorporated El Dorado County, CA. The BSA consists of assessor's parcel number (APN) 126-250-012.

The BSA is on the Clarksville USGS topographic quad (Section 21, T7N, R6E, 14 Mt. Diablo Base & Meridian; Figure 1) and is in the Lower South Fork American River Hydrologic Unit (Hydrologic Unit Code 1802012907).

The geographic coordinates of the BSA are 38.442062° north, -121.33816° west (WGS84), and the UTM coordinates are 674,542 meters east, 4,256,810 meters north, Zone 10 N (WGS84).

Figure 2 is a 17 June 2020 aerial photo of the BSA and surrounding area.

The project parcel is not within any County rare plant mitigation areas (pers. comm., Matthew Aselage, El Dorado County Planning). The BSA is outside the U.S. Fish and Wildlife Service (USFWS) recovery boundary for the Pine Hill plants (USFWS August 2002). The BSA is located outside the El Dorado County Important Biological Corridor (IBC; El Dorado County 2018).

C. Project Applicant

Applicant:
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Phone: 925.216.8574

Engineer:
D&Z Structural Engineering, inc. 3389
Mira Loma Drive, Suite 3 Cameron Park,
CA 95682
Phone: 530.677.0900
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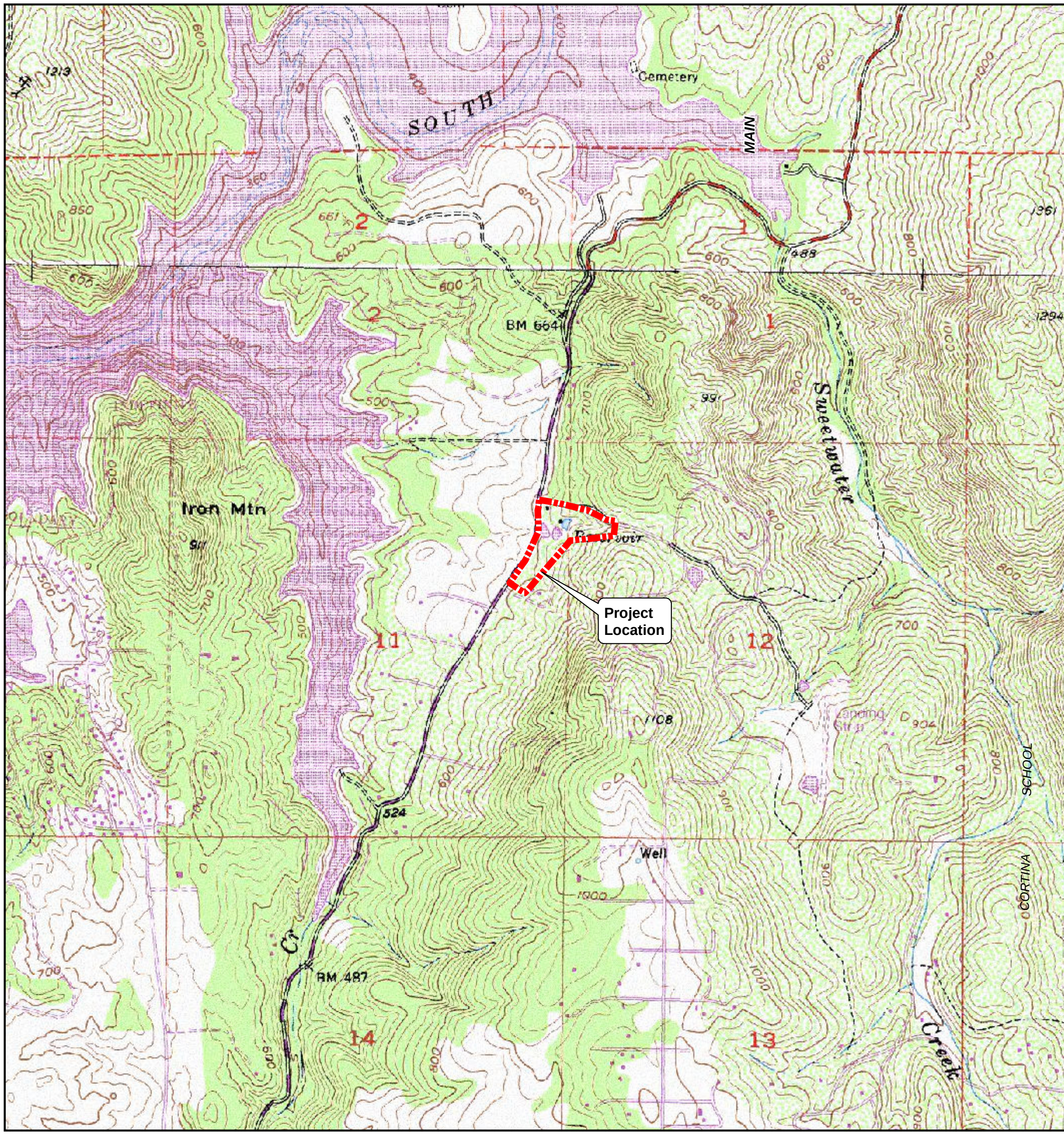
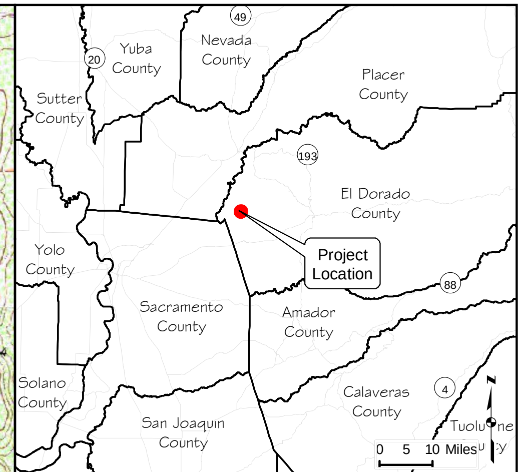
D. Project Description

The Project is a proposed lot split into a 10-acre parcel and a 5-acre parcel. The owner is contemplating a residential development on the 5-acre parcel.





Lin Lot Parcel Split
El Dorado County, CA
17 June 2021

Figure 1. Project Location Map

Project Location

2,000 1,000 0 2,000 Feet

Scale: 1 inch = 2,000 feet

N

USGS 7.5' Quadrangle Topo Basemap:
Shingle Springs, CA (Revised 1973)
CASIL California USGS Digital Raster Graphics (DRG),
7.5 Minute (C) Series, Albers Nad83 Mosaics (MrSID)
o_nw0201.sid & o_nw0202.sid

20087LinLotSplit_Fig1LocationMap.mxd

Lin Lot Parcel Split
El Dorado County, CA
17 June 2021

Biological Study Area (BSA)

Aerial Photograph: 17 June 2020
WV02 Metro Maxar Imagery
ESRI ArcMap Basemap layer

Figure 2. Aerial Photograph

20087LinLotSplit_Fig2AerialPhoto.mxd

III. STUDY METHODS

A. Studies Conducted

An evaluation of biological resources was conducted to determine whether any special-status plant or wildlife species, their habitat, or sensitive habitats occur in the BSA. Data on known special-status species and habitats in the area was obtained from state and federal agencies. Maps and aerial photographs of the BSA and surrounding area were reviewed. A field survey was conducted to determine the habitats present. The field surveys, map review, and a review of the biology of evaluated species and habitats were used to determine the special-status species and sensitive habitats that could occur in the BSA.

Special-status species in this report are those listed under the federal or state endangered species acts; under the California Native Plant Protection Act; as a California species of special concern or fully protected by the California Department of Fish and Wildlife (CDFW); species that are Ranked 1 or 2 by the California Native Plant Society, Inventory of Rare and Endangered Plants of California (CNPS 2021); or are rare plants listed in the El Dorado County Ordinance Code §130.71.030. Special-status natural communities are waters, wetlands, riparian communities, any natural community ranked S1, S2, or S3 by CDFW (2020), and any community identified as sensitive in the El Dorado County General Plan (2018).

B. Literature and Database Review

SWCA obtained an online list from the U.S. Fish and Wildlife Service (USFWS) that identifies federal-listed species that could potentially occur in or be affected by a project in the BSA. The California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) Inventory were queried for the Clarksville quad and eight surrounding USGS quads to determine known records of special-status species that occur in the vicinity of the BSA. The results of the database queries are in Appendix A. Table 1 lists the nine USGS quads evaluated. Appendix B contains a table evaluating special-status species returned in database queries.

Table 1. USGS Quads Evaluated.

Rocklin	Pilot Hill	Coloma
Folsom	**Clarksville**	Shingle Springs
Buffalo Creek	Folsom SE	Latrobe

Information on the biology, distribution, taxonomy, legal status, and other aspects of the special-status species was obtained from documents on file in the library of SWCA. Standard references used for the biology and taxonomy of plants included Baldwin et al.,

eds. (2012). On-line references included California Native Plant Society (2021); CalPhotos (2021); Consortium of California Herbaria (CCH 2021); Jepson eFlora (2021); and Flora of North America (FNA 1993+). References pertaining to natural communities include California Natural Community List (CDFW 2020).

Two special-status species lists produced by CDFW were reviewed: 1) Special Vascular Plants, Bryophytes, and Lichens List; and 2) State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2021b).

C. Survey Methods

1. Survey Dates and Personnel

Biological and botanical and wetland delineation fieldwork was conducted by Mike Bower, M.S., on May 19, 2021. Mr. Bower is a biologist/botanist and wetland delineator with 13 years of experience conducting biological, botanical and wetland surveys. He is familiar with the local flora, has conducted numerous surveys in El Dorado County, and has direct experience with all rare Pine Hill plants.

2. Biological Survey

The general biological survey consisted of walking through the BSA while assessing potential habitat for special-status species and sensitive communities. Wildlife species and vegetation communities were identified and recorded. A list of plant and wildlife species observed in the BSA is in Appendix C. Photographs are in Appendix D.

3. Botanical Survey

The botanical survey was conducted in accordance with botanical survey guidelines from California Department of Fish and Wildlife (CDFW 2018) and U.S. Fish & Wildlife Service (USFWS 1996b); and California Native Plant Society (CNPS 2007). The botanical survey was "floristic," meaning that every plant taxon found was identified to the taxonomic level necessary to determine rarity and listing status. Scientific nomenclature follows Baldwin, et al., eds. (2012).

Natural communities were identified and mapped. Vegetation in these communities was classified according to methods and vegetation alliance membership rules in *A Manual of California Vegetation, 2nd edition* (Sawyer et al. 2009). The CDFW (2020) *California Natural Community List* was reviewed to verify vegetation rarity ranks and determine if any sensitive vegetation alliances or associations occur.

The May 19, 2021 fieldwork was conducted during the published blooming period of special-status plants with potential to occur in the BSA. On May 24, 2021, a nearby reference population of Red Hills soaproot (*Chlorogalum grandiflorum*) was visited. The

reference population is about 7.5 miles southeast of the BSA. Red Hills soaproot plants were evident and identifiable (observed in bud and in early flower).

The botanical survey was conducted using systematic transects. The botanist searched for and recorded all plant species observed while surveying the BSA on foot. The survey was intuitively controlled, with more survey time spent in microhabitats with higher potential for rare plants (openings in chaparral, mesic areas, rocky outcrops, serpentine soils, etc.). Approximately 8 person-hours were spent in the field during the May 2021 survey. All vascular plants found in the BSA were identified to the taxonomic level necessary to determine legal status. Plant species were identified on-site or collected and identified later with the aid of a microscope and using dichotomous keys in The Jepson manual: Vascular plants of California, 2nd ed. (Baldwin, et al. 2012) or the Jepson eFlora (2021). A list of vascular plants observed in the BSA is in Appendix C. Scientific nomenclature follows the Baldwin et al. (2012).

D. Mapping

An aerial photograph acquired from ESRI ArcMap provided the base layer for Figures 2 and 4. Data collected with a sub-meter accurate Trimble Nomad 5 GPS unit equipped with an Empower Module, and a review of aerial photographs and field notes, were used to estimate the boundaries of biological communities. Areas mapped as oak woodlands in the BSA have a minimum of 10% cover of oak tree canopy, consistent with the County Oak Resources Management Plan (ORMP) adopted by El Dorado County in 2017. Acreages of plant communities and other features were calculated using ArcMap functions.

E. Problems Encountered and Limitations That May Influence Results

The general biological survey conducted for this report may not necessarily have detected cryptic, fossorial, migratory, aestivating, or nocturnal wildlife species. Such species with habitat in the BSA could be present in or periodically utilize suitable habitat in the BSA even if not observed during a general biological survey. Sign of such species (feathers, excrement, carcasses, etc.) were recorded if observed.

The botanical survey was conducted following a period of below-normal precipitation. Drought and low precipitation can negatively influence detectability and abundance of rare plants. Despite dry conditions, plant vigor, phenology, and abundance observed in the BSA did not appear substantially different from past normal years in El Dorado County. The reference population of Red Hills soaproot visited on May 24, 2021, was evident and identifiable. There is no evidence that ongoing drought or dry conditions adversely affected the ability of the botanist to detect rare plants during the survey.

IV. ENVIRONMENTAL SETTING

The BSA is located in a rural residential area located east of Folsom Lake. Salmon Valley Lane borders the BSA immediately to the north. Salmon Falls Road borders the BSA immediately to the west. Areas to the north, south, and west of the BSA consist of low-density residential developments. Areas to the east of the BSA are largely undeveloped. Vegetation in the surrounding area consists of oak woodlands, pine-oak forests, and chaparral. A drainage flows through the BSA from east to west, draining ultimately to Folsom Lake. The drainage has been modified with impoundments. Several residential buildings occur in the BSA north of the drainage. The southern portion of the parcel is an undeveloped grassland area with few trees. The elevation in the BSA ranges from approximately 590 to 766 feet above sea level (NAVD 88).

A. Soils

Mapped soil units in the BSA are Auburn Very Rocky Silt Loam, 2 to 30 Percent Slopes and Auburn Very Rocky Silt Loam, 30 to 50 Percent Slopes (Figure 3). The soils are part of the Auburn Series, which is summarized below (NRCS 1974, NRCS 2021a; 2021b).

Auburn Series

The Auburn series soils are on foothills with 2 to 75 percent slopes. The soils formed in material weathered from metabasic or metasedimentary rock. Rock outcrops are common. The soils are shallow to moderately deep. This series is well drained. A typical profile of the Auburn Series is as follows (reported colors are for moist soil):

A1—0 to 2 inches; strong brown (7.5YR 5/6) silt loam, reddish brown (5YR 4/4) moist; massive; slightly hard, friable, slightly sticky and non-plastic; many very fine roots; many very fine and fine tubular pores; slightly acid (pH 6.4); clear smooth boundary.

A2—2 to 9 inches; yellowish red (5YR 5/6) silt loam, reddish brown (5YR 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine and medium roots; many very fine and medium tubular pores; slightly acid (pH 6.4); gradual smooth boundary.

Bw—9 to 14 inches; yellowish red (5YR 5/8) silt loam, yellowish red (5YR 4/6) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; few thin clay films line pores; slightly acid (pH 6.5); abrupt wavy boundary.

R—14 to 24 inches; very pale brown (10YR 7/4) partly weathered amphibolite schist with reddish brown (2.5YR 4/4) colloidal stains in fracture planes; few roots in cracks; slightly acid (pH 6.5).

B. Weather Conditions

Fieldwork for the botanical survey was conducted on May 19, 2021. From October 1, 2020 through May 18, 2021, the nearby Folsom Point gauge (FLD) received 9.04 inches of precipitation (39% of normal; CDEC 2021). The FLD gauge is located approximately 4.6 miles southwest of the BSA at similar elevation, and would be expected to receive similar amounts of precipitation as the BSA. Hydrologic conditions preceding the May 2021 survey were drier than normal.

Lin Lot Parcel Split
El Dorado County, CA
12 July 2021

Figure 3. Soils Map

Botanical Study Area (BSA)

Soil Boundary

Soil Mapping Unit

Symbol	Name
AxD	Auburn very rocky silt loam, 2 to 30 percent slopes
AxE	Auburn very rocky silt loam, 30 to 50 percent slopes

1,667 0 1,667 Feet

N

Scale: 1 inch = 1,667 feet

Soil Survey Geographic (SSURGO) database for
El Dorado Area, California, USDA, NRCS
URL:http://SoilDataMart.nrcs.usda.gov/

Aerial Photograph: 17 June 2020
Maxar 2000 Imagery
Google Earth Pro

20087LinLotSplit_Fig3SoilsMap.mxd

C. Natural Communities

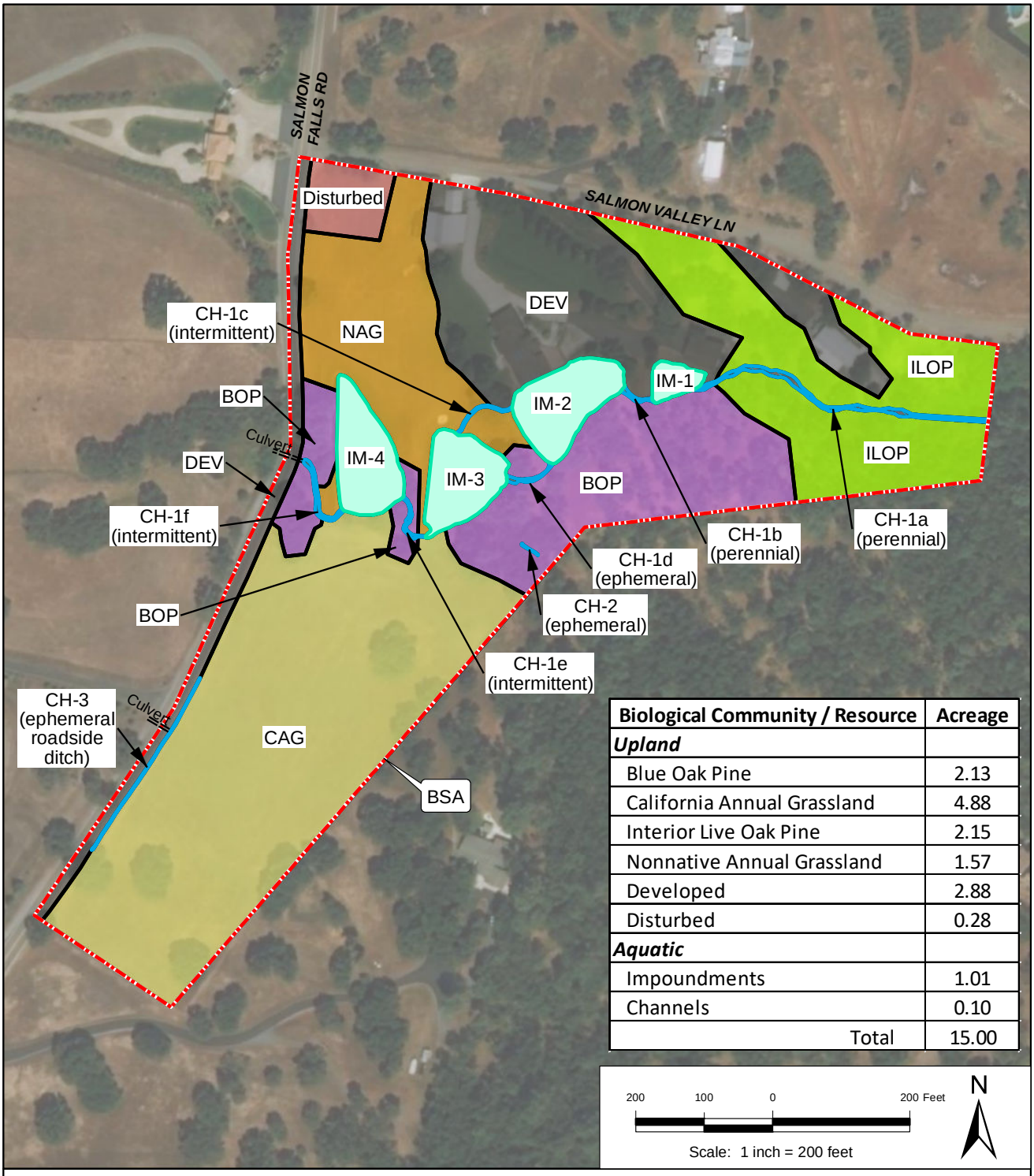
Natural communities are defined by species composition and relative abundance. The Natural Communities described below correlate with the California Natural Community List (CDFW 2020) and the El Dorado County General Plan EIR (2018). No sensitive vegetation alliances or associations are present in the BSA. Natural communities are shown on Figure 4 and listed in Table 2. Photographs of the BSA are in Appendix D.

Table 2. Natural Communities.

Natural Community	Vegetation Alliance and Association (CDFW Association Code / Rarity Rank) [1]	El Dorado County Major Habitat Type	Acreage [2]
Upland			
Blue Oak Pine	Blue Oak Woodland and Forest Alliance *Quercus douglasii – Pinus sabiniana* Association (71.020.02 / G4 S4)	Blue Oak Woodland	2.13
Interior Live Oak Pine	Interior Live Oak Woodland and Forest Alliance *Quercus wislizeni – Quercus douglasii - Pinus sabiniana* / grass Association (71.080.01/ G4 S4)	Blue Oak Woodland	2.15
California Annual Grassland	None recognized – This community is dominated by nonnative grasses with some natives forbs	Annual Grassland	4.88
Nonnative Annual Grassland	None recognized – This community is dominated by nonnative grasses	Annual Grassland	1.57
Aquatic			
Impoundments	None recognized	--	1.01
Channels	None recognized	--	0.10
Other Features			
Developed	None recognized	--	2.88
Disturbed	None recognized	--	0.28
		TOTAL:	**15.00**

[1] Vegetation alliances based on descriptions and classification methods in Sawyer et al. (2009). Alliance codes are from CDFW (2020). Rarity ranks of State (S) 1-3 are considered highly imperiled by CDFW (2021b). Communities may lack recognized vegetation alliances if they lack vegetation, occupy a small area, or are dominated by nonnatives.

[2] Acreages were calculated using AutoCAD or ArcMap functions.



Biological Community / Resource	Acreage
Upland	
Blue Oak Pine	2.13
California Annual Grassland	4.88
Interior Live Oak Pine	2.15
Nonnative Annual Grassland	1.57
Developed	2.88
Disturbed	0.28
Aquatic	
Impoundments	1.01
Channels	0.10
Total	15.00

Lin Lot Parcel Split
El Dorado County, CA
9 August 2021

Figure 4.
Biological Resources Map

Biological Study Area (BSA; 15 ac)
Biological Community Boundary
Impoundment (IM)
Channel (CH)
Existing Culvert

Blue Oak Pine (BOP)
California Annual Grassland (CAG)
Interior Live Oak Pine (ILOP)
Nonnative Annual Grassland (NAG)
Developed (DEV)
Disturbed

Aerial Photograph: 17 June 2020
WV02 Metro Maxar Imagery
ESRI ArcMap Basemap layer

20087LinLotSplit_Fig3BioresMap.mxd

1. Blue Oak Pine

A total of 2.13 acres of blue oak pine occurs in the BSA (Figure 4). This community occurs on dry slopes and terraces in the northern portion of the BSA. The overstory of this community is dominated by blue oak (*Q. douglasii*) and foothill pine (*Pinus sabiniana*) with lesser amounts of interior live oak (*Quercus wislizeni*), California black walnut (*Juglans hindsii*), and California buckeye (*Aesculus californica*). When present, the shrub layer is dominated by poison oak (*Toxicodendron diversilobum*). The herb layer is dominated by nonnative annual grasses including slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), bristly dogtail grass (*Cynosurus echinatus*), rye grass (*Festuca perennis*), and rattail sixweeks fescue (*Festuca myuros*). Native forbs present in the understory include goldback fern (*Pentagramma triangularis*), sanicle (*Sanicula* spp.), mule's ears (*Wyethia angustifolia*), common fiddleneck (*Amsinckia menziesii*), and morning-glory (*Calystegia occidentalis*). Vegetation in this community may be classified as *Q. douglasii – P. sabiniana* Association (CDFW Code 71.020.02 / Rarity Rank G4S4). This vegetation association is not highly imperiled in California. Impacts to oaks and oak woodlands are regulated by the County (see Section V.E).

2. Interior Live Oak – Pine

A total of 2.15 acres of interior live oak – pine occurs in the BSA (Figure 4). This forested community occurs in the easternmost portion of the BSA. This community is dominated by interior live oak and foothill pine with lesser amounts of interior blue oak, and edible fig (*Ficus carica*). When present, the shrub layer is dominated by poison oak. The herb layer is dominated by nonnative annual grasses including ripgut brome, bristly dogtail grass, and rye grass. Native forbs present in the understory include goldback fern, sanicle, and morning-glory, and leather root (*Hoita macrostachya*). Vegetation in this community may be classified as *Quercus wislizeni – Pinus sabiniana* / annual grass Association (CDFW Code 71.080.01/ Rarity Rank G4S4). This vegetation association is not highly imperiled in California. Impacts to oaks and oak woodlands are regulated by the County (see Section V.E).

3. California Annual Grassland

A total of 4.88 acres of California annual grassland occurs in the BSA. This community occurs in the open pasture in the southern portion of the BSA (Figure 4; Appendix D, Photos 1, 2, 3 and 4). This community is dominated by nonnative annual grasses including slender wild oat, ripgut brome, soft chess (*Bromus hordeaceus*), bristly dogtail grass, rye grass, and rattail sixweeks fescue, Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and hare barley (*H. murinum* ssp. *leporinum*). Native forbs occur at approximately 10% relative cover and include miniature lupine (*Lupinus bicolor*), deervetch (*Acmispon americanus* var. *americanus*), harvest brodiaea (*Brodiaea elegans* ssp. *elegans*), navarretia (*Navarretia* sp.), willowherb (*Epilobium ciliatum*), and common fiddleneck. Vegetation in this community is periodically mowed. The California annual grassland was previously used for cattle grazing

and alfalfa crops (pers. comm., Tom Lin, owner). No native vegetation associations were recognized within this community. California annual grassland is not a sensitive natural community. Some scattered blue oak trees occur in this community at around 5% cover. Impacts to oaks and oak woodlands are regulated by the County (see Section V.E).

4. Nonnative Annual Grassland

A total of 1.57 acres of nonnative annual grassland occurs in the BSA (Figure 4). This community occurs in the northwestern portion of the BSA. This community is dominated by nonnative annual grasses including slender wild oat, ripgut brome, soft chess, bristly dogtail grass, rye grass, and rattail sixweeks fescue, and hare barley. Native forbs are generally absent. Vegetation in this community was classified as Vegetation in this community is periodically mowed. No native vegetation associations were recognized within this community. Nonnative annual grassland is not a sensitive natural community. One ornamental juniper (*Juniperus* sp.) occurs within this community along the western edge of the BSA near Salmon Falls Road.

5. Impoundments

Four man-made impoundments (IM-1 through IM-4) occur along a single east-west drainage in the northern portion of the BSA the BSA (Appendix D, Photos 8, 9, 11, and 12; Figure 4). The impoundments were delineated during a concurrently prepared aquatic resources delineation and occupy a collective 1.01 acres in the BSA (SWCA 2021). The impoundments consist of earthen berms placed across a natural drainage. They appear to have been constructed by 1973 (SWCA 2021). IM-1 and IM-2 are permanently flooded features fed by a perennial stream that enters the BSA from the east. The drainage is intermittent by the time it reaches IM-3 and IM-4 and as it exits the BSA to the west, ultimately draining to Folsom Lake. IM-3 and IM-4 may dry up completely in some years. Vegetation below the ordinary high water mark (OHWM) of the impoundments generally consists of a mixture of cattails (*Typha* sp.), rabbitfoot grass (*Polypogon monspeliensis*), and monkeyflower (*Mimulus guttatus*). No riparian vegetation occurs along the impoundments. Some horticultural plantings have been installed adjacent to the impoundments. There are no riparian corridors or wetlands associated with the impoundments. The impoundments are potential Clean Water Act jurisdictional waters and waters of the state (SWCA 2021). No vegetation associations were recognized in this community. The impoundments are a sensitive natural community. Predatory American bullfrogs (*Lithobates catesbeianus*) and warm water game fish including bass (*Micropterus* sp.) and sunfish (*Centrarchidae*) were observed in the impoundments during the biological survey.

6. Channels

Three channels (CH) occupy 0.10 acre occur in the BSA (Figure 4; Appendix D, Photos 5, 6, 7, 9, and 10). Perennial and intermittent channels (CH-1a, CH1-b, CH-1c, CH-1e, and CH-1f) are sensitive natural communities regulated as waters of the U.S. and waters of the state (SWCA 2021). The ephemeral channels within the BSA (CH-1d, CH-2, and CH-3) are

not regulated under the current definition of waters of the U.S. (SWCA 2021). The ephemeral channels may be regulated by the state.

Channel 1

CH-1 is a modified natural drainage that passes through the four impoundments described above (Figure 4; Appendix D, Photos 7, 9, and 10). The reaches of CH-1 separated by impoundments were mapped separately as CH-1a-f. The concurrently prepared aquatic resource delineation classified channel hydrology as follows (SWCA 2021):

- CH 1a – Perennial (flowing during fieldwork)
- CH 1b – Perennial (flowing during fieldwork)
- CH 1c – Intermittent (flowing during fieldwork)
- CH 1d – Ephemeral
- CH 1e – Intermittent
- CH 1f – Intermittent
- CH 2 – Ephemeral
- CH 3 – Ephemeral

CH-1a occurs on natural rock substrate. CH-1b occurs on a combination of natural and imported rock substrate. CH-1c, CH-1e, and portions of CH-1f are lined with imported rock and appear to be realigned portions of the natural channel. CH-f has scoured down to bedrock as it returns the natural channel downstream. Vegetation on the bed of CH-1a and CH-1b consists mainly of rabbitfoot grass, monkeyflower, bent grass (*Agrostis* sp.), and sedge (*Carex* sp.). Vegetation on the bed of CH-1c consists of rabbitfoot grass. Vegetation on the beds of CH-1d consists of upland nonnative grasses. Vegetation on the bed of CH-1e and CH-1f is generally absent. CH-1f flows from the southwestern end of IM-4 to the west, out of the BSA and through a culvert under Salmon Falls Road. CH-1f ultimately flows west into Folsom Lake. No wetlands, sensitive vegetation types, or riparian vegetation occur in or along CH-1. Some trees typical of the surrounding uplands occur near the channels. Some horticultural plantings have been installed along the channels.

Channel 2

CH-2 is an ephemeral channel in a gentle swale located roughly 50 feet southeast of IM-3 (Appendix D, Photo 6). The 26-foot segment of CH-2 mapped in the BSA receives sheet flow from the surrounding uplands and then redeposits the water as sheet flow once more at its northwest end. The sheet flow from CH-2 flows over uplands into IM-3, outside any defined channel. CH-2 is heavily shaded by oaks and generally contained sparse annual grassland vegetation similar to the surrounding uplands. The channel bed is earthen. No wetlands, sensitive vegetation types, or riparian vegetation occur in or along CH-2.

Channel 3

CH-3 is an ephemeral roadside ditch along the east side of Salmon Falls Road in the southern portion of the BSA (Appendix D, Photo 5). CH-3 flows into a culvert that passes beneath Salmon Falls Road. Water in CH-3 ultimately flows to Folsom Lake. Vegetation was generally absent in CH-3. The channel bed is earthen. No wetlands, sensitive vegetation types, or riparian vegetation occur in or along CH-3.

7. Disturbed

A total of 0.28 acres of disturbed land occurs within animal enclosures in the northwest corner of the BSA (Figure 4). The disturbed area generally lacks vegetation. Nonnative weeds and nonnative annual grasses may occur briefly in the spring, or when grazing animals are not present. No native vegetation associations were recognized within this community. Nonnative annual grassland is not a sensitive natural community.

8. Developed

A total of 2.88 acres of developed land occurs in the northern portion of the BSA (Figure 4). Buildings and associated driveways, pads, awnings, and landscaping occur in the area classified as developed. A portion of Salmon Falls Road at the western edge of the BSA was also classified as developed land. Developed land lacks natural vegetation. Developed land is not a sensitive natural community.

D. The Existing Level of Disturbance

Several buildings occur in the northern portion of the BSA, each with a paved driveway connecting to Salmon Valley Lane. Landscaping and lawns occur adjacent to some of the buildings. The main drainage that flows east to west through the property has been heavily modified with impoundments and engineered spillways lined with imported rock. Ornamental trees have been planted around the impoundments. According to the owner, the southern 5-acre portion of the parcel was previously used for cattle grazing and alfalfa crops. The majority of the open grassland in the BSA has been mowed.

V. BIOLOGICAL RESOURCES IN THE STUDY AREA

A. Determination of Special-Status Species in the Study Area

USFWS file data, CNDDB/CNPS records, and field surveys were used to determine the special-status species that could occur in the BSA (Appendix A). A field survey was conducted to determine whether habitat for special-status species identified in the file data is present in the BSA. Special-status species for which suitable habitat is present in the BSA are listed in Table 3.

Table 3. Special-Status Species and Natural Communities with Potential to Occur.

Special-Status Species	Common Name	Federal Status [a]	State Status [a] & other codes [b]	Source [c]	Habitat Present? / Species Observed?
Amphibians					
Rana boylii	Foothill yellow-legged frog	--	E	2	Yes/No
Rana draytonii	California red-legged frog	T, CH	--	1, 2	Yes/No
Spea hammondi	Western spadefoot	--	SSC	2	Yes/No
Reptiles					
Emys marmorata	Western pond turtle	--	SSC	2	Yes/**Yes**
Birds					
Agelaius tricolor	Tricolored blackbird	--	T	2	Yes/No
Ammodramus savannarum	Grasshopper sparrow	--	SSC	2	Yes/No
Aquila chrysaetos	Golden eagle	--	FP	2	Yes/No
Athene cunicularia	Burrowing owl	--	SSC	2	Yes/No
Buteo swainsoni	Swainson's hawk	--	T	2	Yes/No
Elanus leucurus	White-tailed kite	--	FP	2	Yes/No
Haliaeetus leucocephalus	Bald eagle	D	E	2	Yes/No
Nesting Birds (MBTA or CA Fish & Game Code regulated)		--	--	3	Yes/**Yes**
Mammals					
Antrozous pallidus	Pallid bat	--	SSC	2	Yes/No
Taxidea taxus	American badger	--	SSC	2	Yes/No
Plants			**/ CNPS List [b]**		
Balsamorhiza macrolepis	Big-scale balsamroot	--	--/1B.2	2	Yes/No
Gratiola heterosepala	Boggs Lake hedge-hyssop	--	E/1B.2	2	Yes/No
Sagittaria sanfordii	Sanford's arrowhead	--	--/1B.2	2	Yes/No

[a] **Listing Status:** Federal status determined from USFWS letter. State status determined from CDFW (2021). Codes used in table are: **E** = Endangered; **T** = Threatened; **P** = Proposed; **C** = Candidate; **R** = California Rare; ***** = Possibly extinct.

[b] **Other Codes:** Other codes determined from USFWS letter; CDFW (2021). Codes used in table are as follows:

SSC = CDFW Species of Special Concern; **FP** = CDFW Fully Protected; **Prot** = CDFW Protected; **CH =** Critical habitat designated.

CNPS List (plants only): **1A** = Presumed Extinct in CA; **1B** = Rare or Endangered (R/E) in CA and elsewhere; **2** = R/E in CA and more common elsewhere; **3** = Need more information; **4** = Plants of limited distribution

CNPS List Decimal Extensions: .1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); **.2** = Fairly endangered in CA (20-80% of occurrences threatened); **.3 =** Not very endangered in CA (< 20% of occurrences threatened or no current threats known).

[c] **Source: 1** = USFWS letter. **2** = CNDDB. **3 =** Observed or included by SWCA.

B. Special-Status Species not in the Project Study Area

Special-status species for which suitable habitat is not present, or whose distributional limits preclude the possibility of their occurrence in the BSA, are not discussed in Section V of this report. An evaluation of these species is in Appendix B.

C. Evaluation of Special-Status Wildlife Species

1. Amphibians

Foothill yellow-legged frog (*Rana boylii*)

HABITAT AND BIOLOGY: The clade of foothill yellow-legged frog (FYLF) that occurs in El Dorado County is listed as state endangered (CDFW 2021b). FYLF is primarily stream dwelling and requires shallow, flowing water in streams and rivers with at least some cobble-sized substrate (Thompson et al. 2016). FYLF are found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley foothill riparian, Ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types. Adults often bask on exposed rock surfaces near streams and take refuge under submerged rocks or sediments when disturbed. During periods of inactivity, individuals seek cover under rocks in the streams or on shore within a few meters of water (CWHR 2021). FYLF are highly aquatic and spend most or all of their life in or near streams (Ashton et al. 1998; Jennings and Hayes 1994). FYLF require permanent streams in which to reside and are rarely found far from permanent water (CWHR 2021).

Adult FYLF are primarily diurnal with high site fidelity and small home ranges. FYLF may be active all year in the warm localities, but may become inactive or hibernate in colder areas. Eggs are laid in low velocity stream margins, generally attached to cobble and pebble, but may also be attached to aquatic vegetation, woody debris, and gravel (Ashton et al.1998). Egg deposition generally occurs from late March to early June, after streams have slowed from winter runoff (Jennings and Hayes 1994). Tadpoles require water for at least 3 or 4 months while completing their aquatic development (CWHR 2021). FYLF are infrequent or absent in habitats where introduced predators (i.e., various fishes, bullfrogs [*Lithobates catesbeianus*]) are present (Jennings and Hayes 1994). FYLF rarely occur far from the water's edge.

RANGE: Historically, foothill yellow-legged frog was known from most Pacific drainages from the Santiam River system (Marion County, OR) to the San Gabriel River system (Los Angeles County, CA). This species has not been observed south of the Transverse Ranges since 1970. Currently, FYLF are known primarily from the north and south Coast Ranges, the Klamath Mountains, and the west slope of the Sierra Nevada, from sea level to 6,370 feet (Jennings and Hayes 1994).

KNOWN RECORDS: There are five CNDDB records of this species within the nine-quad area surrounding the BSA. The closest (Occurrence #1913), occurs approximately 2 miles southwest of the BSA. The record is based on a 1972 collection. The population associated with the Occurrence #1913 is presumed extirpated. The only record within the nine-quad

area surrounding the BSA that is presumed extant occurs approximately 10.3 miles northeast of the BSA. The extant record is based on 100 individuals of all ages observed in Indian Creek in October 2003. In July 2004, 14 tadpoles and 1 adult were observed at the same location.

HABITAT PRESENT IN THE BSA: CH-1 is a rocky, intermittent to perennial stream that provides suitable habitat for FYLF. IM-1 and IM-2 provide perennial sources of water.

DISCUSSION: FYLF was not observed in the BSA during the biological survey in 2021. FYLF could occur in CH-1 and in IM-1 through IM-4. Breeding is unlikely due to the lack of cobble-sized rock substrate in the channel, low flows within the channel, presumed high water temperatures, and the presence of introduced predators including American bullfrog and predatory bass and sunfish in the impoundments. There are no known populations of FYLF within dispersal distance of the BSA. It is unlikely that FYLF occurs in the BSA.

California red-legged frog (*Rana draytonii*)

HABITAT AND BIOLOGY: CRLF was listed as a federal-threatened species on 23 May 1996 (FR 61:25813-25833). Critical habitat was designated for CRLF in April 2006 (FR 71:19244-19346) and revised in March 2010 (FR 51:12816-12959). CRLF inhabits ponds and quiet pools of streams and marshes (CWHR 2021). Adults typically require dense, shrubby, or emergent riparian vegetation closely associated with deep (2+ feet), still, or slowly moving water. Deep-water pools with dense stands of overhanging willows intermixed with cattails support the highest densities of CRLF. Well-vegetated terrestrial areas within a riparian corridor may provide important sheltering habitat during the winter (USFWS 1996a). Frogs spend considerable time resting and feeding in riparian vegetation when it is present (USFWS 2002a).

CRLF requires water to breed. Breeding sites may contain water only seasonally, but sufficient water must persist into the summer for tadpoles to reach a size sufficient for metamorphosis. CRLF typically breeds from mid-December through early April, earlier than other ranids within its range (Barry and Fellers 2013). The timing of breeding is likely influenced by local precipitation and ambient temperature. CRLF typically breed after significant rainfall and after the cold periods of winter have passed (Cook 1997).

RANGE: CRLF are endemic to California and Baja California, Mexico. Its known elevation range extends from near sea level to approximately 5,200 feet. Nearly all sightings have occurred below 3,500 feet (USFWS 2002a). CRLF historically occurred through pacific slope drainages from the vicinity of Redding (Shasta County) inland, and to Point Reyes (Marin County) southward to the Santo Domingo River drainage in Baja California, Mexico (Jennings and Hayes 1994). CRLF is now known only from isolated localities in the Sierra Nevada, northern coast, and northern transverse ranges (USFWS 2002a).

KNOWN RECORDS: There is one CNDDB record of this species within the nine-quad area surrounding the BSA. The record occurs approximately 1.2 miles west of the BSA. One

juvenile was observed in 2005 in a small watercourse that drains into Folsom Lake. The watercourse was vegetated with sedges and Himalayan blackberry (*Rubus armeniacus*).

HABITAT PRESENT IN THE BSA: CH-1 is a rocky, intermittent to perennial stream that provides suitable foraging and dispersal habitat for CRLF. The impoundments provide marginal breeding habitat. IM-1 and IM-2 provide perennial sources of water.

DISCUSSION: CRLF was not observed in the BSA during the biological survey. Potentially suitable aquatic habitat occurs in CH-1 and in IM-1 through IM-4. Breeding is unlikely due to the presence of introduced predators including American bullfrog and predatory bass and sunfish in the impoundments. There are no known populations of CRLF within dispersal distance of the BSA. It is unlikely that CRLF occurs in the BSA.

Western spadefoot (*Spea hammondi*)

HABITAT AND BIOLOGY: Western spadefoot is a CDFW species of special concern (CDFW 2021b). Grasslands with shallow temporary pools are optimal habitats for western spadefoots. Western spadefoots occur primarily in grasslands, but occasionally populations also occur in valley-foothill hardwood woodlands. Some populations persist for a few years in orchard or vineyard habitats (CWHR 2021). They are primarily found in the lowlands frequenting washes, floodplains of rivers, alluvial fans, playas, and alkali flats. Western spadefoots prefer areas of open vegetation and short grasses with sandy or gravelly soil (Stebbins 2003). They are rarely found on the surface, spending most of the year in underground burrows up to 36 inches deep, which they construct themselves. Some individuals use mammal burrows. Most surface movements by adults are associated with rains or high humidity at night. Few movements occur during most of the year, and movements to and from breeding ponds are rarely extensive (CWHR 2021).

Rainfall is important in the formation and maintenance of breeding ponds. Western spadefoots breed and lay eggs almost exclusively in shallow, temporary pools formed by heavy winter rains (CWHR 2021). They also breed in quiet streams (Stebbins 2003). Egg masses are attached to plant material or the upper surfaces of small, submerged rocks. Breeding activities normally conclude by the end of March. Tadpoles transform during late spring. Recently metamorphosed juveniles seek refuge in the immediate vicinity of breeding ponds for up to several days after transformation. Dispersal of post-metamorphic juveniles from breeding ponds often occurs without rainfall. They hide in drying mud cracks, and under boards and other surface objects (CWHR 2021).

RANGE: Western spadefoot ranges throughout the Central Valley and adjacent foothills. In the Coast Ranges the species is found from Point Conception, Santa Barbara County, south to the Mexican border. Occurrences are known from near sea level to 4,460 feet in the southern Sierra foothills (CWHR 2021).

KNOWN RECORDS: There are three CNDDB records of this species within the nine-quad area surrounding the BSA. The closest (Occurrence #498) occurs approximately 4 miles

southwest of the BSA. One western individual was heard calling at night during audio surveys at Mormon Island Wetland Preserve in February 2008.

HABITAT PRESENT IN THE BSA: CH-1 is a rocky, intermittent to perennial stream that provides suitable foraging and dispersal habitat for Western spadefoot. The impoundments provide marginal breeding habitat.

DISCUSSION: Western spadefoot was not observed in the BSA during the biological survey. The BSA does not contain shallow, temporary pools formed by heavy winter rains, and thus it is unlikely that western spadefoot would breed in the BSA. Breeding in the impoundments (which are estimated to be 3-15 feet deep) is unlikely due to the presence of introduced predators including American bullfrog and predatory bass and sunfish. There are no known populations of western spadefoot within dispersal distance of the BSA. It is unlikely that western spadefoot occurs in the BSA.

2. Reptiles

Western pond turtle (*Emys marmorata*)

HABITAT AND BIOLOGY: Western pond turtle (WPT) is a CDFW species of special concern (CDFW 2021b). WPT prefers aquatic habitats with abundant vegetative cover and exposed basking sites such as logs. WPT is associated with permanent or nearly permanent water in a wide variety of habitat types, normally in ponds, lakes, streams, irrigation ditches, or permanent pools along intermittent streams (CWHR 2021). They are omnivorous generalists and opportunistic predators that prey upon small insects, aquatic invertebrates, fish, frogs, snakes, and small mammals. They also eat aquatic plant material and carrion (Stebbins 2003).

Two distinct habitats may be used for oviposition. Along large, slow-moving streams, eggs are deposited in nests constructed in sandy banks. Along foothill streams, females may climb hillsides, sometimes traveling over 330 feet to find a suitable nest site. Soil must usually be at least 4 inches deep for nesting. Generally, 3 to 11 eggs are laid from March to August depending on local conditions and are incubated for approximately 73 to 80 days (CWHR 2021).

RANGE: WPT occur throughout northern CA west of the Sierra Nevada (Stebbins 2003) from sea level to 6,000 feet (CWHR 2021).

KNOWN RECORDS: There are thirteen CNDDB records of this species within the nine-quad area surrounding the BSA. The closest (Occurrence #1359) occurs approximately 4.5 miles southwest of the BSA. Thirteen individuals were caught and released at Mormon Island Wetland Preserve over a period of 29 trap days in 2009. Most recently, one adult female and one juvenile were captured in April 2016.

HABITAT PRESENT IN THE BSA: The impoundments and channels provide suitable habitat for western pond turtle.

DISCUSSION: One turtle was observed in IM-3 during the biological survey. The turtle could not be identified before it quickly retreated and concealed itself. The turtle may have been a WPT. WPT could occur in any of the impoundments or channels within the BSA. The impoundments contain some emergent vegetation that would provide cover, as well as open, rocky areas suitable for basking. Potential prey such as small fish and frogs were observed in the channels during the survey. WPT could nest on the banks bordering CH-1 and the impoundments.

3. Birds

Tricolored blackbird (*Agelaius tricolor*)

HABITAT AND BIOLOGY: Tricolored blackbird is a state threatened species (CDFW 2021b). Tricolored blackbirds form the largest breeding colonies of any North American inland bird species (Shuford and Gardali 2008). Colonies vary in size from a minimum of about 50 nests to over 20,000 in an area of 10 acres or less (CWHR 2021).

Basic breeding site requirements are open, accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few kilometers of the nesting colony. Historically, most colonies nested in freshwater marshes dominated by cattails or tules, while some colonies nested in nettles, thistles, and willows. However, the use of freshwater marshes as breeding colony sites has decreased. An increasing percentage of colonies since the 1970s have been reported in Himalayan blackberry and thistles, and some of the largest recent colonies were in silage and grain fields near dairies in the San Joaquin Valley. Other less commonly used substrates include safflower, tamarisk, elderberry, western poison oak, giant reed, riparian scrublands, and riparian forests.

Ideal foraging conditions for this species are created when shallow flood irrigation, mowing, or grazing keeps the vegetation less than 6 inches tall. Preferred foraging habitats include crops such as rice, alfalfa, irrigated pastures, and ripening or cut grain fields, as well as annual grasslands, cattle feedlots, and dairies. Tricolored blackbirds also forage in native habitats, including wet and dry vernal pools and other seasonal wetlands, riparian scrub habitats, and open marsh borders. Proximity to suitable foraging habitat appears important for the establishment of colony sites (Shuford and Gardali 2008).

RANGE: In California, tricolored blackbird breeding occurs in the Sacramento and San Joaquin valleys, the foothills of the Sierra Nevada south to Kern County, the coastal slope from Sonoma County south to the Mexican border, and sporadically, the Modoc Plateau. Tricolored blackbirds are a permanent resident in California, but make extensive migrations and movements within their range, both in the breeding season and in winter. Individuals usually move north after first nesting efforts (March-April) in the San Joaquin Valley and Sacramento County to new breeding locations in the Sacramento Valley, northeastern California, and rarely Oregon, Nevada, and Washington (Shuford and Gardali 2008).

KNOWN RECORDS: There are 23 CNDDB record of tricolored blackbird within the 9-quad area surrounding the BSA. The closest record (Occurrence #102) is approximately 3.8 miles northeast of the BSA. A nesting colony of about 400 pairs were observed in May of 1971. No birds were observed at the site in 1992, 2000, or 2014.

HABITAT PRESENT IN THE BSA: The emergent vegetation in the impoundments provides potentially suitable nesting habitat for a tricolored blackbird colony. Grasslands in the BSA provide suitable foraging habitat.

DISCUSSION: Tricolored blackbird was not observed in the BSA during the survey and there was no evidence of tricolored blackbird nesting in 2021. Red-winged blackbirds (*Agelaius phoeniceus*) successfully nested in the cattails in IM-3 in 2021. There may be enough cattails to support a tricolored blackbird nesting colony in the future. No other potential nesting habitat was observed in the BSA.

Grasshopper sparrow (*Ammodramus savannarum*)

HABITAT AND BIOLOGY: Grasshopper sparrow is a state species of special concern (2021b). Grasshopper sparrow occurs in California primarily as a summer resident from March to September (Shuford and Gardali 2008). Most migrate south in August or September. Grasshopper sparrows that winter in California are secretive and chiefly occur along the southern coast (CWHR 2021). The grasshopper sparrow's ecology varies substantially from region to region within its wide range, and has received very little study in California. In general, grasshopper sparrows in California prefer short to middle height, moderately open grasslands with scattered shrubs. These sparrows are generally absent from areas with extensive shrub cover. Patchy bare ground has also been noted as an important habitat component. Grasshopper sparrows are more likely to be found in large tracts of habitat than in small ones (Shuford and Gardali 2008).

Grasshopper sparrows breed from early April to mid-July, with a peak in May and June. A thick cover of grasses and forbs is essential for concealment. Pairs generally nest solitarily and build a nest of grasses and forbs in a slight depression in the ground, hidden at the base of an overhanging clump of grasses or forbs. They search for food on the ground and in low foliage within relatively dense grasslands (CWHR 2021).

RANGE: In California, grasshopper sparrow is an uncommon and local, summer resident and breeder in foothills and lowlands west of the cascade-Sierra Nevada crest from Mendocino and Trinity counties south to San Diego County (CWHR 2021). Agriculture and urbanization have greatly reduced numbers of grasshopper sparrows in the Central Valley, but anecdotal evidence indicates they still breed very locally, primarily at the edges of and in low foothills, but also very sparingly on the valley floor (Shuford and Gardali 2008).

KNOWN RECORDS: There is one CNDDB record of grasshopper sparrow within the nine-quad area surrounding the BSA. The record (Occurrence #15) is approximately 14 miles south of the BSA. Two adults were observed in foothill grassland and swale habitat in the Prairie City State Vehicle Recreation Area in May 2007.

HABITAT PRESENT IN THE BSA: The grasslands in the BSA provide suitable foraging habitat.

DISCUSSION: Grasshopper sparrow was not observed in the BSA during the biological survey. Grasslands in the BSA are sparsely vegetated and mowed regularly. The grasslands do not provide suitable nesting habitat. Grasshopper sparrow could forage in the BSA.

Golden eagle (*Aquila chrysaetos*)

HABITAT AND BIOLOGY: Golden eagle is a species considered fully-protected by CDFW (2021b). Golden eagles are generally found in rolling foothills, mountain areas, sage-juniper flats, desert; open country of prairies, arctic and alpine tundra, open wooded country, and barren areas, especially in hilly or mountainous regions (NatureServe 2021). Golden eagles need open terrain for hunting such as grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats. Golden eagles use secluded cliffs with overhanging ledges and large trees for cover. Golden eagles nest on cliffs of all heights and in large trees in rugged, open areas with canyons and escarpments. Alternative nest sites are maintained and old nests are reused. Golden eagles breed from late January through August with a peak from March through July (CWHR 2021). Nesting and nonbreeding/wintering sites are of concern to CDFW (2021).

RANGE: Golden eagles are an uncommon permanent resident and migrant throughout California, except the center of the Central Valley. This species is perhaps more common in southern California than in the north. Golden eagles range from sea level to 11,500 feet (CWHR 2021).

KNOWN RECORDS: There are two CNDDB record of golden eagle within the nine-quad area surrounding the BSA. The closest record (Occurrence #322) is approximately 5 miles south of the BSA. Two adults were observed near a nest tree in El Dorado Hills in February 2015.

HABITAT PRESENT IN THE BSA: Large foothill pine trees provide marginal nesting habitat for golden eagle. Grasslands provide suitable foraging habitat.

DISCUSSION: Golden eagle was not observed in the BSA during the biological survey. No potential raptor nests were observed in the BSA. Large trees in the BSA could be used for nesting, however this is considered unlikely due to adjacent development and the lack of canyons and escarpments in the area. Grasslands in the BSA provide potential foraging habitat.

Burrowing owl (*Athene cunicularia*)

HABITAT AND BIOLOGY: Burrowing owl is a CDFW species of special concern (2021b). Nesting site are of concern to CDFW (2021). Burrowing owls primarily inhabit open, dry grassland and desert habitats, such as grasses, forbs, and open shrub stages of pinyon-juniper and ponderosa pine habitats (CWHR 2021, Shuford and Gardali 2008). Main habitat components include burrows for roosting and nesting, and relatively short vegetation with

sparse shrubs and taller vegetation (Shuford and Gardali 2008). Burrowing owls most commonly use ground squirrel burrows, but they may also use badger, coyote, and fox holes or dens; or human-made structures such as culverts, piles of concrete rubble, pipes and nest boxes (CWHR 2021; Shuford and Gardali 2008). An active nest chamber is often lined with excrement, pellets, debris, grass and feathers (CWHR 2021). This species also thrives in highly altered human landscapes. In agricultural areas, owls nest along roadsides, under water conveyance structures, and near and under runways and similar structures. In urban areas, burrowing owls persist in low numbers in highly developed parcels, busy urban parks, and adjacent to roads with heavy traffic (Shuford and Gardali 2008).

Burrowing owls are a semi-colonial species that breed in California from March through August, though breeding can begin as early as February and extend into December (Shuford and Gardali 2008; CWHR 2021). A large proportion of adults show strong nest site fidelity. Burrowing owls typically feed on a broad range of insects, but also on small rodents, birds, amphibians, reptiles, and carrion. Foraging usually occurs close to their burrow (Shuford and Gardali 2008).

RANGE: Burrowing owls are a year-round resident in most of California, particularly in the Central Valley, San Francisco Bay region, Carrizo Plain, and Imperial Valley (Shuford and Gardali 2008). This species is generally absent from the coastal counties north of Marin and mountainous areas above 5,300 feet. Burrowing owl has declined along the central and southern coast, but large populations remain in agricultural areas in the Central and Imperial valleys (Shuford and Gardali 2008; CWHR 2021). Burrowing owl winter range extends east to the western portion of El Dorado County. The BSA is located within winter range of burrowing owl (CWHR 2021).

KNOWN RECORDS: There are no records of burrowing owl in El Dorado County. There are eight CNDDB records of burrowing owl within the nine-quad area surrounding the BSA. The closest record (Occurrence #1166) is approximately 7 miles south of the BSA in Sacramento County. Two owls were observed at a burrow site in annual grassland foothills in December 2006. The owls were nesting in a rock outcropping instead of a burrow.

HABITAT PRESENT IN THE BSA: The grassland provides suitable wintering habitat for burrowing owl.

DISCUSSION: No burrowing owl or sign of burrowing owl was observed during the biological survey. No small mammals or small mammal burrows were observed during the survey. The BSA is outside the summer breeding range of burrowing owl. The BSA is within the winter range of burrowing owl. Non-breeding owls could forage in the BSA during the winter. Burrows occupied by burrowing owl are not expected to occur.

Swainson's hawk (*Buteo swainsoni*)

HABITAT AND BIOLOGY: Swainson's hawk is a state threatened species (CDFW 2021b). Swainson's hawks nest in open riparian habitat, in scattered trees, or in small groves in sparsely vegetated flatlands. Nesting areas are usually located near water, but are

occasionally found in arid regions. Typical habitat includes open desert, grassland, or cropland containing scattered, large trees or small groves (CWHR 2021). Swainson's hawk breeds from late March to late October (CWHR 2021). They forage in adjacent grasslands, suitable grain or alfalfa fields, or in livestock pastures, feeding on rodents, small mammals, small birds, reptiles, large arthropods, amphibians, and, rarely, fish (Bloom 1980; CWHR 2021).

RANGE: Swainson's hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Swainson's hawks breed and forage in the California's Central Valley in spring and summer. Migrating individuals move south through the southern and central interior of California in September and October, some migrating as far as South America (CWHR 2021).

KNOWN RECORDS: There are eight CNDDB record of Swainson's hawk within the nine-quad area surrounding the BSA. The closest record (Occurrence #2662) is approximately 6.3 miles southwest of the BSA. An active nest was observed near Folsom in 1962 and again in 1979.

HABITAT PRESENT IN THE BSA: Large trees provide potential nesting habitat for Swainson's hawk. The grassland provides suitable foraging habitat.

DISCUSSION: Swainson's hawk was not observed in the BSA during the biological survey. No potential raptor nests were observed during the survey. The BSA is 3 miles outside of Swainson's hawk range and predicted habitat modeling (CDFW 2021a). Since repeated breeding has occurred just 6.3 miles to the southwest in the past (CNDDB Occurrence #2662), it is possible that Swainson's hawks could establish a nest in the large trees within the BSA. Potential nest trees also occur in the land surrounding the BSA. Grasslands in the BSA provide suitable foraging habitat for Swainson's hawk.

White-tailed kite (*Elanus leucurus*)

HABITAT AND BIOLOGY: White-tailed kite is a CDFW fully protected species (CDFW 2021b). Nesting sites are of concern to CDFW (2021a). White-tailed kite inhabit herbaceous and open stages of most habitats, mostly in cismontane California. They forage in undisturbed, open grasslands, meadows, farmlands and emergent wetlands. Trees with dense canopies are used for cover. Areas with substantial groves of dense, broad-leafed deciduous trees are generally used for nesting and roosting. Nests are typically located from 20 to 100 feet above the ground near the top of dense oak, willow, or other tree, and are often located near an open foraging area with a dense population of voles. They are rarely found away from agricultural areas. White-tailed kite prey mostly on voles and other small, diurnal mammals, occasionally on birds, insects, reptiles, and amphibians. White-tailed kites breed from February to October, with peak activity from May to August (CWHR 2021).

RANGE: White-tailed kite is a year-round resident of coastal and valley lowlands in cismontane California. They are absent from higher elevations in the Sierra Nevada, the Modoc Plateau, and from most desert regions. The eastern extent of the white-tailed kite range includes the western portion of El Dorado County (CWHR 2021).

KNOWN RECORDS: There are 10 CNDDB record of white-tailed kite within the nine-quad area surrounding the BSA. The closest record (Occurrence #149) approximately 4.7 miles southwest of the BSA. Two adults were observed at a nest just south of Sophia Parkway in El Dorado Hills in August 2008.

HABITAT PRESENT IN THE BSA: Large trees provide potential nesting habitat for white-tailed kite. The grassland provides suitable foraging habitat.

DISCUSSION: White-tailed kite was not observed in the BSA during the biological survey. The area surrounding the BSA is either undeveloped or residential. White-tailed kite is more likely to nest closer to agricultural fields that provide ample foraging habitat. White tailed kite could nest in the large trees and forage in the grassland in the BSA.

Bald eagle (*Haliaeetus leucocephalus*)

HABITAT AND BIOLOGY: Bald eagle is a state endangered species (CDFW 2021b). Bald eagles occur along coasts, rivers, and large, deep lakes and reservoirs inland. They require large bodies of water, or free-flowing rivers with abundant fish, and adjacent snags or other perches. Bald eagles perch in high, large, stoutly limbed trees, snags, broken topped trees, or high rock ledges. They roost communally in winter in dense, sheltered, remote conifer stands. They nest in large, old growth, or dominant live trees with open branch work, especially Ponderosa pines. Bald eagles nest most frequently in stands with less than 40% canopy. Bald eagles breed from February through July, with peak activity from March to June. Bald eagles usually do not begin nesting if human disturbance is evident (CWHR 2021).

RANGE: Bald eagles are a permanent resident, and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity counties. About half of the wintering population is in the Klamath basin. Bald eagles are more common at lower elevations and are not found in the high Sierra Nevada (CWHR 2021).

KNOWN RECORDS: There are four CNDDB records of bald eagle within the nine-quad area surrounding the BSA. The closest record (Occurrence #359) is approximately 0.8 mile northwest of the BSA. At least one chick was observed in a nest in a Ponderosa pine along Folsom Lake in El Dorado Hills. Two adults were observed in the area.

HABITAT PRESENT IN THE BSA: Large trees provide potential nesting habitat for bald eagle.

DISCUSSION: Bald eagle was not observed in the BSA during the biological survey. Bald eagle could nest in the large trees within the BSA.

Nesting Birds Listed Under the MBTA or Regulated by CA Fish and Game Code

California Fish and Game Code (FGC) § 3503 protects most birds and their nests. FGC § 3503.5 further protects all birds in the orders Falconiformes and Strigiformes (collectively known as birds of prey). Birds of prey include raptors, falcons, and owls. The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) also protects most birds and their nests, including most non-migratory birds in California. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any bird listed in 50 CFR Part 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations. Any disturbance that causes direct injury, death, nest abandonment, or forced fledging of migratory birds, is restricted under the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a 'take' of the species under federal law.

HABITAT PRESENT IN THE BSA: The BSA provides potential nesting habitat for birds listed under the MBTA and/or regulated by FGC. Depending on the species, birds may nest on trees, shrubs, in or on the ground, and on artificial structures such as buildings, poles, and signs.

DISCUSSION: Several birds listed under the MBTA or regulated by CA Fish and Game Code were observed during the survey (Appendix C). Suspected active nests of house finch (*Carpodacus mexicanus*) were observed in the ornamental juniper tree at the northwest corner of the BSA. House finch is not a protected MBTA bird or bird regulated by the FGC. Nests of protected birds could become established during future nesting seasons in any part of the BSA.

4. Mammals

Pallid bat (*Antrozous pallidus*)

HABITAT AND BIOLOGY: Pallid bat is a CDFW species of special concern (CDFW 2021b). Pallid bat occupies a wide variety of habitats including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. Pallid bat feeds on a wide variety of insects and arachnids, foraging over open ground, usually 1.6 to 8 feet above level ground. This species day roosts in caves, crevices, mines, and occasionally buildings and in hollow trees (CWHR 2021). Pallid bat has also been observed roosting in wide, tall, mature stands of live trees in coniferous forests of California (Baker et al. 2008); and tree cavities in oaks, ponderosa pine, coast redwood and giant sequoia (Bolster 1998). Roost must protect bats from high temperatures. Night roosts may be in more open sites, such as porches and open buildings. Few hibernation sites are known, but rock crevices are probably used. Pallid bats prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Maternity colonies form in early April, and may have a dozen to 100 individuals. Males may roost separately or in the nursery colony. This species is known to roost with other bats. Pallid bats are very sensitive to disturbance of roosting sites (CWHR 2021).

RANGE: Pallid bat is locally common in low elevations in California. This species occurs throughout California except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County. Pallid bat is a yearlong resident in most of the range (CWHR 2021).

KNOWN RECORDS: There are two CNDDB records of pallid bat within the nine-quad area surrounding the BSA. The record (Occurrence #233) is approximately 7.5 miles southwest of the BSA. One female was collected 2 miles northwest of Folsom in June 1941.

HABITAT PRESENT IN THE BSA: Open cavities in the oak trees provide suitable roosting habitat for pallid bat. The woodlands and grasslands in the BSA provide suitable foraging habitat.

DISCUSSION: Pallid bat was not observed in the BSA during the biological survey. The BSA does not provide rocky outcrops, cliffs or crevices preferred by pallid bat. Pallid bat could roost in cavities of the oak trees within the BSA.

American badger (*Taxidea taxus*)

HABITAT AND BIOLOGY: The American badger is a CDFW species of special concern (CDFW 2021b) that occupies grasslands and open stages of shrub and forest habitats with friable soils. Badgers can be active at any hour but are primarily nocturnal. When inactive, badgers dig and occupy underground burrows, sometimes reusing existing burrows but often digging new burrows nightly (Messick and Hornocker 1981). Burrows are dug in areas with dry, often sandy, soils with sparse overstory cover. Badgers feed primarily on fossorial rodents such as ground squirrels and pocket gophers, which they hunt by digging. They also take voles, mice, birds, eggs, reptiles, and insects (CWHR 2021).

Mating occurs in summer and early fall, with delayed implantation. Some females are able to breed in their first year, but males do not sexually mature until their second year. Two to five young are born in natal dens in March and April. Females and kits occupy natal dens until May. Young badgers disperse from the natal den between July and August of their first or second year, sometimes staying within the range of their mother, other times dispersing up to 70 miles from the natal den (Messick and Hornocker 1981). Home ranges sizes of between 0.46 up to 6.83 square miles were documented in Monterey County, California (Quinn 2008). Family members may share the same territory as females, but males are generally solitary except during the breeding season. This species is tolerant of human activities, but is threatened by agricultural and urban development, road-kill, indiscriminate predator trapping, and poisoning (Williams 1986, Kinley and Newhouse 2009).

RANGE: American badger can be found throughout California, except for the northern coast area (CWHR 2021).

KNOWN RECORDS: There are two CNDDB records of American badger within the nine-quad area surrounding the BSA. The closest record (Occurrence #489) is approximately 5.5

miles southwest of the BSA. One dead adult badger was observed in the center median of East Natoma Street in May 2015.

HABITAT PRESENT IN THE BSA: The woodlands and grasslands in the BSA provide suitable foraging and denning habitat.

DISCUSSION: American badger was not observed in the BSA during the biological survey. No medium-sized mammal burrows were observed during the survey. American badger could establish burrows in the woodland or grassland habitat in the BSA.

D. Evaluation of Special-Status Plants

Three special-status plants identified as having potential to occur in the BSA are discussed below. No special-status plants were observed in the BSA during the protocol botanical survey in May 2021, during the evident and identifiable period for all special-status plant species with potential to occur. There are no known records of special-status plants in the BSA.

Big-scale balsamroot (*Balsamorhiza macrolepis*)

HABITAT AND BIOLOGY: Big-scale balsamroot is a perennial herbaceous species found in valley and foothill grasslands, chaparral, cismontane woodlands, and sometimes on serpentinite soils from 295 to 5,102 feet. It blooms March through July (CNPS 2021; Jepson eFlora 2021).

RANGE: Big-scale balsamroot is endemic to California. It is known from Almeda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties (CNPS 2021).

KNOWN RECORDS: There is one CNDDB record of big-scale balsamroot in the nine-quad area surrounding the BSA. The record (Occurrence #14) is from 1997, approximately 5.2 miles northwest of the BSA. The records location is 'Rattlesnake Bend' in Placer County. The occurrence is based on a historic collection with no date or other information. This occurrence is noted as possibly extirpated.

HABITAT PRESENT IN THE BSA: The woodlands and grasslands in the BSA provide potential habitat for Big-scale balsamroot.

DISCUSSION: Big-scale balsamroot was not observed in the BSA during the botanical survey conducted in May 2021 during the evident and identifiable period.

Boggs Lake hedge-hyssop (*Gratiola heterosepala*)

HABITAT AND BIOLOGY: Boggs Lake hedge-hyssop is an annual herb found in shallow water near marshes and swamps and vernal pools from 33 to 7,792 feet. It blooms April through September (CNPS 2021; Jepson eFlora 2021).

RANGE: Boggs Lake hedge-hyssop is known from Fresno, Lake, Lassen, Madera, Mendocino, Merced, Modoc, Placer, Sacramento, San Joaquin, Shasta, Siskiyou, Solano, Sonoma, and Tehama counties (CNPS 2021).

KNOWN RECORDS: There are five CNDDB records for Boggs Lake hedge-hyssop in the nine-quad area surrounding the BSA. The closest CNDDB record of Boggs Lake hedge-hyssop (Occurrence #48) is from 1995, approximately 9.4 miles southwest of the BSA. The record location is northwest of the Prairie City Road and White Rock Road intersection, at the Aerojet property. The record is for plants seen in ponds with *Downingia bicornuta*, *Eleocharis palustris*, *Gratiola ebracteata*, *Lasthenia glaberrima*, and *Psilocarphus brevissimus*.

HABITAT PRESENT IN THE BSA: The edges of impoundments and CH-1 provide potential habitat for Boggs Lake hedge-hyssop.

DISCUSSION: Boggs Lake hedge-hyssop was not observed in the BSA during the botanical survey conducted in May 2021, during the evident and identifiable period.

Sanford's arrowhead (*Sagittaria sanfordii*)

HABITAT AND BIOLOGY: Sanford's arrowhead is a perennial rhizomatous herb found in ponds, marshes and swamps, and ditches from 0 to 2,133 feet. It blooms May through November (CNPS 2021; Jepson eFlora 2021).

RANGE: Sanford's arrowhead endemic to California. It is known from Butte, Del Norte, El Dorado, Fresno, Madera, Marin, Mariposa, Merced, Napa, Sacramento, San Bernardino, San Joaquin, Shasta, Solano, Sutter, Tehama, Tulare, Ventura, and Yuba counties (CNPS 2021).

KNOWN RECORDS: There are two CNDDB records for Sanford's arrowhead in the nine-quad area surrounding the BSA. The closest record (Occurrence #64) is 7.7 miles south of the BSA. The record location is near tributaries to Carson Creek, south of White Rock and east of Malby Crossing. The record based on 100 plants observed in 2005 in a wetland swale on extensive, degraded grasslands with vernal pool complexes conveying waters into Carson Creek.

HABITAT PRESENT IN THE BSA: The impoundments and CH-1 provide potential habitat for Sanford's arrowhead.

DISCUSSION: Sanford's arrowhead was not observed in the BSA during the botanical survey conducted in May 2021, during the evident and identifiable period.

E. Evaluation of Sensitive Natural Communities

Oak Woodlands

There are 4.28 acres of oak woodland in the BSA (2.13 acres of interior live oak – pine and 2.15 acres of blue oak pine; see full descriptions of these communities in Section IV.C). Isolated oak trees also occur in the California annual grassland in the southern portion of the BSA.

The El Dorado County Oak Resources Management Plan (ORMP), adopted in September 2017, regulates oak woodlands and individual oak trees outside of oak woodlands. The ORMP requires 1:1 mitigation ratio of impacted oak woodland for projects that impact less than 50.1 % of onsite oak woodland. The ORMP requires a 3:1 mitigation ratio at $153 per inch of diameter at breast height (dbh) for impacted Heritage trees. Retained trees may be affected by project activities such as clearing, grading, and pruning for clearance.

Wetlands and Waters

This BRE incorporates the results of a concurrently prepared aquatic resource delineation report prepared to U.S. Army Corps of Engineers minimum standards (SWCA 2021). A total of 1.11 acres of waters in the BSA (Figure 4). The impoundments and CH-1 (with exception of ephemeral CH-1d) are potential Clean Water Act § 404 jurisdictional features (SWCA 2021). These features are also waters of the state regulated by the Regional Water Quality Control Board (RWQCB), and part of a stream regulated by the CDFW State Fish and Game Code §1600 Streambed Alteration Agreement (SAA) Program.

The ephemeral channels within the BSA (CH-1d, CH-2, and CH-3) are not regulated under the current definition of waters of the U.S. (SWCA 2021). The ephemeral channels may still be regulated by the RWQCB or by SAA.

Placement of fill in potential waters of the U.S. requires a Section 404 permit from the U.S. Army Corps of Engineers. Impacts to the waters may be regulated under State Fish and Game Code §1600 Streambed Alteration Program.

County Zoning Code §130.30.050(G) establishes standards for avoidance and minimization of impacts to wetlands and sensitive riparian habitat as provided in General Plan Policies 7.3.3.4 and 7.4.2.5. The standards apply to most waterbodies, wetlands, and riparian areas, but not to ephemeral channels. Setbacks of 25 feet are typically required for intermittent streams, wetlands, or sensitive riparian habitat. Setbacks of 50 feet are typically required for perennial streams.

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VII. PREPARERS

Jeffery Little, Director. Over 29 years of experience working with environmental review, permitting, biological, and cultural issues. Mr. Little evaluates environmental and regulatory constraints to assist his clients determine realistic schedules of permits and entitlements. He prepares and manages CEQA/ NEPA documents and technical studies. He develops project design recommendations to achieve regulatory compliance with the numerous applicable local, state, and federal environmental laws and regulations.

Responsibilities: QA/QC

Michael Bower, M.S., Ecology, University of California, Davis, CA. Over 13 years of experience as a biologist/ botanist with Sycamore Environmental and SWCA. Mr. Bower serves as both field biologist and technical report writer. He conducts wetland delineations and surveys for special-status plants and wildlife. He prepares reports used in CEQA/NEPA that quantify resources, identify impacts, and recommend mitigation measures. He prepares restoration, weed management, and monitoring plans. He is a certified Ecologist and Professional Wetland Scientist (#2230).

Responsibilities: Fieldwork, plant identification, report preparation

Monica E. Coll, B.A., Environmental Science and Conservation Biology, Clark University, Worcester, MA. Two years of experience as a biologist. Her background is in conservation biology and she has accumulated a range of knowledge including project management skills and wildlife survey experience. Ms. Coll serves as both field biologist and technical report writer. She conducts construction monitoring and wildlife surveys, writes biological resource evaluations, and assists with plant surveys and wetland delineations.

Responsibilities: Report preparation

Alex V. Jamal, B.S., Wildlife Conservation and Management, Humboldt State University, Arcata, CA. Two years of experience as a biologist. He serves as both field biologist and technical report writer. He conducts plant and wildlife surveys, performs preconstruction and construction monitoring, and prepares environmental documents such as, biological resource reports and preconstruction reports. His background is in wildlife biology and biological surveys and has accumulated a range of knowledge and skills in wildlife surveys.

Responsibilities: Report preparation

Aramis Respall, GIS Analyst/ CAD Operator. Over 25 years of experience in drafting and spatial analysis using AutoCAD map and ArcGIS for public and private projects. He prepares figures for biological and permitting documents such as project location maps, aerial photograph exhibits, biological resource maps, wetlands/waters delineation maps, project impact maps, and other supporting graphics. Mr. Respall provides geospatial analysis and support for projects involving geodesy, hydrology, watershed studies, project impact and mitigation analyses, listed species, and designated critical habitat. Primary experience evolved from conventional surveying and civil engineering practices to advanced GPS and GIS based technology.

Responsibilities: Figure preparation, spatial analysis

APPENDIX A.

Database Queries

IPaC **U.S. Fish & Wildlife Service**

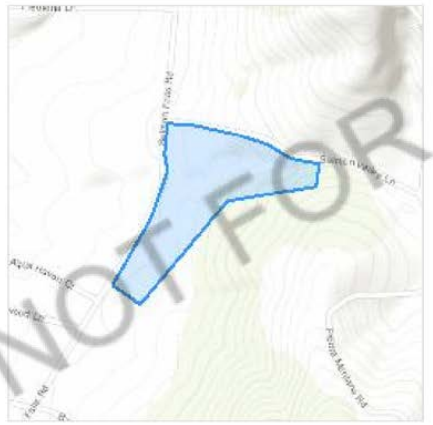
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

El Dorado County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS

Giant Garter Snake Thamnophis gigas — Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4482

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2076

Fishes

NAME	STATUS

Delta Smelt Hypomesus transpacificus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
El Dorado Bedstraw Galium californicum ssp. sierrae Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5209	Endangered
Layne's Butterweed Senecio layneae Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4062	Threatened
Pine Hill Ceanothus Ceanothus roderickii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3293	Endangered
Pine Hill Flannelbush Fremontodendron californicum ssp. decumbens Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4818	Endangered
Stebbins' Morning-glory Calystegia stebbinsii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3991	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES

	THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
California Thrasher Toxostoma redivivum This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch Carduelis lawrencei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Lewis's Woodpecker Melanerpes lewis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Nuttall's Woodpecker Picoides nuttallii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse Baeolophus inornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15

Rufous Hummingbird selasphorus rufus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Song Sparrow Melospiza melodia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
Spotted Towhee Pipilo maculatus clementae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243	Breeds Apr 15 to Jul 20
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any

week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

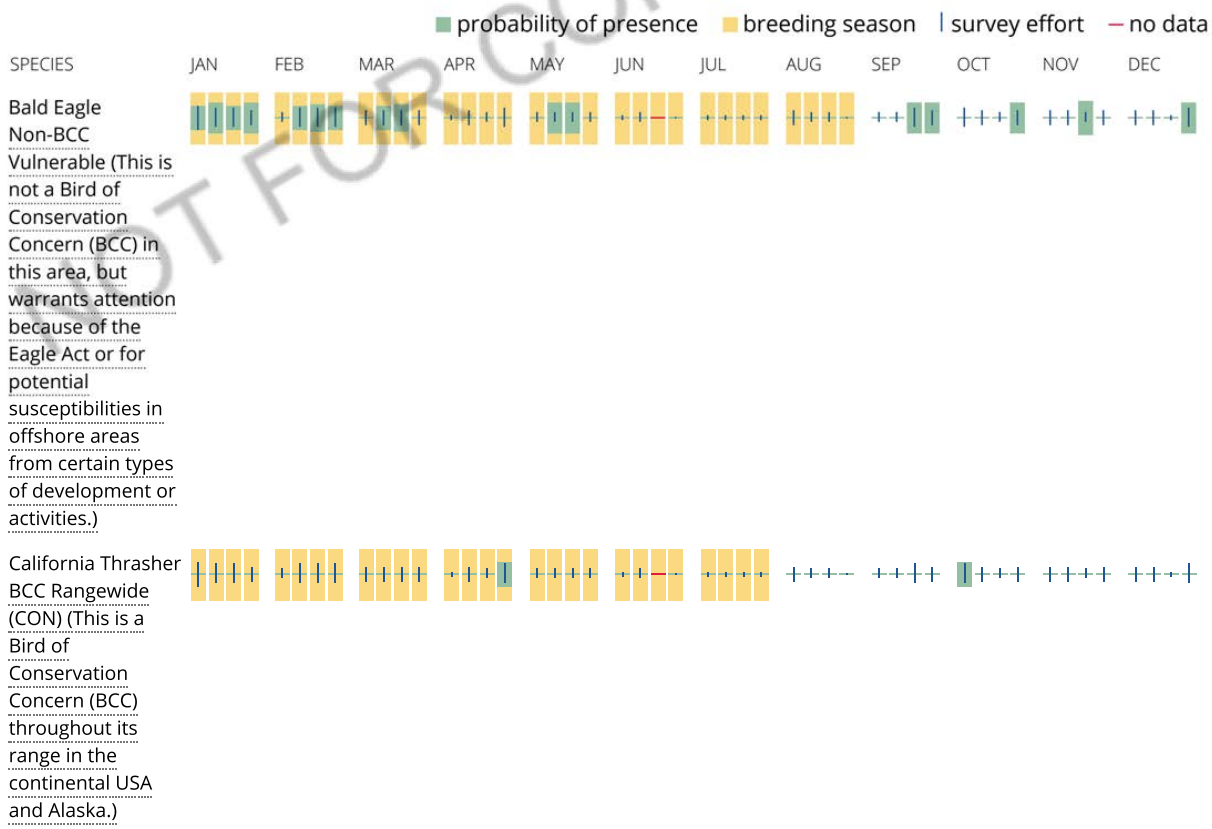
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

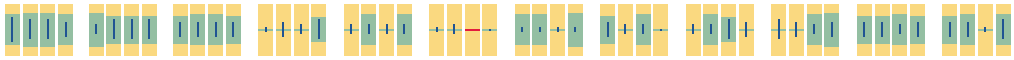
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

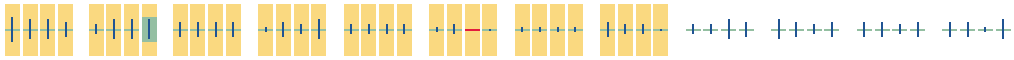
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



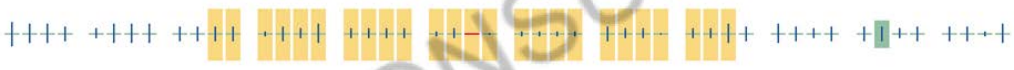
Clark's Grebe BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



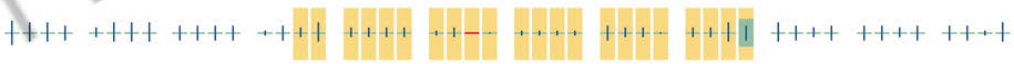
Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



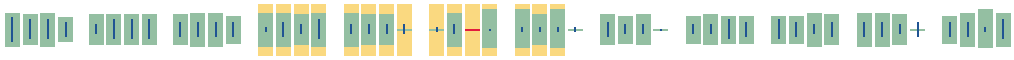
Lawrence's Goldfinch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



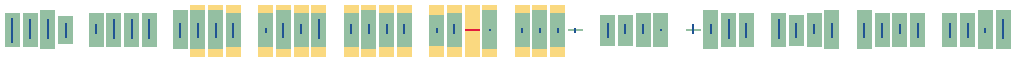
Lewis's Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

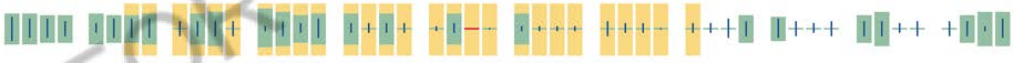


Oak Titmouse BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

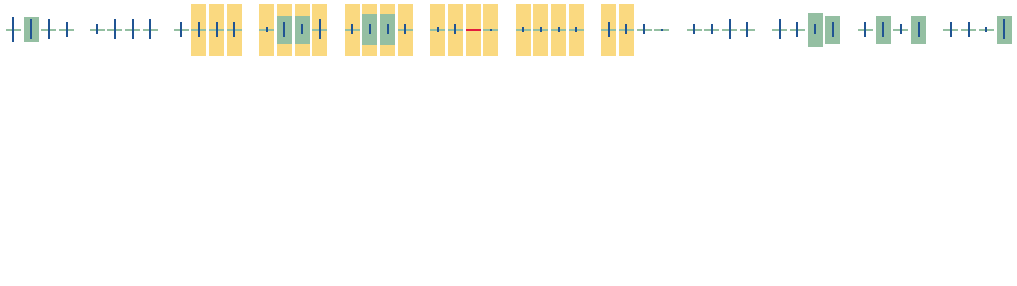


Rufous Hummingbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Spotted Towhee BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Wrentit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Yellow-billed Magpie BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1A

FRESHWATER FORESTED/SHRUB WETLAND

PFOA

FRESHWATER POND

PUBFh

PUBHh

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Rocklin (3812172) OR Pilot Hill (3812171) OR Coloma (3812078) OR Folsom (3812162) OR Folsom SE (3812151) OR Clarksville (3812161) OR Shingle Springs (3812068) OR Buffalo Creek (3812152) OR Latrobe (3812058))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Allium jepsonii Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Andrena blennospermatis Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S2	
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Banksula californica Alabaster Cave harvestman	ILARA14020	None	None	GH	SH	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Calystegia stebbinsii Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Carex xerophila chaparral sedge	PMCYP03M60	None	None	G2	S2	1B.2
Ceanothus roderickii Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
Central Valley Drainage Hardhead/Squawfish Stream Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
Chlorogalum grandiflorum Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
Clarkia biloba ssp. brandegeeae Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
Cosumnoperla hypocrena Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
Crocanthemum suffrutescens Bisbee Peak rush-rose	PDCIS020F0	None	None	G2?Q	S2?	3.2
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S3	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Dumontia oregonensis hairy water flea	ICBRA23010	None	None	G1G3	S1	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Eryngium pinnatisectum Tuolumne button-celery	PDAPI0Z0P0	None	None	G2	S2	1B.2
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Fremontodendron decumbens Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
Galium californicum ssp. sierrae El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
Gratiola heterosepala Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Hydrochara rickseckeri Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Juncus leiospermus var. ahartii Ahart's dwarf rush	PMJUN011L1	None	None	G2T1	S1	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Navarretia myersii ssp. myersii pincushion navarretia	PDPLM0C0X1	None	None	G2T2	S2	1B.1
Northern Hardpan Vernal Pool Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
Northern Volcanic Mud Flow Vernal Pool Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	G1	S1.1	
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Orcuttia tenuis slender Orcutt grass	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
Orcuttia viscida Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Packera layneae Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Pekania pennanti Fisher	AMAJF01020	None	None	G5	S2S3	SSC
Phalacrocorax auritus double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Wyethia reticulata El Dorado County mule ears	PDAST9X0D0	None	None	G2	S2	1B.2

Record Count: 66

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Search Criteria: CRPR is one of [**1A,1B,2A,2B**], Quad is one of [**3812161,3812162,3812172,3812078,3812171,3812068,3812058,3812151,3812152**]

Scientific Name | Common Name | Family | Lifeform | Blooming Period | Fed List | State List | Global Rank | State Rank | CA Rare Plant Rank | General Habitats | Micro Habitats | Lowest Elevation | Highest Elevation | CA Endemic | Date Added | Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	GENERAL HABITATS	MICRO HABITATS	LOWEST ELEVATION	HIGHEST ELEVATION	CA ENDEMIC	DATE ADDED	PHOTO
Allium jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		300	1320	Yes	1994-01-01	No Photo Available
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland		45	1555	Yes	1974-01-01	 ©1998 Dean Wm. Taylor
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	FE	CE	G1	S1	1B.1	Chaparral, Cismontane woodland		185	1090	Yes	1980-01-01	No Photo Available
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		440	770	Yes	2016-06-06	No Photo Available
Ceanothus roderickii	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	FE	CR	G1	S1	1B.1	Chaparral, Cismontane woodland		245	1090	Yes	1974-01-01	No Photo Available
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	None	None	G3	S3	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		245	1690	Yes	1974-01-01	No Photo Available
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2	Valley and foothill grassland, Vernal pools		1	445		1980-01-01	No Photo Available

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	GENERAL HABITATS	MICRO HABITATS	LOWEST ELEVATION	HIGHEST ELEVATION	CA ENDEMIC	DATE ADDED	PHOTO
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual/perennial herb	May-Aug	None	None	G2	S2	1B.2	Cismontane woodland, Lower montane coniferous forest, Vernal pools		70	915	Yes	1974-01-01	No Photo Available
Fremontodendron decumbens	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	FE	CR	G1	S1	1B.2	Chaparral, Cismontane woodland		425	760	Yes	1974-01-01	No Photo Available
Galium californicum ssp. *sierrae*	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	FE	CR	G5T1	S1	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		100	585	Yes	1974-01-01	No Photo Available
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2	Marshes and swamps, Vernal pools		10	2375		1974-01-01	No Photo Available
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	None	None	G2T1	S1	1B.2	Valley and foothill grassland		30	229	Yes	1984-01-01	No Photo Available
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	Vernal pools		1	880	Yes	1974-01-01	No Photo Available
Navarretia myersii ssp. *myersii*	pincushion navarretia	Polemoniaceae	annual herb	Apr-May	None	None	G2T2	S2	1B.1	Vernal pools		20	330	Yes	1994-01-01	No Photo Available
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	G2	S2	1B.1	Vernal pools		35	1760	Yes	1974-01-01	No Photo Available
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	G1	S1	1B.1	Vernal pools		30	100	Yes	1974-01-01	No Photo Available
Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	FT	CR	G2	S2	1B.2	Chaparral, Cismontane woodland		200	1085	Yes	1974-01-01	No Photo Available
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Marshes and swamps		0	650	Yes	1984-01-01	No Photo Available
Wyethia reticulata	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest		185	630	Yes	1974-01-01	No Photo Available

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APPENDIX B.

Species Evaluated Table

APPENDIX B

Species Evaluated Table

Special-Status Species from USFWS Letter, CNDDB Data, CNPS Data

Special-Status Species/ Common Name	Federal Status [a]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Invertebrates					
Branchinecta lynchi Vernal pool fairy shrimp	T, CH	--	1, 2	Exist only in vernal pools or vernal pool-like habitats. Have never been found in riverine, marine, or other permanent bodies of water. Water movement within complexes allows movement between individual pools. Currently found in 28 counties across the Central Valley and coast ranges of California. Most commonly found in small (< 0.05 ac), clear to tea-colored vernal pools with mud, grass, or basalt bottoms in unplowed grasslands (USFWS 2005).	No. There are no vernal pools in the BSA. This species is known from only one location in El Dorado Co (USFWS 2006), near the El Dorado Hills/Folsom area at the Sacramento Co line. The BSA is not in critical habitat.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	T, CH	--	1, 2	Requires an elderberry shrub (*Sambucus* sp.) as a host plant (USFWS 1999). Females lay their eggs on the bark of elderberry, and larvae hatch and burrow into the stems and feed on the pith (USFWS 2006). The range extends throughout the Central Valley and associated foothills from about the 3,000-ft elevation contour on the east and the watershed of the Central Valley on the west (USFWS 1999), from southern Shasta Co to Fresno Co. (USFWS 2006). The elderberry stems must be greater than 1.0 inches in diameter to support larvae (USFWS 1999).	No. There are no elderberry shrubs in the BSA. The BSA is not in critical habitat.
Lepidurus packardi Vernal pool tadpole shrimp	E, CH	--	1, 2	Occurs in vernal pools and sometimes other areas of similar hydrology across the Central Valley of California and in the San Francisco Bay area. Requires a minimum of about 25 days to mature, and usually inhabits large, deep vernal pools that pool continuously for many months (USFWS 2005). They can also make use of smaller pools that are present as part of a larger vernal pool complex (Witham *et al.* 1998), and they may be able tolerate temporary dry conditions (USFWS 2005).	No. There are no vernal pools in the BSA. The BSA is outside the current distribution of this species. This species is not known to occur in El Dorado Co (USFWS 2006). The BSA is not in critical habitat.
Fish					
Hypomesus transpacificus Delta smelt	T, CH	T	1	Euryhaline (tolerant of a wide salinity range) species that spawns in freshwater dead-end sloughs and shallow edge-waters of channels of the Delta (USFWS 1994).	No. There is no suitable aquatic habitat in the BSA. The BSA is not in critical habitat.
Oncorhynchus mykiss California Central Valley steelhead DPS	T, CH	--	2	Anadromous *O. mykiss* (steelhead) originating below natural and manmade impassable barriers from the Russian River to and including Aptos Creek, and all drainages of San Francisco and San Pablo Bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin Rivers. Includes steelhead from two artificial propagation programs: Don Clausen Fish Hatchery Program, and Kingfisher Flat Hatchery Program (Monterey Bay Salmon and Trout Project) (NMFS 2014). Require loose gravels at pool tails for spawning (Moyle et al. 2008).	No. There is no suitable habitat within the BSA. There are no streams or rivers that support salmonids in the BSA. The BSA is not in critical habitat.

Amphibians					
Ambystoma californiense California tiger salamander (central population)	T, CH	T	1, 2	Occurs in grassland, oak savannah, and edges of mixed woodland and lower elevation coniferous forest. Spends much time underground in mammal burrows. The Central California DPS occurs in Alameda, Amador, Calaveras, Contra Costa, Fresno, Kern, Kings, Madera, Mariposa, Merced, Monterey, Sacramento, San Benito, San Mateo, San Joaquin, San Luis Obispo, Santa Clara, Santa Cruz, Stanislaus, Solano, Tulare, Tuolumne, and Yolo cos. (USFWS 2017a). Usually breeds in temporary ponds such as vernal pools but may also breed in slower parts of streams and some permanent waters (Stebbins 2003). Requires long-lasting vernal pools to complete larval development lasting 10+ weeks (Jennings and Hayes 1994).	No. The BSA is outside the CWHR range, predicted habitat, and connectivity modeling for this species (CWHR 2021; CDFW 2021b). The BSA is not in critical habitat.
Rana boylii Foothill yellow-legged frog	--	E	2	Found in or near rocky streams in a variety of habitats, including valley-foothills hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types. Egg clusters are attached to gravel or rocks in moving water near stream margins. This species is rarely encountered (even on rainy nights) far from permanent water. Its elevation range extends from near sea level to 6,370 ft in the Sierra (CWHR 2021).	Yes. See text.
Rana draytonii California red-legged frog	T, CH	SSC	1, 2	Inhabits quiet pools of streams, marshes, and occasionally ponds with dense, shrubby, or emergent vegetation. Requires permanent or nearly permanent pools for larval development (CWHR 2021; USFWS 2010). The range of CA red-legged frog extends from near sea level to approximately 5,200 ft, though nearly all sightings have occurred below 3,500 ft. California red-legged frog was probably extirpated from the floor of the Central Valley before 1960 (USFWS May 2002).	Yes. See text.
Spea hammondi Western spadefoot	--	SSC	2	Ranges throughout the Central Valley and adjacent foothills and is usually quite common where it occurs. Occurs primarily in grasslands, but occasionally occurs in valley-foothill hardwood woodlands (CWHR 2021). Primarily found in the lowlands frequenting washes, floodplains of rivers, alluvial fans, playas, and alkali flats. Prefers areas of open vegetation and short grasses with sandy or gravelly soil (Stebbins 2003). Spends most of the year in underground burrows up to 36 inches deep, which they generally construct themselves. Most surface movements by adults are associated with rains or high humidity at night. Breeding and egg laying occur almost exclusively in shallow, temporary pools formed by heavy winter rains (CWHR 2021).	Yes. See text.
Reptiles					
Emys marmorata Western pond turtle	--	SSC	2	Prefers aquatic habitats with abundant vegetative cover and exposed basking sites such as logs. Associated with permanent or nearly permanent water in a wide variety of habitat types, normally in ponds, lakes, streams, irrigation ditches, or permanent pools along intermittent streams (CWHR 2021).	Yes. See text.

Phrynosoma blainvillii Coast (California) horned lizard	--	SSC	2	Occurs in valley and foothill hardwood, conifer, and riparian habitats, as well as in pine-cypress, juniper and annual grasslands up to 4,000 ft in the Sierra Nevada and 6,000 ft in southern California Basks in the early morning. Often associated with sandy or loose soil areas (CWHR 2021). Feeds mostly on native ants. Tends not to persist where the argentine ant invades (Suarez *et al.* 2000, Suarez and Case 2002).	No. There are no sandy soils in the BSA. All four CNDDB records in El Dorado Co are from gabbroic northern mixed chaparral.
Thamnophis gigas Giant garter snake	T	T	1, 2	Endemic to the wetlands of the Sacramento and San Joaquin valleys, inhibiting the tule marshes and seasonal wetlands created by overbank flooding of the rivers and streams. Requires 1) freshwater aquatic habitat with protective emergent vegetative cover that allows foraging; 2) upland habitat near the aquatic habitat that can be used for thermoregulation and summer shelter in burrows; and 3) upland refugia that serve as winter hibernacula (USFWS 2017b).	No. The BSA is outside the range of this species.
Birds					
Agelaius tricolor Tricolored blackbird	--	T	2	Forages on ground in cropland, grassland, and on pond edges. Nests near freshwater, preferably in emergent marsh densely vegetated with cattails or tules, but also in thickets of willow, blackberry, and wild rose. Highly colonial; nesting area must be large enough to support a minimum colony of about 50 pairs (CWHR 2021). Chooses areas with widespread water and large, thick patches of vegetation for colonies to reduce predation (Hamilton 2004).	Yes. See text.
Ammodramus savannarum Grasshopper sparrow	--	SSC	2	An uncommon local summer resident and breeder in foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity cos. south to San Diego Co. Occurs in dry, dense grasslands, especially with scattered shrubs for sitting perches. A thick cover of grasses and forbs is essential for concealment. Nests are built of grasses and forbs in slight depressions in ground hidden by a clump of grasses or forbs. Usually nests solitarily from early April to mid-July. May form semicolonial breeding groups of 3-12 pairs (CWHR 2021).	Yes. See text.
Aquila chrysaetos Golden eagle	--	FP	2	Uncommon permanent resident and migrant throughout CA, except in the central portion of the Central Valley. Ranges from sea level up to 11,500 ft (Grinnell and Miller 1944). Typically inhabits rolling foothills, mountainous areas, sage-juniper flats, and deserts. Uses secluded cliffs with overhanging ledges and large trees for cover. Nest on cliffs of all heights and in large trees in open areas. Rugged, open habitats with canyons and escarpments are used most frequently for nesting. Needs open terrain for hunting (CWHR 2021).	Yes. See text.
Athene cunicularia Burrowing owl	--	SSC	2	Yearlong resident of open, dry grassland and desert habitat, and in grass, forb, and open shrub stages of pinyon-juniper and Ponderosa pine habitats, from sea level to 5,300 ft. Uses small mammal burrows, often those of ground squirrels, for roosting and nesting cover. Nest boxes, pipes, and culverts may be used if burrows are scarce. Occurs throughout CA except the high mountains and northwestern coastal forests (CWHR 2020). Burrow sites and some wintering sites are of concern to CDFW (2020b).	Yes. See text.

Buteo swainsoni Swainson's hawk	--	T	2	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Nests in stands of juniper-sage flats, in riparian areas and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures. Feeds on small birds, rodents, mammals, reptiles, large arthropods, amphibians, and, rarely, fish (CWHR 2021).	Yes. See text.
Elanus leucurus White-tailed kite	--	FP	2	Yearlong resident in coastal and valley lowlands. Rarely found away from agricultural areas. Inhabits herbaceous and open stages of most habitats, mostly in cismontane California. Substantial groves of dense, broad-leafed deciduous trees are used for nesting and roosting. Nest placed near top of dense oak, willow, or other tree stand located near open foraging area. Forages in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands (CWHR 2021).	Yes. See text.
Haliaeetus leucocephalus Bald eagle	D	E/ FP	2	Occurs along coasts, rivers, and large, deep lakes and reservoirs in California. Nests mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity cos. More widespread as a winter migrant. Requires large bodies of water or free flowing rivers with abundant fish and perching sites. Nests in large old growth and dominant live trees with open branchwork. Favors Ponderosa pine (CWHR 2021).	Yes. See text.
Laterallus jamaicensis coturniculus California black rail	--	T	2	Year-long resident of saline, brackish, and fresh emergent wetlands in the San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern CA at Morro Bay and a few other locations, the Salton Sea, and the lower Colorado River area. Occurs most commonly in tidal emergent wetlands dominated by pickleweed, or in brackish marshes supporting bulrushes and pickleweed. Found in immediate vicinity of tidal sloughs. In freshwater habitat, usually found in bulrushes, cattails, and saltgrass. Nests are concealed in dense vegetation near upper limits of tidal flooding. Occasionally found away from wetlands in late summer and autumn. May overwinter in locations where it does not breed (CWHR 2021).	No. Suitable habitat does not occur in the BSA. The ponds in the BSA do not provide enough marsh habitat for this species.
Progne subis Purple martin	--	SSC	2	Widely distributed throughout nearly the entire eastern U.S. In the western U.S, occurs in the Rocky Mountains, Sonoran Desert, Central Mexico, and Pacific Coast states (Shuford and Gardali 2008). Breeding occurs from April into August. In northern CA, an uncommon to rare local breeder on the coast and inland to Modoc and Lassen cos. Absent from high Sierra. Inhabits open forests, woodlands, and riparian areas in breeding season. Found in a variety of open habitats during migration, including grassland, wet meadow, and fresh emergent wetland, usually near water. Nests colonially or singly in natural or human-made cavities (CWHR 2021).	No. The BSA is outside the CWHR range and predicted habitat for this species (CDFW 2021b).
Ripariariparia Bank swallow	--	T	2	Found primarily west of CA deserts in riparian and other lowland habitats during the spring-fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine textured sandy soils, into which it digs nesting holes. About 75% of the breeding population in CA occurs along banks of the Sacramento and Feather Rivers in the northern Central Valley. Other colonies are known from the central coast from Monterey to San Mateo cos., and in northeastern CA in Shasta, Siskiyou, Lassen, Plumas, and Modoc cos. Breeding colonies contain 10 to 1,500 pairs (CWHR 2021).	No. There are no vertical banks, bluffs, or cliffs suitable for nesting in the BSA.

Mammals					
Antrozous pallidus Pallid bat	--	SSC	2	Occupies many habitats including desert, grasslands, shrublands, woodlands, rocky canyons, oak savannah, redwood, open farmland and mixed conifer forest from sea level up to 3,000 ft (Bolster 1998, CWHR 2021). Prefers open, dry habitats with rocky areas for roosting, and rock outcrops, cliffs, and crevices with access to open habitats for foraging. Day roosts in caves, crevices, mines, and occasionally buildings and hollow trees. Night roosts may be more open, such as porches and open buildings. Social, often roosting in groups of 20 or more. Absent in the northwest from Del Norte and western Siskiyou cos. south to northern Mendocino Co. (CWHR 2021). Sometimes found in tree cavities in oak, Ponderosa pine, coast redwood and giant sequoia (Bolster 1998).	Yes. See text.
Pekania pennanti Fisher – West Coast DPS	--	CT/ SSC	2	Permanent resident of the Sierra Nevada, Cascades, Klamath Mountains, and the North Coast Range. Occurs above 3,200 ft in the Sierra Nevada and Cascades (Jameson and Peeters 2004). Occurs in coniferous or deciduous riparian habitats with intermediate to large trees and closed canopies. Dens in protected cavities, brush piles, logs, or under an upturned tree. Hollow logs, trees, and snags are especially important. Mostly nocturnal and crepuscular (CWHR 2021).	No. The BSA is outside the geographic and elevation range.
Taxidea taxus American badger	--	SSC	2	Found throughout most of CA except the northern North Coast. Abundant in drier open stages of many shrub, forest, and herbaceous habitats with friable soils. Feeds on fossorial rodents, some reptiles, insects, earthworms, bird eggs, and carrion (CWHR 2021).	Yes. See text.
Plants		**/ CNPS [d]**			
Allium jepsonii Jepson's onion	--	--/ 1B.2	2	Bulbiferous herb found in serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 984 to 4,331 ft. Known from Butte, El Dorado, Placer, and Tuolumne cos. Blooms April through August (Baldwin et al. 2012; CNPS 2021).	No. There are no suitable soils in the BSA.
Balsamorhiza macrolepis Big-scale balsamroot	--	--/ 1B.2	2	Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils, from 295 to 5,102 ft. Known from the Bay Area, Sacramento Valley, and Sierra foothills. Blooms March through July (Baldwin et al. 2012; CNPS 2021).	Yes. See text.
Calystegia stebbinsii Stebbins' morning-glory	E	E/ 1B.1	1, 2	Perennial rhizomatous herb found in serpentine or gabbroic soils in openings in chaparral and cismontane woodland from 607 to 3,576 ft. Known from El Dorado and Nevada cos. Blooms April through July (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA.
Carex xerophila Chaparral sedge	--	--/1B.2	2	A newly described perennial cespitose herb known from serpentine or gabbro soils (Zika et al. 2014). Occurs in uplands in full sun to partial shade, in open forest or chaparral, from 1,475 to 2,525 ft. Known from Butte, El Dorado, Nevada, and Yuba cos. Although there is no published blooming period, most collections are from April, May, or June (Zika et al. 2014).	No. There are no suitable soils in the BSA. The BSA occurs below 1,400 ft elevation.
Ceanothus roderickii Pine Hill ceanothus	E	R/ 1B.1	1, 2	Perennial evergreen shrub found on serpentine or gabbroic soils in chaparral and cismontane woodland from 804 to 2,067 ft. Known from less than 10 occurrences in El Dorado Co. Blooms April through June (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. The BSA occurs below 804 ft elevation.

Chlorogalum grandiflorum Red Hills soaproot	--	--/ 1B.2	2	Perennial bulbiferous herb found in serpentine, gabbroic, and other soils in chaparral, cismontane woodland, and lower montane coniferous forest from 804 to 4,067 ft. Known from Amador, Butte, Calaveras, El Dorado, Placer, and Tuolumne cos. Blooms May through June (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. This species is known from the gabbro soils of the Pine Hill formation, elsewhere in El Dorado Co. The BSA occurs below 804 ft elevation.
Downingia pusilla Dwarf downingia	--	--/ 2B.2	2	Annual herb found in mesic valley and foothill grassland and vernal pools from 3 to 1,460 ft. Known from the north Coast Range, Bay Area, and Central Valley. Blooms March through May (Baldwin et al. 2012, CNPS 2021).	No. There are no vernal pools or other suitable aquatic habitat in the BSA.
Eryngium pinnatisectum Tuolumne button-celery	--	--/ 1B.2	2	Annual to perennial herb found in mesic areas of cismontane woodland, lower montane coniferous forests, and vernal pools/swales, and intermittent streams from 230 to 3,000 ft. Known from Amador, Calaveras, Sacramento, and Tuolumne cos. Blooms May through August (Baldwin et al. 2012, CNPS 2021).	No. No suitable mesic habitat occurs in the BSA. This species is not known from El Dorado Co.
Fremontodendron decumbens Pine Hill flannelbush	E	R/ 1B.2	1, 2	Perennial evergreen shrub found on rocky, gabbroic, and serpentine soil in chaparral and cismontane woodland from 1,394 to 2,494 ft. Known from 10 occurrences in El Dorado, Nevada, and Yuba cos. Uncertain about distribution or identity in Nevada and Yuba cos. Blooms April through July (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. In El Dorado Co this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the Co. The BSA occurs below 1,394 ft.
Galium californicum ssp. *sierrae* El Dorado bedstraw	E	R/ 1B.2	1, 2	Perennial herb found in gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 330 to 1,920 ft. Known from El Dorado County. Blooms March through July (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. In El Dorado Co this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the Co.
Gratiola heterosepala Boggs Lake hedge-hyssop	--	E/ 1B.2	2	Annual herb found in clay soils in marshes and swamps (lake margins) and vernal pools from 30 to 7,800 ft (CNPS 2021). Known from the Modoc Plateau, Warner Mountains, high Cascade Range, inner north Coast Range, Central Valley, and northern and central Sierra Nevada foothills. Blooms April through August (Jepson eFlora 2021).	Yes. See text.
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	--	--/ 1B.2	2	Annual herb found in mesic areas in valley and foothill grassland from 100 to 750 ft. Known from Butte, Calaveras, Placer, Sacramento, Tehama, and Yuba cos. Blooms March through May (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable mesic habitats in the BSA. The BSA is outside of the species' range.
Legenere limosa Legenere	--	--/ 1B.1	2	Annual herb found in vernal pools from 3 to 2,900 ft. Known from Alameda, Lake, Monterey, Napa, Placer, Sacramento, Santa Clara, Shasta, San Joaquin, San Mateo, Solano, Sonoma, Tehama, and Yuba cos. Presumed extirpated in Stanislaus Co. Blooms April through June (Baldwin et al. 2012, CNPS 2021).	No. There are no vernal pools or other suitable habitat in the BSA. The BSA is outside of the species' range.
Navarretia myersii ssp. *myersii* Pincushion navarretia	--	--/ 1B.1	2	Annual herb found in vernal pools, often with acidic conditions, from 65 to 1,100 ft. Known from Amador, Calaveras, Merced, Placer, and Sacramento cos. Blooms April through May (Stanislaus Co. Blooms April through June (Baldwin et al. 2012, CNPS 2021).	No. There are no vernal pools or other suitable aquatic habitat in the BSA. The BSA is outside of the species' range.

Orcuttia tenuis Slender Orcutt grass	T	E/ 1B.1	2	Annual herb found in vernal pools, often gravelly, from 115 to 5,800 ft. Blooms May through October (CNPS 2021). Found primarily on substrates of volcanic origin in pools classified as northern volcanic ashflow or mudflow vernal pools, but also found on Redding soils in Sacramento County. Known from pools at least 0.2 ac in size (1.6 ac median) and 11.8 inches deep and typically occurs in the deepest area of the pool (USFWS 2003).	No. There are no vernal pools or vernal pool complexes in the BSA. The BSA is outside of the species' range.
Orcuttia viscida Sacramento Orcutt grass	E, CH	E/ 1B.1	2	Annual herb found in vernal pools from 98 to 328 ft. Known only from Sacramento County. Blooms April through September (Baldwin et al. 2012, CNPS 2021). Known from northern hardpan and volcanic mudflow vernal pools. Known only from Sacramento County in pools of at least 0.25 ac (USFWS 2003).	No. There are no vernal pools or vernal pool complexes in the BSA. The BSA is outside of the species' range.
Packera (=Senecio) layneae Layne's ragwort	T	R/ 1B.2	1, 2	Perennial herb found in rocky serpentine or gabbroic soils in chaparral and cismontane woodland from 650 to 3,560 ft. Known from Butte, El Dorado, Placer, Tuolumne, and Yuba cos. Blooms April through August (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. In El Dorado Co this species is known primarily from the gabbro soils of the Pine Hill formation, elsewhere in the Co.
Sagittaria sanfordii Sanford's arrowhead	--	--/ 1B.2	2	A perennial emergent rhizomatous herb found in assorted shallow freshwater marshes and swamps from 0 to 2,130 ft. Known from northwestern CA, Cascade foothills, Central Valley, and South Coast. Blooms May through November (Baldwin et al. 2012, CNPS 2021).	Yes. See text.
Wyethia reticulata El Dorado County mule ears	--	--/ 1B.2	2	Perennial rhizomatous herb found on clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 600 to 2,100 ft. Known from El Dorado and Yuba cos. Blooms April through August (Baldwin et al. 2012, CNPS 2021).	No. There are no suitable soils in the BSA. In El Dorado Co this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the Co.

Natural Communities					
Central Valley drainage hardhead/ squawfish stream	--	--	2	Hardhead occur in low- to mid-elevation streams in the main Sacramento-San Joaquin drainage and in the Russian River. Their range extends from the Pit River in Modoc Co south to Kern River in Kern Co. In the San Joaquin drainage, the species is scattered in tributary streams and absent from valley reaches of the San Joaquin River. In the Sacramento drainage, hardhead is present in most large tributary streams as well as in the Sacramento River. Hardhead are typically found in undisturbed areas of larger low- to mid-elevation streams, although they are also found in the mainstem Sacramento River at low elevations and in its tributaries to about 4,920 ft. They prefer clear, deep (>32 inches) pools and runs with sand-gravel-boulder substrates and slow velocities. Hardhead are always found in association with Sacramento pikeminnow (squawfish) and usually with Sacramento sucker. They tend to be absent from streams where introduced species, especially centrarchids (sunfish), predominate and from streams that have been severely altered by human activity. Sacramento pikeminnow occurs in clear rivers and creeks of central CA and in small numbers in the Sacramento-San Joaquin Delta. They occur in low- to mid-elevation streams with deep pools, slow runs, undercut banks, and overhanging vegetation. Most abundant in lightly disturbed, tree-lined reaches that also contain other native fish (Moyle 2002).	No. This community does not occur in the BSA.
Northern hardpan vernal pool	--	--	2	A low emergent wetland community dominated by annual herbs and grasses on very acidic soils with an iron-silicon cemented hardpan. Evaporation (not runoff) dries pools in spring creating concentric bands of vegetation. Occurs primarily on old alluvial terraces on the east side of the Great Valley from Tulare or Fresno County north to Shasta County (Holland 1986).	No. This community does not occur in the BSA.
Northern Volcanic Mud Flow Vernal Pool	--	--	2	A very low, open mixture of amphibious annual herbs and grasses. Pools are typically small, covering at most a few square meters. Restricted to irregular depressions in shallow soil in tertiary pyroclastic flows. Pools form in small depressions following winter rains. Characteristic species include: *Downingia bicornuta, Lasthenia glaberrima, Limnanthes douglasii rosea, Navarretia tagetina*. Distribution is scattered on flat-topped mesas along the Sierran foothills, mostly between 500-2,000 ft in blue oak woodland and gray-pine chaparral woodland (Holland 1986).	No. This community does not occur in the BSA.
Valley Needlegrass Grassland	--	--	2	Grassland dominated by the perennial tussock-forming bunchgrass *Stipa pulchra* with annuals occurring between bunches. Usually on fine-textured soils, moist or waterlogged in winter, but very dry in summer. Historically occurred in Sacramento, San Joaquin, and Salinas valleys, as well as the Los Angeles Basin. Present range greatly reduced (Holland 1986).	No. This community does not occur in the BSA.

[a] **Listing Status** **E** = Endangered; **T** = Threatened; **P** = Proposed; **C** = Candidate; **R** = California Rare; **D** = Delisted

[b] **Other Codes** **SSC** = CA Species of Special Concern; **FP** = CA Fully Protected; **Prot** = CA Protected; **CH =** Critical habitat designated.
CNPS Rank (plants only): **1A** = Presumed Extinct in CA; **1B** = Rare or Endangered (R/E) in CA and elsewhere; **2** = R/E in CA and more common elsewhere; **3** = Need more information; **4** = Plants of limited distribution

CNPS List Decimal Extensions:.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); **.2** = Fairly endangered in CA (20-80% of occurrences threatened); **.3 =** Not very endangered in CA (< 20% of occurrences threatened or no current threats known).

[c] **Source: 1** = USFWS letter. **2** =CNDDB/CNPS.**3 =** Observed or included by SWCA.

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APPENDIX C.

Plant and Wildlife Species Observed

Plant Species Observed

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
GYMNOSPERMS				
Cupressaceae	*Juniperus* sp. (ornamental)	Juniper	N	
	Sequoia sempervirens (ornamental)	Coast redwood	N	
Pinaceae	*Pinus sabiniana*	Gray, ghost, or foothill pine	N	
	Pinus sp. (ornamental)	Pine	--	
NYMPHAEALES				
Nymphaeaceae	*Nymphaea odorata*	Fragrant or white waterlily	I	
FERNS				
Pteridaceae	*Pentagramma triangularis*	Goldback fern	N	
MAGNOLIIDS				
Aristolochiaceae	*Aristolochia californica*	Pipevine, birthwort	N	
EUDICOTS				
Altingiaceae	*Liquidambar styraciflua*	Liquidambar, sweet gum	I	
Anacardiaceae	*Toxicodendron diversilobum*	Western poison oak	N	
Apiaceae	*Torilis arvensis*	Tall sock-destroyer	I	Moderate
	Torilis nodosa	Short sock-destroyer	I	
	Sanicula bipinnata	Poison sanicle	N	
	Sanicula bipinnatifida	Purple sanicle, shoe buttons	N	
Asteraceae	*Achillea millefolium*	Yarrow	N	
	Baccharis pilularis	Coyote brush	N	
	Carduus pycnocephalus ssp. *pycnocephalus*	Italian thistle	I	Moderate
	Centaurea solstitialis	Yellow star-thistle	I	High
	Chondrilla juncea	Skeleton weed	I	Moderate
	Cirsium vulgare	Bull thistle	I	Moderate
	Dittrichia graveolens	Stinkwort	I	Moderate
	Erigeron bonariensis	Flax-leaved horseweed	I	
	Lactuca sp.	Lettuce	I	
	Leontodon saxatilis	Hairy hawkbit	I	
	Madia exigua	Tarweed, tarplant	N	
	Pseudognaphalium sp.	Cudweed, everlasting	--	
	Senecio vulgaris	Common groundsel	I	
	Solidago sp.	Goldenrod	N	
	Sonchus asper ssp. *asper*	Prickly sow thistle	I	
	Sonchus oleraceus	Common sow thistle	I	
	Tragopogon dubius	Yellow salsify	I	
	Wyethia angustifolia	Mule's ears	N	
Boraginaceae	*Amsinckia menziesii*	Common fiddleneck, small-flowered fiddleneck	N	
	Eriodictyon californicum	California yerba santa	N	
	Plagiobothrys sp.	Popcorn flower	N	
Brassicaceae	*Capsella bursa-pastoris*	Shepherd's purse	I	
	Cardamine oligosperma	Bitter-cress	N	
Caprifoliaceae	*Lonicera* sp.	Honeysuckle	N	
Caryophyllaceae	*Cerastium glomeratum*	Sticky mouse-ear chickweed	I	

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
	Silene gallica	Small-flower catchfly, windmill pink	I	
	Spergularia rubra	Red sand-spurrey	I	
Convolvulaceae	*Calystegia occidentalis*	Morning-glory	N	
	Convolvulus arvensis	Bindweed, orchard morning-glory	I	
Euphorbiaceae	*Croton setigerus*	Turkey-mullein	N	
	Euphorbia maculata	Spotted spurge	I	
Fabaceae	*Acmispon americanus* var. *americanus*	Deervetch, deerweed	N	
	Cercis occidentalis	Western redbud	N	
	Hoita macrostachya	Leather root	N	
	Lathyrus vestitus	Wild pea	N	
	Lupinus bicolor	Miniature lupine	N	
	Lupinus succulentus	Arroyo lupine	N	
	Medicago polymorpha	California burclover	I	Limited
	Melilotus indicus	Sourclover	I	
	Trifolium sp.	Clover	--	
	Trifolium dubium	Little hop clover	I	
	Trifolium glomeratum	Clustered clover	I	
	Trifolium repens	White clover	I	
	Vicia sativa	Vetch	I	
	Vicia villosa	Hairy vetch, winter vetch	I	
Fagaceae	*Quercus wislizeni*	Interior live oak	N	
	Quercus douglasii	Blue oak	N	
Geraniaceae	*Erodium botrys*	Storksbill, filaree	I	
	Erodium moschatum	Greenstem filaree	I	
	Geranium dissectum	Cranesbill, geranium	I	Limited
	Geranium molle	Cranesbill, geranium	I	
Juglandaceae	*Carya illinoinensis*	Pecan	I	
	Juglans hindsii	Northern California black walnut	N	
Lamiaceae	*Monardella villosa*	Coyote-mint	N	
	Salvia rosmarinus (ornamental)	Rosemary	I	
	Stachys albens	Hedge-nettle	N	
Malvaceae	*Malva* sp.	Mallow	--	
Montiaceae	*Claytonia* sp.	Claytonia	N	
Moraceae	*Ficus carica*	Edible fig	I	Moderate
Myrsinaceae	*Anagallis arvensis*	Scarlet pimpernel	I	
Onagraceae	*Epilobium ciliatum*	Willowherb	N	
	Clarkia purpurea ssp. *quadrivulnera*	Four-spot	N	
	Clarkia unguiculata	Elegant clarkia	N	
Papaveraceae	*Eschscholzia californica*	California poppy	N	
Phrymaceae	*Mimulus guttatus*	Monkeyflower	N	
Plantaginaceae	*Plantago lanceolata*	English plantain	I	Limited
	Veronica sp.	Speedwell, brooklime	--	
Polemoniaceae	*Leptosiphon bicolor*	Leptosiphon	N	
	Navarretia sp. (past flower; likely *N. squarrosa* or similar)	Navarretia	N	

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
Polygonaceae	*Pterostegia drymarioides*	Woodland threadstem	N	
	Rumex crispus	Curly dock	I	Limited
	Rumex dentatus	Dock	I	
	Rumex pulcher	Fiddle dock	I	
Rhamnaceae	*Ceanothus cuneatus*	California-lilac	N	
	Rhamnus ilicifolia	Hollyleaf redberry	N	
Rosaceae	*Adenostoma fasciculatum*	Chamise, greasewood	N	
	Drymocallis sp.	Drymocallis	N	
	Heteromeles arbutifolia	Christmas berry, toyon	N	
	Prunus sp.	Prunus	--	
	Rubus armeniacus	Himalayan blackberry	I	High
	Rubus ursinus	California blackberry	N	
Rubiaceae	*Galium parisiense*	Wall bedstraw	I	
	Galium porrigens	Climbing bedstraw	N	
Salicaceae	*Populus fremontii* ssp. *fremontii* (seedling)	Fremont cottonwood	N	
	Salix gooddingii (sapling)	Goodding's black willow	N	
	Salix laevigata (sapling)	Red willow	N	
Sapindaceae	*Acer* sp. (ornamental)	Maple	I	
	Aesculus californica	California buckeye	N	
Scrophulariaceae	*Verbascum blattaria*	Moth mullein	I	
	Verbascum virgatum	Wand mullein	I	
Solanaceae	*Nicotiana* sp.	Tobacco	--	
	Solanum sp.	Nightshade	--	
Viscaceae	*Arceuthobium campylopodum*	Western dwarf mistletoe	N	
	Phoradendron leucarpum	American mistletoe	N	
Vitaceae	*Vitis californica*	California wild grape	N	
MONOCOTS				
Arecaceae	*Phoenix* sp. (seedlings)	Palm	I	
Agavaceae	*Chlorogalum pomeridianum*	Soaproot	N	
Cyperaceae	*Carex* sp. 1 (likely *C. prae-gracilis*; not *C. xerophila*; not in flower)	Sedge	--	
	Carex sp. 2 (growing in stream, not *C. xerophila*)	Sedge	--	
	Cyperus eragrostis	Nutsedge	N	
	Eleocharis sp.	Spikerush	--	
Iridaceae	*Iris germanica*	Iris	I	
Juncaceae	*Luzula comosa*	Hairy wood rush	N	
Liliaceae	*Calochortus* sp. (likely *C. albus*; in fruit only; fruit pendant)	Calochortus	N	
Poaceae	*Aegilops triuncialis*	Barbed goat grass	I	High
	Agrostis sp.	Bent grass	--	
	Aira caryophyllea	Silver hair grass	I	
	Avena barbata	Slender wild oat	I	Moderate
	Briza minor	Annual quaking grass, small quaking grass	I	
	Bromus carinatus	California brome	N	
	Bromus diandrus	Ripgut grass	I	Moderate

Family	Scientific Name[1]	Common Name	N/I[2]	Cal-IPC[3]
	Bromus hordeaceus	Soft chess	I	Limited
	Cynodon dactylon	Bermuda grass	I	Moderate
	Cynosurus echinatus	Bristly dogtail grass	I	Moderate
	Elymus caput-medusae	Medusa head	I	High
	Elymus triticoides	Beardless wild rye	N	
	Festuca perennis	Rye grass	I	Moderate
	Festuca myuros	Rattail sixweeks grass	I	Moderate
	Gastridium phleoides	Nit grass	I	
	Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	I	Moderate
	Hordeum murinum ssp. *leporinum*	Hare barley	I	Moderate
	Melica sp.	Oniongrass, melic	N	
	Muhlenbergia rigens	Deer grass	N	
	Poa pratensis ssp. *pratensis*	Kentucky blue grass	I	Limited
	Polypogon sp.	Beard grass	I	
	Polypogon monspeliensis	Annual beard grass, rabbitfoot grass	I	Limited
Potamogetonaceae	*Potamogeton foliosus*	Leafy pondweed	N	
Themidaceae	*Brodiaea elegans* ssp. *elegans*	Harvest brodiaea	N	
	Dichelostemma capitatum	Blue dicks	N	
	Dichelostemma volubile	Twining brodiaea, snake lily	N	
	Triteleia ixioides ssp. *ixioides*	Golden brodiaea	N	
	Triteleia laxa	Ithuriel's spear, common triteleia	N	
Typhaceae	*Typha domingensis*	Southern cattail	N	

[1] Nomenclature and taxonomy follow *The Jepson manual: Vascular plants of California*, 2nd ed. (Baldwin et al., eds. 2012).

[2] N = Native to California; I = Introduced.

[3] Negative ecological impact ranking by the California Invasive Plant Council (Cal-IPC 2021).

Wildlife Species Observed

Common Name	Scientific Name
MAMMALS	
Mule deer	*Odocoileus hemionus*
BIRDS	
Acorn woodpecker	*Melanerpes formicivorus*
Bald eagle	*Haliaeetus leucocephalus*
Black phoebe	*Sayornis nigricans*
Bushtit	*Psaltriparus minimus*
Cedar waxwing	*Bombycilla cedrorum*
European starling	*Sturnus vulgaris*
Goldfinch	*Carduelis* sp.
Great egret	*Ardea alba*
House finch	*Carpodacus mexicanus*
Hummingbird	Likely *Calypte anna*
Mallard	*Anas platyrhynchos*
Mourning dove	*Zenaida macroura*
Northern mockingbird	*Mimus polyglottos*
Oak titmouse	*Contopus cooperi*
Red-tailed hawk	*Buteo jamaicensis*
Red-winged blackbird	*Agelaius phoeniceus*
Tree swallow	*Tachycineta bicolor*
Turkey vulture	*Cathartes aura*
Spotted towhee	*Pipilo maculatus*
White-breasted nuthatch	*Sitta carolinensis*
Wild turkey	*Meleagris gallopavo*
REPTILES	
Garter snake	*Thamnophis couchii*
Turtle[1]	--
Western fence lizard	*Sceloporus occidentalis*
AMPHIBIANS	
American bullfrog (numerous adults and sub-adults, with vocalizations)	*Lithobates catesbeianus*
FISH	
Bass	*Micropterus* sp.
Sunfish	*Centrarchidae*

[1] The turtle quickly retreated and concealed itself in IM-3 before it could be identified. Likely a western pond turtle (*Emys marmorata*) or red-eared slider (*Trachemys scripta elegans*).

APPENDIX D.

Photographs

Photo 1. View looking south toward California annual grassland (upland) in the southern portion of the BSA adjacent to Salmon Falls Road (on right). 18 May 2021.

Photo 2. View looking north toward California annual grassland in the southern portion of the BSA. A few scattered blue oaks occur in the grassland. 18 May 2021.

Photo 3. View looking southeast toward California annual grassland in the southern portion of the BSA. Oak woodland in the background. 18 May 2021.

Photo 4. View looking northwest toward an upland swale within California annual grassland in the southern portion of the BSA. 18 May 2021.

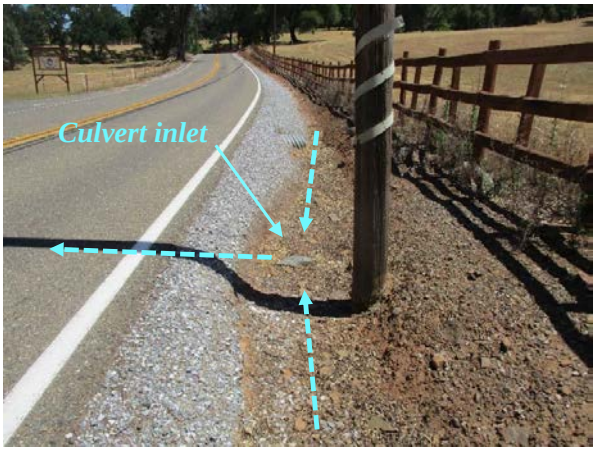

Photo 5. View looking northeast toward CH-3, an ephemeral roadside ditch in the southern portion of the BSA, and ultimately drains to Folsom Lake. 18 May 2021.

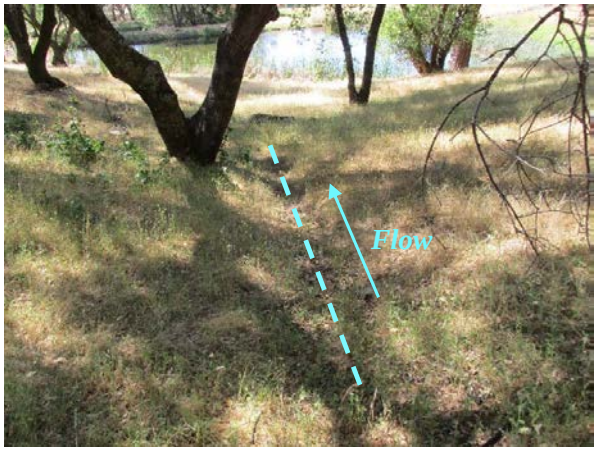

Photo 6. View looking northwest toward ephemeral CH-2 as it flows toward IM-3. An OHWM is present only in the segment labeled in blue. 18 May 2021.

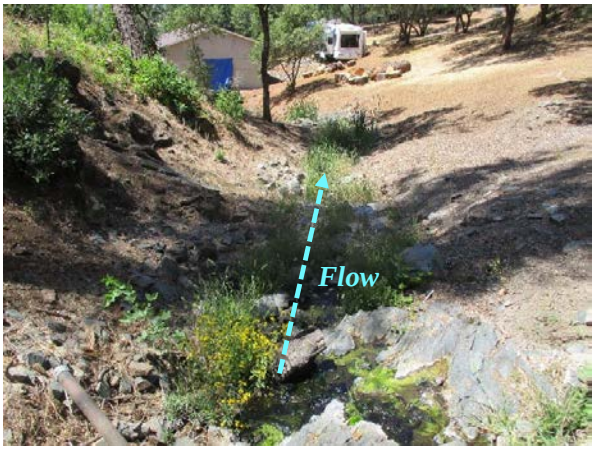

Photo 7. View looking northwest toward CH-1a (facing downstream) as it flows toward IM-1. Water is flowing over bedrock in the channel. 18 May 2021.

Photo 8. View looking southwest toward IM-1. Some cattails (*Typha* sp.) are present in the center of the pond along with floating algae. 18 May 2021.

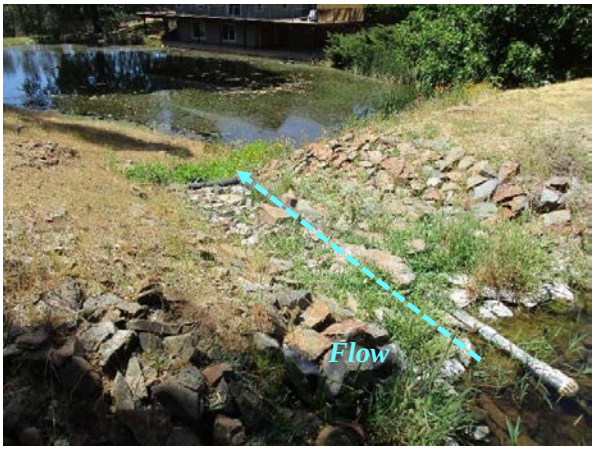

Photo 9. View toward CH-1b, the connection between IM-1 (bottom right) and IM-2 (top left). Water is flowing in the channel. The small pipe delivers water from IM-1 to a fountain that flows into IM-2. 18 May 2021.

Photo 10. View looking northeast toward CH-1c, facing upstream. Water is flowing in the channel. The channel is a created channel on an impoundment and has been lined with rocks. 18 May 2021.

Photo 11. View looking south toward IM-3. Cattails occur in the shallow edgewaters within IM-3. Large trees provide potential raptor nesting opportunities. 18 May 2021.

Photo 12. View looking southeast toward IM-4. Nonnative annual grassland in foreground. No water was observed flowing into or out of IM-4 during fieldwork. 18 May 2021.

Aquatic Resource Delineation Report

for the

Lin Lot Split Project

El Dorado County, CA

Prepared by:

Sycamore Environmental Consultants, Inc. / SWCA Environmental Consultants
6355 Riverside Blvd., Suite C
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Prepared for:

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Contact: Mark Brehmer, PE

July 2021

P20-0005 Attachment C: Aquatic Resource Delineation Report

Table of Contents

Figures

Tables

Appendices

I. INTRODUCTION

A. Purpose

The purpose of this report is to document baseline biological resources in the Lin Lot Split Project (Project) Biological Study Area (BSA). This report may be used in support of permit applications and environmental review. This report does not identify or analyze project impacts.

B. Project Location

The 15-acre BSA is located on the east side of Salmon Falls Road, just south of Salmon Valley Lane, in the unincorporated area of El Dorado County, California. The BSA is located on assessor's parcel number (APN) 126-250-012. The BSA is on the Clarksville USGS topographic quad (Section 21 T7N, R6E, Mt. Diablo Base and Meridian; Figure 1) and is located in the Lower South Fork American River (Hydrological Unit Code [HUC] 1802012907) Hydrological Unit. The geographic coordinates of the BSA are 38.442062° north, -121.33816° west (WGS84), and the UTM coordinates are 674,542 meters east, 4,256,810 meters north, Zone 10N (WGS84). Figure 2 is a 17 June 2020 aerial photo of the BSA and surrounding area.

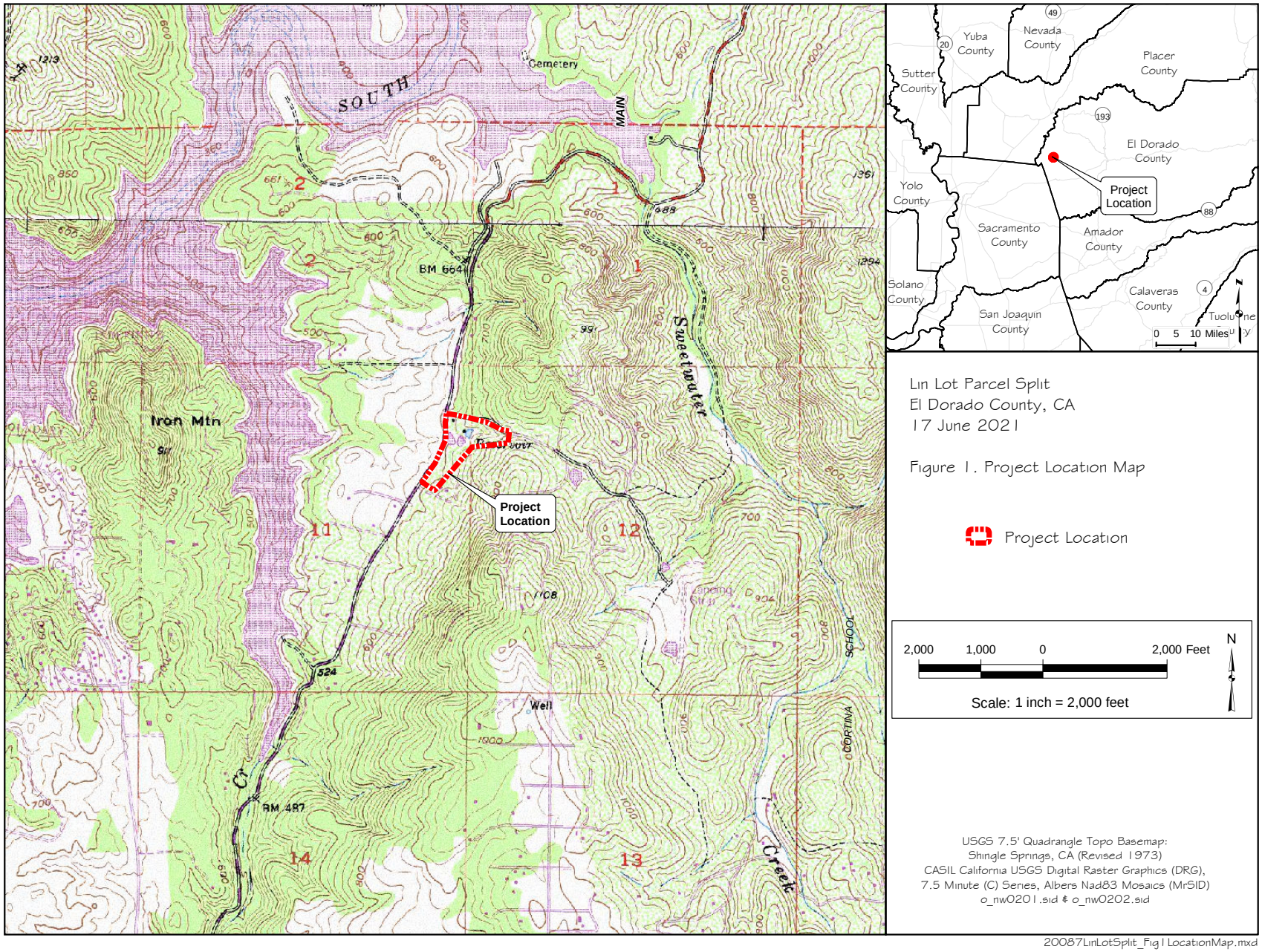
C. Project Applicant

Mark Brehmer, PE
D&Z Engineering, Inc.
3389 Mira Loma Drive, Suite 3
Cameron Park, CA 95682

Phone: 530.677.0900
Email: mbrehmer@dz-engineering.com

D. Project Description

The project is a proposed lot split into a 10-acre parcel and a 5-acre parcel. The owner is contemplating a residential development on the 5-acre parcel.


SOUTH
MAIN
Cemetery
BM 664
Iron Mtn
Sweetwater
Project Location
11
12
13
14
SCHOOL
Well
BM 487
524
Creek
Nevada County
Yuba County
Sutter County
Placer County
El Dorado County
Yolo County
Sacramento County
Amador County
Solano County
San Joaquin County
Calaveras County
Tuolumne County
Project Location
0 5 10 Miles
N
Lin Lot Parcel Split
El Dorado County, CA
17 June 2021
Figure 1. Project Location Map
Project Location
2,000 1,000 0 2,000 Feet
Scale: 1 inch = 2,000 feet
USGS 7.5' Quadrangle Topo Basemap:
Shingle Springs, CA (Revised 1973)
CASIL California USGS Digital Raster Graphics (DRG),
7.5 Minute (C) Series, Albers Nad83 Mosaics (MrSID)
o_nw0201.sid & o_nw0202.sid
20087LinLotSplit_Fig1 LocationMap.mxd

Lin Lot Parcel Split
El Dorado County, CA
17 June 2021

Biological Study Area (BSA)

Aerial Photograph: 17 June 2020
WV02 Metro Maxar Imagery
ESRI ArcMap Basemap layer

Figure 2. Aerial Photograph

20087LinLotSplit_Fig2AerialPhoto.mxd

II. STUDY METHODS

A. Data Sources

Table 1 is a list of data sources used in the preparation of this report. Table 1 is based on an itemized list of data sources for jurisdictional determinations published by the U.S. Army Corps of Engineers (Corps) and U.S. Environmental Protection Agency (EPA) (2007).

Table 1. Data Sources

Data Source	Data Location/Results
1. Maps, plans, plots or plat submitted by or on behalf of the applicant	See Figures 1 through 4.
2. Data sheets prepared/submitted by or on behalf of the applicant	See Appendix A.
3. Corps navigable waters study	Corps (2021)
4. U.S. Geological Survey Hydrologic Atlas • USGS NHD data • USGS 8- and 12-digit HUC maps	Folsom Reservoir-South Fork American River Hydrologic Unit (180201290703)
5. U.S. Geological Survey map(s)	Clarksville USGS Quad, see Figure 1.
6. USDA Natural Resources Conservation Service Soil Survey	NRCS 1974; 2021a, b; see Figure 3. See description in Section III.E.
7. National wetlands inventory map(s)	NWI map for the Clarksville Quad. See description in Section III.F.
8. State/Local wetland inventory map(s)	None known.
9. FEMA/FIRM maps	See Appendix D. The BSA is located in Zone X – Area of Minimal Flood Hazard.
10. 100-year Floodplain Elevation is: (e.g., National Geodetic Vertical Datum of 1929)	The BSA is not located within the 100-year floodplain.
11. Photographs: • Aerial (Name & Date): • Other (Name & Date):	• Figure 2, Aerial Photograph, 17 June 2020. • Appendix B, on-site photographs taken during fieldwork in 2020 and 2021.
12. Previous determination(s). File no. and date of response letter.	None known.

B. Survey Dates and Personnel

Fieldwork for the aquatic resource delineation was conducted by Professional Wetland Scientist Mike Bower, M.S., on May 18, 2021. On July 28, 2021, Tom Lin (Owner) provided video and photographs showing hydrologic conditions within impoundments and channels that day.

C. Survey Methods

This aquatic resource delineation report has been prepared in accordance with the Sacramento District minimum standards (information requested for verification of Corps jurisdiction; Corps 2016), the U.S. Army Corps of Engineers Wetland Delineation Manual (Corps 1987), the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Arid West Supplement; Corps 2008b), and applicable Ordinary High Water Mark (OHWM) delineation field guides (Corps 2008a, 2014). Regional supplements are intended to bring the 1987 Wetland Delineation Manual up to date with current knowledge and practice in specific regions. The Arid West Supplement is applicable to the BSA because it is located in Arid West sub region (LRR C – Mediterranean California). All wetland and water features were identified and mapped. Hydrophytic classifications of plants were determined from the current (2021) National Wetland Plant List (Lichvar et al. 2018). Plant nomenclature follows Baldwin et al., eds. (2012).

The delineation was conducted using the on-site routine determination approach (Corps 1987). Jurisdictional data were recorded using the Wetland Determination Data Form for the Arid West Region (Corps 2008b). Soil, vegetation, and hydrology data were recorded at the data points. Plant species were identified by Mr. Bower. The OHWMs were identified in the field based on applicable indicators described in the OHWM field guides (Corps 2008a, 2014). Wetland data sheets are in Appendix A. Photographs are in Appendix B. Appendix C is a list of plant species recorded at the data points.

D. Mapping of Data and Calculation of Acreages

Aquatic features observed in the BSA were mapped using sub-meter accurate global positioning system (GPS) units (Trimble Nomad5 with Empower Module and TDC-100 with R-1 receiver. The GPS data were exported to ArcMap and Google Earth, where feature boundaries were completed. Acreages and feature dimensions were calculated using ESRI ArcMap functions.

E. Definitions

The Corps and EPA regulate the discharge of dredge and fill material into "waters of the United States" under Section 404 of the Clean Water Act (CWA; 33 U.S.C. 1344). The Corps issues permits for certain dredge and fill activities in waters of the U.S. pursuant to the regulations in 33 CFR 320-330. The definitions listed below are those currently in effect (2020 Navigable Waters Protection Rule; NWPR).

Waters of the United States are defined at 33 CFR 328.4 (a), (b), and (c), as follows:

> (a) ***Territorial Seas***. The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three nautical miles. (See 33 CFR 329.12)
>
> (b) ***Tidal waters of the United States***. The landward limits of jurisdiction in tidal waters:
>
> (1) Extends to the high tide line, or
>
> (2) When adjacent non-tidal waters of the United States are present, the jurisdiction extends to the limits identified in paragraph (c) of this section.
>
> (c) ***Non-tidal waters of the United States***. The limits of jurisdiction in non-tidal waters:
>
> (1) In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or
>
> (2) When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.
>
> (3) When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

Key definitions used in defining jurisdictional waters are found at 33 CFR 328.3, as follows:

> (a) ***Jurisdictional waters***. For purposes of the Clean Water Act, 33 U.S.C. 1251 *et seq.* and its implementing regulations, subject to the exclusions in paragraph (b) of this section, the term "waters of the United States" means:
>
> (1) The territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;
>
> (2) Tributaries;
>
> (3) Lakes and ponds, and impoundments of jurisdictional waters; and
>
> (4) Adjacent wetlands.
>
> (b) ***Non-jurisdictional waters***. The following are not "waters of the United States":
>
> (1) Waters or water features that are not identified in paragraph (a)(1), (2), (3), or (4) of this section;
>
> (2) Groundwater, including groundwater drained through subsurface drainage systems;
>
> (3) Ephemeral features, including ephemeral streams, swales, gullies, rills, and pools;
>
> (4) Diffuse stormwater run-off and directional sheet flow over upland;
>
> (5) Ditches that are not waters identified in paragraph (a)(1) or (2) of this section, and those portions of ditches constructed in waters identified in paragraph (a)(4) of this section that do not satisfy the conditions of paragraph (c)(1) of this section;

(6) Prior converted cropland;

(7) Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease;

(8) Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional waters, so long as those artificial lakes and ponds are not impoundments of jurisdictional waters that meet the conditions of paragraph (c)(6) of this section;

(9) Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;

(10) Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;

(11) Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention, and infiltration basins and ponds, constructed or excavated in upland or in non-jurisdictional waters; and

(12) Waste treatment systems.

(c) ***Definitions***. In this section, the following definitions apply:

(1) ***Adjacent wetlands***. The term *adjacent wetlands* means wetlands that:

(i) Abut, meaning to touch at least at one point or side of, a water identified in paragraph (a)(1), (2), or (3) of this section;

(ii) Are inundated by flooding from a water identified in paragraph (a)(1), (2), or (3) of this section in a typical year;

(iii) Are physically separated from a water identified in paragraph (a)(1), (2), or (3) of this section only by a natural berm, bank, dune, or similar natural feature; or

(iv) Are physically separated from a water identified in paragraph (a)(1), (2), or (3) of this section only by an artificial dike, barrier, or similar artificial structure so long as that structure allows for a direct hydrologic surface connection between the wetlands and the water identified in paragraph (a)(1), (2), or (3) of this section in a typical year, such as through a culvert, flood or tide gate, pump, or similar artificial feature. An adjacent wetland is jurisdictional in its entirety when a road or similar artificial structure divides the wetland, as long as the structure allows for a direct hydrologic surface connection through or over that structure in a typical year.

(2) ***Ditch***. The term *ditch* means a constructed or excavated channel used to convey water.

(3) ***Ephemeral***. The term *ephemeral* means surface water flowing or pooling only in direct response to precipitation (*e.g.*, rain or snow fall).

(4) ***High tide line***. The term *high tide line* means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds, such as those accompanying a hurricane or other intense storm.

(5) ***Intermittent***. The term *intermittent* means surface water flowing continuously during certain times of the year and more than in direct response to precipitation (*e.g.*, seasonally when the groundwater table is elevated or when snowpack melts).

(6) ***Lakes and ponds, and impoundments of jurisdictional waters***. The term *lakes and ponds, and impoundments of jurisdictional waters* means standing bodies of open water that contribute surface water flow to a water identified in paragraph (a)(1) of this section in a typical year either directly or through one or more waters identified in paragraph (a)(2), (3), or (4) of this section. A lake, pond, or impoundment of a jurisdictional water does not lose its jurisdictional status if it contributes surface water flow to a downstream jurisdictional water in a typical year through a channelized non-jurisdictional surface water feature, through a culvert, dike, spillway, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. A lake or pond, or impoundment of a

jurisdictional water is also jurisdictional if it is inundated by flooding from a water identified in paragraph (a)(1), (2), or (3) of this section in a typical year.

(7) ***Ordinary high water mark***. The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(8) ***Perennial***. The term *perennial* means surface water flowing continuously year-round.

(9) ***Prior converted cropland***. The term *prior converted cropland* means any area that, prior to December 23, 1985, was drained or otherwise manipulated for the purpose, or having the effect, of making production of an agricultural product possible. EPA and the Corps will recognize designations of prior converted cropland made by the Secretary of Agriculture. An area is no longer considered *prior converted cropland* for purposes of the Clean Water Act when the area is abandoned and has reverted to wetlands, as defined in paragraph (c)(16) of this section. Abandonment occurs when prior converted cropland is not used for, or in support of, agricultural purposes at least once in the immediately preceding five years. For the purposes of the Clean Water Act, the EPA Administrator shall have the final authority to determine whether prior converted cropland has been abandoned.

(10) ***Snowpack***. The term *snowpack* means layers of snow that accumulate over extended periods of time in certain geographic regions or at high elevation (*e.g.*, in northern climes or mountainous regions).

(11) ***Tidal waters*** and ***waters subject to the ebb and flow of the tide***. The terms *tidal waters* and *waters subject to the ebb and flow of the tide* mean those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters and waters subject to the ebb and flow of the tide end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

(12) ***Tributary***. The term *tributary* means a river, stream, or similar naturally occurring surface water channel that contributes surface water flow to a water identified in paragraph (a)(1) of this section in a typical year either directly or through one or more waters identified in paragraph (a)(2), (3), or (4) of this section. A tributary must be perennial or intermittent in a typical year. The alteration or relocation of a tributary does not modify its jurisdictional status as long as it continues to satisfy the flow conditions of this definition. A tributary does not lose its jurisdictional status if it contributes surface water flow to a downstream jurisdictional water in a typical year through a channelized non-jurisdictional surface water feature, through a subterranean river, through a culvert, dam, tunnel, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. The term *tributary* includes a ditch that either relocates a tributary, is constructed in a tributary, or is constructed in an adjacent wetland as long as the ditch satisfies the flow conditions of this definition.

(13) ***Typical year***. The term *typical year* means when precipitation and other climatic variables are within the normal periodic range (*e.g.*, seasonally, annually) for the geographic area of the applicable aquatic resource based on a rolling thirty-year period.

(14) ***Upland***. The term *upland* means any land area that under normal circumstances does not satisfy all three wetland factors (*i.e.*, hydrology, hydrophytic vegetation, hydric soils) identified in paragraph (c)(16) of this section, and does not lie below the ordinary high water mark or the high tide line of a jurisdictional water.

(15) ***Waste treatment system***. The term *waste treatment system* includes all components, including lagoons and treatment ponds (such as settling or cooling ponds), designed to either convey or retain, concentrate, settle, reduce, or remove pollutants, either actively or passively, from wastewater prior to discharge (or eliminating any such discharge).

(16) ***Wetlands***. The term *wetlands* means areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

[51 FR 41250, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993; 80 FR 37104, June 29, 2015; 83 FR 5208, Feb. 6, 2018; 84 FR 56667, Oct. 22, 2019; 85 FR 22338, Apr. 21, 2020].

III. SETTING

The BSA is located in a rural residential area located east of Folsom Lake. Salmon Valley Lane borders the BSA immediately to the north. Salmon Falls Road borders the BSA immediately to the west. Areas to the north, south, and west of the BSA consist of low-density residential developments. Areas to the east of the BSA are largely undeveloped. Vegetation in the surrounding area consists of oak woodlands, pine-oak forests, and chaparral. A drainage flows through the BSA from east to west, draining ultimately to Folsom Lake. The drainage has been modified with impoundments. Several residential buildings occur in the BSA north of the drainage. The southern portion of the parcel is an undeveloped grassland area with few trees.

A. Topography and Drainage

The elevation in the BSA ranges from approximately 590 to 766 feet above sea level (NAVD 88). Four impoundments contained water during the survey. Two channels occur within the BSA. The four impoundments that contained water during the survey drain downstream from east to west via Channel 1 (CH-1). CH-1 flows out of the BSA to the west and ultimately drains into Folsom Lake. Channel 2 (CH-2) occurs at the central eastern portion of the BSA and flows east to west. An additional impoundment and one swale occur at the southern portion of the BSA. Both features were dry at the time of the survey. Water may sheet flow in the swale during storms.

B. Existing Field Conditions

The fieldwork was conducted on May 18, 2021. According to the Corps' Antecedent Precipitation Tool (APT v1.01.3; Corps 2021), conditions in the BSA were drier than normal, and the site was experiencing extreme drought. The APT tool utilized gauge data from the nearby Sacramento 5 ESE and Sacramento 5.2 E stations located approximately 9 miles west of the BSA. The most recent precipitation event exceeding 0.25 inches occurred on March 18 and 19, 2021 (0.44 inches over 2 days). The full APT report is presented in Appendix F.

C. Vegetation

The vegetation in the BSA consists of native blue oak (*Quercus douglasii*) pine (*Pinus sabiniana*) woodland, native interior live oak (*Quercus wislizeni*) pine woodland, grassland (both California annual grassland with native wildflower component and nonnative annual grassland), and landscaping associated with existing development. Vegetation observed in the impoundments and channels is described in Section IV. Appendix C contains a list of plant species recorded at the data points. Photographs of the vegetation present in the BSA are in Appendix B.

D. Existing Level of Disturbance

Several residential buildings occur within the BSA. Each residence has a paved driveway accessible from Salmon Valley Lane. Landscaping and lawns occur adjacent to some of the residences. The main drainage that flows east to west through the property has been heavily

modified with impoundments and engineered spillways lined with imported rock. At least three of the four impoundments observed during fieldwork (the larger three located most downstream) were created by 1973 according to USGS quad maps. The most upstream impoundment was probably created at the same time. Ornamental trees have been planted around the impoundments. According to the owner, the southern 5-acre portion of the parcel was previously used for cattle grazing and alfalfa crops. The majority of the open grassland in the BSA has been mowed.

E. Soils

Soil pits were excavated by hand with a shovel to observe the chroma, texture, degree of saturation, and other characteristics. Soil characteristics observed in the field are recorded on the soil data sheets in Appendix A. Mapped soil units in the BSA are Auburn Very Rocky Silt Loam, 2 to 30 Percent Slopes and Auburn Very Rocky Silt Loam, 30 to 50 Percent Slopes (NRCS 1974, 2021b). These soils are a part of the same series but have unique slopes. The soils are not hydric (NRCS 2021c). Figure 3 is a soils map. The following descriptions are summarized from NRCS (1974, 2021b).

Auburn Series

The Auburn Series soils are on foothills with 2 to 75 percent slopes. Rock outcrops are common. The soils are shallow to moderately deep, well-drained soils which formed in material weathered from metabasic or metasedimentary rock. A typical profile of Auburn Series is as follows (reported colors are for moist soil):

A1—0 to 2 inches; strong brown (7.5YR 5/6) silt loam, reddish brown (5YR 4/4) moist; massive; slightly hard, friable, slightly sticky and non-plastic; many very fine roots; many very fine and fine tubular pores; slightly acid (pH 6.4); clear smooth boundary.

A2—2 to 9 inches; yellowish red (5YR 5/6) silt loam, reddish brown (5YR 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine and medium roots; many very fine and medium tubular pores; slightly acid (pH 6.4); gradual smooth boundary.

Bw—9 to 14 inches; yellowish red (5YR 5/8) silt loam, yellowish red (5YR 4/6) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; few thin clay films line pores; slightly acid (pH 6.5); abrupt wavy boundary.

R—14 to 24 inches; very pale brown (10YR 7/4) partly weathered amphibolite schist with reddish brown (2.5YR 4/4) colloidal stains in fracture planes; few roots in cracks; slightly acid (pH 6.5).

Lin Lot Parcel Split
El Dorado County, CA
12 July 2021

Figure 3. Soils Map

Botanical Study Area (BSA)

Soil Boundary

Soil Mapping Unit

Symbol	Name
AxD	Auburn very rocky silt loam, 2 to 30 percent slopes
AxE	Auburn very rocky silt loam, 30 to 50 percent slopes

1,667 0 1,667 Feet

N

Scale: 1 inch = 1,667 feet

Soil Survey Geographic (SSURGO) database for
El Dorado Area, California, USDA, NRCS
URL:http://SoilDataMart.nrcs.usda.gov/

Aerial Photograph: 17 June 2020
Maxar 2000 Imagery
Google Earth Pro

20087LinLotSplit_Fig3SoilsMap.mxd

F. National Wetlands Inventory Map

The online National Wetland Inventory (NWI; USFWS 2021) shows palustrine aquatic features within the BSA, all associated with a single drainage that travels roughly east to west through the BSA, draining into Folsom Lake outside the BSA to the west. From upstream (east) to downstream (west), features mapped by NWI within the BSA consist of:

- One linear palustrine, forested, persistent, temporary flooded aquatic feature (PFOA) occurs at the eastern end of the BSA. This feature was observed during fieldwork and corresponds with channel CH-1a.
- The PFOA feature is connected to a small palustrine, unconsolidated bottom, permanently flooded diked/impounded (PUBHh) aquatic feature. This feature was observed during fieldwork and roughly corresponds with impoundment IM-2.
- One palustrine, unconsolidated bottom, semi-permanently flooded, diked/impounded (PUBFh) aquatic feature occurs just west of the PUBH feature mentioned above. This feature was observed during fieldwork and roughly corresponds with impoundments IM-3 and IM-4.
- The PUBFh feature mentioned above flows into a linear palustrine, emergent, persistent, temporary flooded wetland (PEM1A) which extends outside of the BSA to the west. The feature eventually flows into Folsom Lake. This feature was observed during fieldwork, and roughly corresponds with channel CH-1f.

The features were mapped by NWI primarily through aerial photograph interpretation, using image scale 1:80,000 or finer, on color infrared imagery from 1987 (USFWS 2021).

No other aquatic features are shown within the BSA on the NWI map. No other aquatic features abut or occur near the BSA on the NWI map.

G. Other Aquatic Resource Maps

Other maps reviewed include the most recent USGS Clarksville Quadrangle (Quad) Map. The USGS Clarksville Quad map depicts three isolated ponds in the BSA. The features are not represented with any upstream or downstream connections. No blue-line streams are represented in the BSA on the quad map.

IV. WATERS AND WETLANDS

Waters are shown on the aquatic resource delineation map in Figure 4. No wetlands occur in the BSA. A summary of acreages by feature is in Table 2 below. An evaluation of delineated aquatic resources pursuant to the current definition of waters of the U.S. and their potential jurisdiction under Section 404 of the Clean Water Act (33 U.S.C. 1344) is in Section V.

Table 2. Summary of Delineated Aquatic Resources

AQUATIC FEATURE	HYDROLOGY/ COWARDIN CLASSIFICATION[1]	LENGTH (FT)	AVG. WIDTH (FT)	AREA (AC)
Impoundment 1 (IM-1)	Perennial / PUBHh	--	--	0.07
Impoundment 2 (IM-2)	Perennial / PUBHh	--	--	0.33
Impoundment 3 (IM-3)	Intermittent / PUBFh	--	--	0.29
Impoundment 4 (IM-4)	Intermittent / PUBFh	--	--	0.32
Channel 1a (CH-1a)	Perennial / R3RB	454	5.1	0.05
Channel 1b (CH-1b)	Perennial / R3RB	50	4.4	0.01
Channel 1c (CH-1c)	Intermittent / R4UB	100	2.0	< 0.01 (209 sf)
Channel 1d (CH-1d)	Ephemeral / R6	77	3.9	0.01
Channel 1e (CH-1e)	Intermittent / R4UB	88	3.3	0.01
Channel 1f (CH-1f)	Intermittent / R4UB	130	2.5	0.01
Channel 2 (CH-2)	Ephemeral / R6	26	1.0	< 0.01 (30 sf)
Channel 3 (CH-3)	Ephemeral / R6	296	1.0	0.01
	Total Waters:	--	--	**1.11**

[1] Classification according to Cowardin et al. (1979) and the Corps' aquatic resource table template.

PUBHh = Palustrine, unconsolidated bottom, permanently flooded, diked/impounded

PUBFh = Palustrine unconsolidated bottom, semipermanently flooded, diked/impounded

R3RB = Riverine, upper perennial, rock bottom

R4UB = Riverine, intermittent, unconsolidated bottom.

R6 = Ephemeral

A. Waters

The BSA contains four impoundments (IM) and three channels (CH). The impoundments and CH-1(a-f) are part of a single drainage that enters the BSA from the east as a perennial feature and exits the BSA to the west as an intermittent feature that ultimately drains to Folsom Lake. Channels 2 and 3 are ephemeral. Impoundment and channel acreages and dimensions are summarized in Table 2 and shown on Figure 4.

Impoundments (IM-1 through IM-4)

IM-1 through IM-4 are man-made impoundments along a single east-west drainage in the northern portion of the BSA (Appendix B, Photos 8, 9, 11, and 12). The impoundments consist of earthen berms placed across a natural drainage. USGS quad maps show that one impoundment was present by 1953, and two others by 1973 (the fourth and smallest impoundment, IM-1, is not represented on any quad maps but is visible in Google Earth aerials). All four impoundments are visible on the earliest aerial photograph date available in Google Earth (1993).

IM-1 and IM-2 are permanently flooded features fed by a perennial stream that enters the BSA from the east. The drainage is intermittent by the time it reaches IM-3 and IM-4. The hydrology determinations were based on direct field observation (water was flowing into IM-1, IM-2, and IM-3, but not IM-4 on May 18, 2021), aerial photograph review (water always present in the impoundments, with IM-4 often appearing nearly dry), dominant obligate wetland plants within these features and the channels feeding them, and an interview with a person with local knowledge (owner Tom Lim states that the stream has flowed year-round into at least IM-1 in the 1+ year he has lived there; he also provided video of water flowing into IM-1 on July 28, 2021).

The four impoundments are connected by portions of CH-1 (described below; see Figure 4). Water from CH-1a flows into IM-1. Water leaving IM-1 flows west via CH-1b into IM-2. Water from IM-2 flows out through both CH-1c and CH-1d into IM-3. IM-3 flows through CH-1e into IM-4. Water in IM-4 flows out via CH-1f, which exits the BSA to the west and ultimately drains to Folsom Lake. Folsom Lake flows into the American River, which flows into the Sacramento River, which flows into the San Francisco Bay and ultimately the Pacific Ocean. The American River is a traditionally navigable water from mouth to River Mile 12 / Bradshaw Road (Corps 2021).

The OHWM of IM-1 through IM-4 was identified based on change in plant community (typically a transition from upland brome grasses to facultative to obligate wetland plants along the OHWM); natural line impressed upon the bank; and vegetation matted down, bent, or absent (Corps RGL 05-05). Vegetation below the OHWM consists of a mixture of cattails (*Typha* sp.), rabbitfoot grass (*Polypogon monspeliensis*), and monkeyflower (*Mimulus guttatus*). No riparian vegetation occurs along the impoundments. Some horticultural plantings have been installed.

Channels (CH-1 through CH-3)
Three channels occur in the BSA (Figure 4). CH-1 is a natural drainage that passes through the four impoundments described above, and thus is broken down into segments (CH-1a-f).

Channel 1:
CH-1a and CH-1b are perennial channels (Appendix B, Photos 7 and 9). The hydrology determination was based on direct field observation (water was flowing in CH-1a and CH-1b on May 18, 2021), aerial photograph review (water always present in IM-1, IM-2, and IM-3), the presences of some obligate wetland plants within these features, and an interview with a person with local knowledge (owner Tom Lim states that the stream has flowed year-round into at least IM-1 in the 1+ year he has lived there; he also provided video of water flowing into IM-1 on July 28, 2021). CH-1a occurs on natural rock substrate. CH-1b occurs on a combination of natural and imported rock substrate. CH-1b contains a pump intake for an ornamental fountain that flows into IM-2. Vegetation on the bed of CH-1a and CH-1b consists mainly of rabbitfoot grass, monkeyflower, bent grass (*Agrostis* sp.), and sedge (*Carex* sp.). The OHWM determination was based on change in plant community (a rapid transition from upland species to facultative to obligate wetland plants along the OHWM); natural line impressed upon the bank; vegetation matted down, bent, or absent; scour; and bed and banks (Corps RGL 05-05).

CH-1c, CH-1e, and CH-1f are intermittent channels (Appendix B, Photo 10). The intermittent hydrology determination was based on direct field observation (on May 18, 2021, water was flowing in CH-1c, flowing to a diminished extent in CH-1e, and not flowing at all in CH-1f), aerial photograph review (water always present in IM-1, IM-2, and IM-3, and generally IM-4), the presences of some obligate wetland plants within these features, and an interview with a person with local knowledge (owner Tom Lim states that the stream has flowed year-round into at least IM-1 in the 1+ year he has lived there; he also provided video of water flowing into IM-1 on July 28, 2021 along with photos showing low water levels in IM-4). CH-1c, CH-1e, and CH-1f are lined with imported rock and appear to be realigned portions of the natural channel. CH-f has scoured down to bedrock as it returns the natural channel downstream of IM-4. Vegetation on the bed of these features primarily consists of rabbitfoot grass (CH-1c) or is absent (CH-1e, CH-1f). The OHWM determination was based on a natural line impressed upon the bank; vegetation matted down, bent, or absent; scour; and bed and banks (Corps RGL 05-05). CH-1f flows from the southwestern end of IM-4 to the west, out of the BSA and through a culvert under Salmon Falls Road. CH-1f ultimately flows west into Folsom Lake, which drains to the American River, a navigable water from its mouth upstream to Bradshaw Road (Corps 2021).

CH-1d is an ephemeral channel excavated within the berm supporting IM-2. The ephemeral hydrology determination was based on direct field observation (no water or saturation was present in CH-1d on May 18, 2021), the predominance of upland grasses (e.g., *Bromus diandrus*, *Cynosurus echinatus*) on the channel bed and banks, and the lack of any evidence

of recent flow. Vegetation on the channel bed and banks is similar to surrounding grass-dominated uplands. The channel bed is earthen with no sign of recent scour. As water flows out of IM-2 it flows first into CH-1c (which was flowing during fieldwork), and then into CH-1d (probably only during and immediately following very large storm events). The OHWM determination was based on a bed and banks (Corps RGL 05-05).

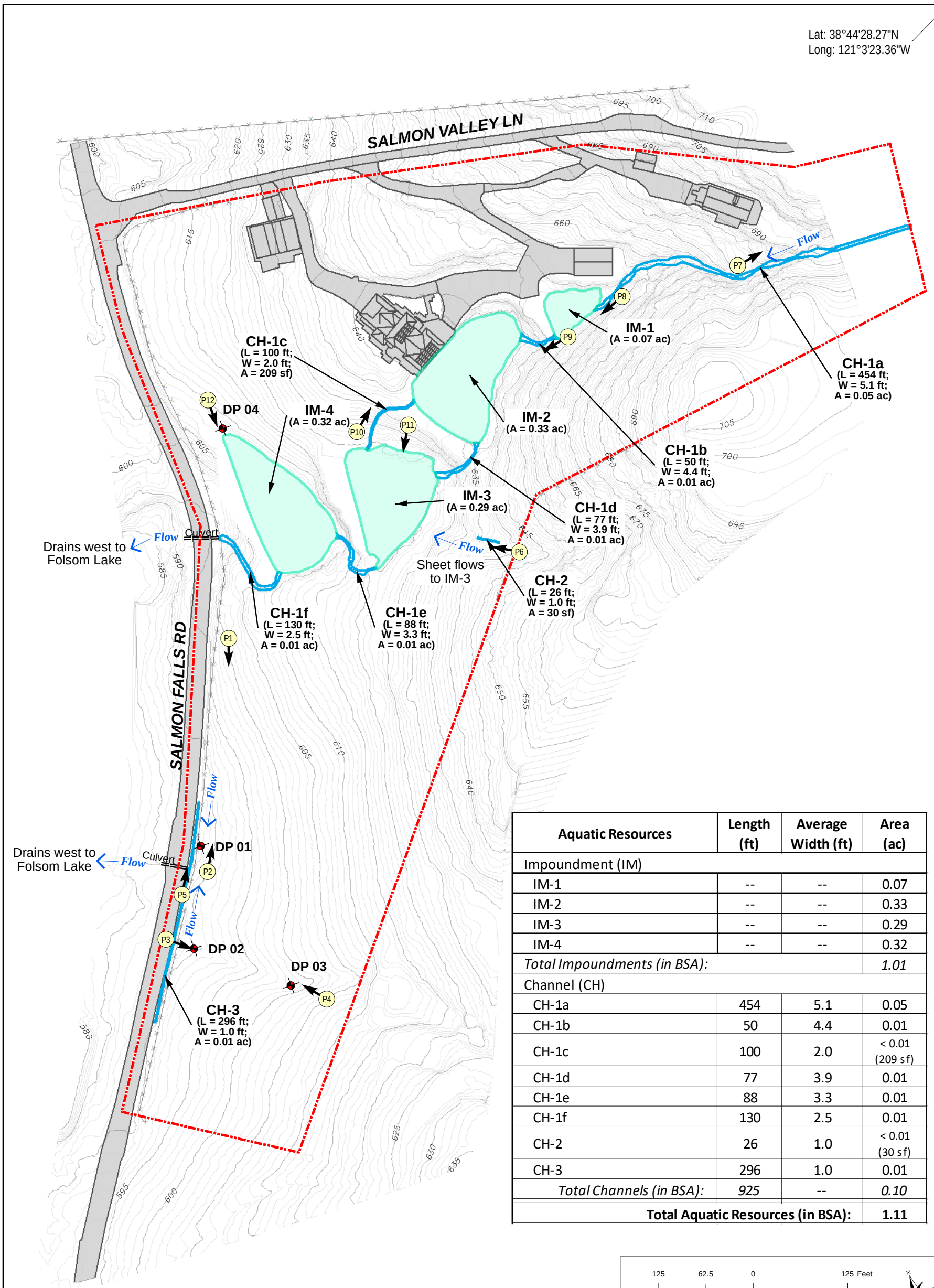
No riparian vegetation occurs along CH-1a through CH-1f. Some trees typical of the surrounding uplands occur near the channels. Some horticultural plantings have been installed along the channels and impoundments.

Channel 2:
CH-2 is an ephemeral channel in a gentle swale located roughly 50 feet southeast of IM-3 (Appendix B, Photo 6). The ephemeral hydrology determination was based on direct field observation (no water or saturation was present in CH-2 on May 18, 2021), aerial photograph review (no flow is visible in this channel and no upstream seeps/wetlands are visible on historic aerials), and the lack of a defined channel both upstream and downstream, reflecting a lack of flow. The 26-foot segment of CH-2 mapped in the BSA receives sheet flow from the surrounding uplands and then redeposits the water as sheet flow once more at its northwest end. The sheet flow exiting CH-2 flows over uplands into IM-3, outside any defined channel. CH-2 is heavily shaded by oaks and generally contained sparse annual grassland vegetation similar to the surrounding uplands. The channel bed is earthen. The OHWM determination was based on scour and a bed and banks (Corps RGL 05-05). No riparian vegetation occurs along CH-2.

Channel 3:
CH-3 is an ephemeral roadside ditch along the east side of Salmon Falls Road in the southern portion of the BSA (Appendix B, Photo 5). The hydrology determination was based on direct field observation (on May 18, 2021 no water was flowing in CH-2), aerial photograph review (no flow is visible in this channel on historic aerials), and the lack of a well-defined channel upstream, reflecting a lack of flow. CH-3 flows into a culvert that passes beneath Salmon Falls Road. Water in CH-3 ultimately flows to Folsom Lake and the American River. Vegetation was generally absent in CH-3. The channel bed is earthen. The OHWM determination was based on scour and a bed and banks (Corps RGL 05-05). No riparian vegetation occurs along CH-3.

B. Wetlands

No wetlands occur in the BSA. Wetland data sheets are in Appendix A.



Aquatic Resources	Length (ft)	Average Width (ft)	Area (ac)
Impoundment (IM)			
IM-1	--	--	0.07
IM-2	--	--	0.33
IM-3	--	--	0.29
IM-4	--	--	0.32
Total Impoundments (in BSA):			*1.01*
Channel (CH)			
CH-1a	454	5.1	0.05
CH-1b	50	4.4	0.01
CH-1c	100	2.0	< 0.01 (209 sf)
CH-1d	77	3.9	0.01
CH-1e	88	3.3	0.01
CH-1f	130	2.5	0.01
CH-2	26	1.0	< 0.01 (30 sf)
CH-3	296	1.0	0.01
Total Channels (in BSA):	*925*	--	*0.10*
Total Aquatic Resources (in BSA):			**1.11**

Lin Lot Parcel Split
El Dorado County, CA
9 July 2021

DRAFT

Figure 4.
Aquatic Resources Delineation Map

Biological Study Area (BSA; 15 acres)
Impoundment (IM)
Channel (CH)
Data Point (DP)
Existing Culvert
P1 Photopoint Location and Direction

Date	Submittal	Delineators	Agency/Company
09 Jul 21	Original	M. Bower	SWCA SAC

Topo Basemap: Lin Site Plan Model (1).PDF
By: D&Z Structural Engineering, Inc.
CAD File: Lin Site Plan.dwg (27 Jan 2021)

20087LinLotSplit_Fig4DelinMap.mxd

V. REGULATORY ANALYSIS AND DISCUSSION

This section addresses waters of the U.S., including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). Current regulatory definitions and the limits of CWA jurisdiction are presented in Section II.F. Information required to classify features within the 2020 NWPR framework is presented in feature descriptions in Section IV. Wetland or water features not subject to the Corps' jurisdiction under Section 404 CWA may come under the jurisdiction of the California Department of Fish and Wildlife and/or State Water Quality Control Board.

The following is an assessment of Corps jurisdiction over the aquatic features identified within the BSA in Section IV, pursuant to the 2020 NWPR:

A. Territorial seas, navigable, and tidal waters (33 CFR 328.3(a)(1))

No territorial seas, navigable waters, or tidal waters occur in the PSA.

B. Tributaries (33 CFR 328.3(a)(2))

CH-1a, CH-1b, CH-1c, CH-1e, and CH-1f are tributaries. These channels have intermittent or perennial flow in a typical year and drain indirectly into a 33 CFR 328.3(a)(1) navigable water (the American River, navigable from mouth upstream to River Mile 12 / Bradshaw Road; Corps 2021).

C. Lakes, ponds, and impoundments of jurisdictional waters (33 CFR 328.3(a)(3))

IM-1, IM-2, IM-3, and IM-4 are impoundments of jurisdictional waters (the tributaries listed above).

D. Adjacent wetlands (33 CFR 328.3(a)(4))

No wetlands occur in the BSA, adjacent or otherwise.

E. Non-jurisdictional waters (33 CFR 328.3(b))

Ephemeral channels CH-1d, CH-2, and CH-3 are non-jurisdictional waters. These features have ephemeral flow in a typical year. CH-1d is a created overflow outlet connecting IM-2 to IM-3. CH-1d contains upland grasses on its bed and bank and shows no sign of recent flow. CH-2 is a natural ephemeral channel that possesses an OHWM for only 26 feet before dissipating and entering IM-3 as sheet flow. CH-3 is a created roadside ditch.

F. Summary

There are approximately 1.09 acres of potential jurisdictional waters in the BSA. There is approximately 0.02 acre of potential non-jurisdictional waters occurs in the BSA. Table 3 is a summary of potential aquatic feature jurisdiction under the 2020 NWPR.

Table 3. Summary of Jurisdictional Waters.

AQUATIC FEATURE	2020 NWPR WATER TYPE	JURISDICTIONAL ACREAGE [1]	NON-JURISDICTIONAL ACREAGE [1]
IM-1	Impoundment of Jurisdictional Waters 33 CFR 328.3(a)(3)	0.07	--
IM-2	Impoundment of Jurisdictional Waters 33 CFR 328.3(a)(3)	0.33	--
IM-3	Impoundment of Jurisdictional Waters 33 CFR 328.3(a)(3)	0.29	--
IM-4	Impoundment of Jurisdictional Waters 33 CFR 328.3(a)(3)	0.32	--
CH-1a	Tributary 33 CFR 328.3(a)(2)	0.05	--
CH-1b	Tributary 33 CFR 328.3(a)(2)	0.01	--
CH-1c	Tributary 33 CFR 328.3(a)(2)	< 0.01 (209 sf)	--
CH-1d	Non-jurisdictional water 33 CFR 328.3(b)(3)	--	0.01
CH-1e	Tributary 33 CFR 328.3(a)(2)	0.01	--
CH-1f	Tributary 33 CFR 328.3(a)(2)	0.01	--
CH-2	Non-jurisdictional water 33 CFR 328.3(b)(3)	--	< 0.01 (30 sf)
CH-3	Non-jurisdictional water 33 CFR 328.3(b)(5)	--	0.01
	TOTAL:	**1.09 acres**	**0.02 acre**

[1] Jurisdictional acreage is preliminary until verified by the U.S. Army Corps of Engineers.

NOTE: In June 2021, the EPA announced its intention to review and rescind the 2020 Navigable Waters Protection Rule. Should the rule be formally rescinded and jurisdictional definitions return to the 1986 Rule with applicable 2007-2008 Rapanos Guidance, the ephemeral features considered 'potentially non-jurisdictional' in Table 3 (CH-1d, CH-2, and CH-3) may become potentially jurisdictional under Section 404 of the Clean Water Act.

VI. LITERATURE CITED

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VII. REPORT PREPARERS

Jeffery Little, Vice President. Principal with over 28 years of experience working with environmental review, permitting, biological, and cultural issues. Mr. Little evaluates environmental and regulatory constraints to assist his clients determine realistic schedules of permits and entitlements. He prepares and manages CEQA/ NEPA documents and technical studies. He develops project design recommendations to achieve regulatory compliance with the numerous applicable local, state, and federal environmental laws and regulations.
Responsibilities: Principal-in-Charge

Michael Bower, M.S., Ecology, University of California, Davis, CA. Over 13 years of experience as a biologist/ botanist with Sycamore Environmental. Mr. Bower serves as both field biologist and technical report writer. He conducts wetland delineations and surveys for special-status plants and wildlife. He prepares reports used in CEQA/NEPA that quantify resources, identify impacts, and recommend mitigation measures. He prepares restoration, weed management, and monitoring plans. He is a certified Ecologist and Professional Wetland Scientist (#2230).
Responsibilities: Fieldwork, plant identification, report preparation

Alex V. Jamal, B.S., Wildlife Conservation and Management, Humboldt State University, Arcata, CA. Two years of experience as a biologist. He serves as both field biologist and technical report writer. He conducts plant and wildlife surveys, performs preconstruction and construction monitoring, and prepares environmental documents such as, biological resource reports and preconstruction reports. His background is in wildlife biology and biological surveys and has accumulated a range of knowledge and skills in wildlife surveys.
Responsibilities: Report preparation

Monica E. Coll, B.A., Environmental Science and Conservation Biology, Clark University, Worcester, MA. Two years of experience as a biologist. Her background is in conservation biology. She has accumulated a range of knowledge including project management skills and wildlife survey experience. Ms. Coll serves as both field biologist and technical report writer. She conducts construction monitoring and wildlife surveys, writes biological resource evaluations, and assists with plant surveys and wetland delineations.
Responsibilities: Report preparation

Aramis Respall, GIS Analyst/ CAD Operator. Over 25 years of experience in drafting and spatial analysis using AutoCAD map and ArcGIS for public and private projects. He prepares figures for biological and permitting documents such as project location maps, aerial photograph exhibits, biological resource maps, wetlands/waters delineation maps, project impact maps, and other supporting graphics.
Responsibilities: Figure preparation, spatial analysis

Appendix A

Wetland Data Sheets

Lin Lot Split Project

WETLAND DETERMINATION DATA FORM – Arid West Region
Routine Wetland Determination
(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Lin Lot City/County: El Dorado County Sampling Date: 5/18/21
Applicant/Owner: Tom Lin/D&Z Engineering State: CA Sampling Point: **01**
Investigator(s): Michael Bower, M.S. Section, Township, Range: See report
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR): C Lat: See report Long: See report Datum: See report
Soil Map Unit Name: See report NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☒ No ☐ (If no, explain in remarks.)
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ Significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ Naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒			
Hydric Soil Present?	Yes ☒	No ☐	Is the Sampled Area		
Wetland Hydrology Present?	Yes ☐	No ☒	within a Wetland?	Yes ☐	No ☒

Remarks: Data point located in a shallow local depression.

VEGETATION

Tree Stratum: ((Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum: (Plot size:_____)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum: (Plot size:____5 ft radius_____)			
1. *Hordeum marinum* ssp. *gussoneanum*	30	D	FAC
2. *Bromus hordeaceus*	30	D	FACU
3. *Cynodon dactylon*	2		FAC
4. *Lupinus bicolor*	2		UPL
5. *Erodium moschatum*	3		UPL
6. *Centaurea solstitialis*	7		UPL
7. *Acmispon americanus*	6		UPL
8. *Festuca myuros*	5		FACU
Total Cover:	85		
Woody Vine Stratum: (Plot size:_____)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL Species: _____ x 1 = _____
FACW Species _____ x 2 = _____
FAC Species _____ x 3 = _____
FACU Species _____ x 4 = _____
UPL Species _____ x 5 = _____
Column Totals: _____ (A) _____ (B)
Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
☐ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of Hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL Sampling Point: **01**

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth	Matrix		Redox Features					
Inches	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	5YR 4/2	80	5YR 3/4	20	C	M,PL	Silt loam	Redox prominent
5-8	7.5YR 3/2	85	7.5YR 3/3	15	C	M	Silt loam	Redox faint
8-10	5YR 3/3	100						

[1]Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: NA
Depth (inches): NA

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: No hardpan observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface water (A1)
- ☐ High water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible-Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
Water Table Present? Yes ☐ No ☒ Depth (inches): _____
Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available:

Remarks: Horticultural redwoods being irrigated to north and south. No evidence of inundation or saturation at this location on aerial photographs.

WETLAND DETERMINATION DATA FORM – Arid West Region
Routine Wetland Determination
(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Lin Lot City/County: El Dorado County Sampling Date: 5/18/21
Applicant/Owner: Tom Lin/D&Z Engineering State: CA Sampling Point: **02**
Investigator(s): Michael Bower, M.S. Section, Township, Range: See report
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave-Linear Slope (%): 3
Subregion (LRR): C Lat: See report Long: See report Datum: See report
Soil Map Unit Name: See report NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☒ No ☐ (If no, explain in remarks.)
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ Naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒		
Hydric Soil Present?	Yes ☐	No ☒	Is the Sampled Area	
Wetland Hydrology Present?	Yes ☐	No ☒	within a Wetland?	Yes ☐ No ☒

Remarks: Data point located in the lower portion of a swale

VEGETATION

Tree Stratum: ((Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum: (Plot size:_____)

1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum: (Plot size:____5 ft radius_____)

1. *Hordeum marinum* ssp. *gussoneanum*	15		FAC
2. *Bromus hordeaceus*	50	D	FACU
3. *Leontodon saxatilis*	4		FACU
4. *Lupinus bicolor*	1		UPL
5. *Hordeum murinum* ssp. *leporinum*	15		FACU
6. *Centaurea solstitialis*	5		UPL
7. *Festuca myuros*	4		FACU
8.			
Total Cover:	94		

Woody Vine Stratum: (Plot size:_____)

1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL Species: _____ x 1 = _____
FACW Species _____ x 2 = _____
FAC Species _____ x 3 = _____
FACU Species _____ x 4 = _____
UPL Species _____ x 5 = _____
Column Totals: _____ (A) _____ (B)
Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
☐ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of Hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: Vegetation similar to surrounding uplands.

SOIL Sampling Point: **02**

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth	Matrix		Redox Features					
Inches	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/3	95	5YR 3/4	5	C	M	Silt loam	Redox not prominent
8-10	7.5YR 3/2	85	7.5YR 3/2	15	C	M	Silt loam	

[1]Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☒

Remarks: No hardpan observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface water (A1)
- ☐ High water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible-Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
Water Table Present? Yes ☐ No ☒ Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available:

Remarks: No evidence of wetland hydrology in field or in aerial photographs. Water may sheet flow in swale during storms. No OHWM.

WETLAND DETERMINATION DATA FORM – Arid West Region
Routine Wetland Determination
(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Lin Lot City/County: El Dorado County Sampling Date: 5/18/21
Applicant/Owner: Tom Lin/D&Z Engineering State: CA Sampling Point: **03**
Investigator(s): Michael Bower, M.S. Section, Township, Range: See report
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Linear Slope (%): 3
Subregion (LRR): C Lat: See report Long: See report Datum: See report
Soil Map Unit Name: See report NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☒ No ☐ (If no, explain in remarks.)
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ Naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒		
Hydric Soil Present?	Yes ☐	No ☒	Is the Sampled Area	
Wetland Hydrology Present?	Yes ☐	No ☒	within a Wetland?	Yes ☐ No ☒

Remarks: Data point located near top of dry swale. A small impoundment occurs to the NE, offsite. The impoundment is dry on date of fieldwork.

VEGETATION

Tree Stratum: ((Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum: (Plot size:_____)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum: (Plot size:____5 ft radius_____)			
1. *Rumex pulcher*	5		FAC
2. *Bromus hordeaceus*	50	D	FACU
3. *Avena barbata*	1		UPL
4. *Brodiaea elegans*	1		FACU
5. *Centaurea solstitialis*	10		UPL
6. *Festuca myuros*	10		FACU
7.			
8.			
Total Cover:	77		
Woody Vine Stratum: (Plot size:_____)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL Species: _____ x 1 = _____
FACW Species _____ x 2 = _____
FAC Species _____ x 3 = _____
FACU Species _____ x 4 = _____
UPL Species _____ x 5 = _____
Column Totals: _____ (A) _____ (B)
Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
☐ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of Hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL Sampling Point: **03**

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth	Matrix		Redox Features					
Inches	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/3	95	5YR 3/4	5	C	M	Silt loam	Redox not prominent
8-10	7.5YR 3/2	85	7.5YR 3/2	15	C	M	Silt loam	

[1]Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☒

Remarks: No hardpan observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface water (A1)
- ☐ High water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible-Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): _____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available:

Remarks: No field evidence of hydrology. No OHWM present. No inundation or saturation on historical aerial photos.

WETLAND DETERMINATION DATA FORM – Arid West Region
Routine Wetland Determination
(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Lin Lot City/County: El Dorado County Sampling Date: 5/18/21
Applicant/Owner: Tom Lin/D&Z Engineering State: CA Sampling Point: **04**
Investigator(s): Michael Bower, M.S. Section, Township, Range: See report
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 8
Subregion (LRR): C Lat: See report Long: See report Datum: See report
Soil Map Unit Name: See report NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☒ No ☐ (If no, explain in remarks.)
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ Naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒		
Hydric Soil Present?	Yes ☐	No ☐	Is the Sampled Area	
Wetland Hydrology Present?	Yes ☐	No ☒	within a Wetland?	Yes ☐ No ☒

Remarks: Data point located above (north of) the OHWM of the most downstream impoundment.

VEGETATION

Tree Stratum: ((Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum: (Plot size:_____)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum: (Plot size:____5 ft radius_____)			
1. *Centaurea solstitialis*	25	D	UPL
2. *Bromus hordeaceus*	10		FACU
3. *Polypogon monspeliensis*	55	D	FACW
4. *Festuca myuros*	13		FACU
5. *Trifolium dubium*	3		UPL
6.			
7.			
8.			
Total Cover:	106		
Woody Vine Stratum: (Plot size:_____)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL Species:	x 1 =	
FACW Species 55	x 2 =	110
FAC Species	x 3 =	
FACU Species 23	x 4 =	92
UPL Species 28	x 5 =	140
Column Totals: 106 (A)		342 (B)

Prevalence Index = B/A = 3.23

Hydrophytic Vegetation Indicators:
☐ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of Hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: Does not meet prevalence Index.

SOIL Sampling Point: **04**

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth	Matrix		Redox Features					
Inches	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☐

Remarks: No soil data collected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface water (A1)
- ☐ High water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible-Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): _____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available:

Remarks: No evidence of wetland hydrology. Seasonal/storm inundation within adjacent impoundment not expected to reach data point location.

Appendix B

Photographs

Lin Lot Split Project

Photo 1. View looking south toward California annual grassland (upland) in the southern portion of the BSA adjacent to Salmon Falls Road (on right). 18 May 2021.

Photo 2. View looking north toward California annual grassland (upland) in the southern portion of the BSA. Data Point 1 at shovel. 18 May 2021.

Photo 3. View looking southeast toward an upland swale within California annual grassland in the southern portion of the BSA. Data Point 2 at shovel. 18 May 2021.

Photo 4. View looking northwest toward an upland swale within California annual grassland in the southern portion of the BSA. Data Point 3 at shovel. 18 May 2021.

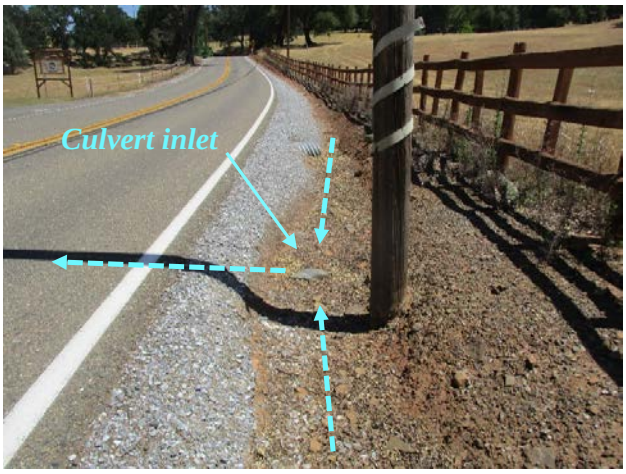


Photo 5. View looking northeast toward CH-3, a roadside ditch in the southern portion of the BSA, and ultimately drains to Folsom Lake. 18 May 2021.

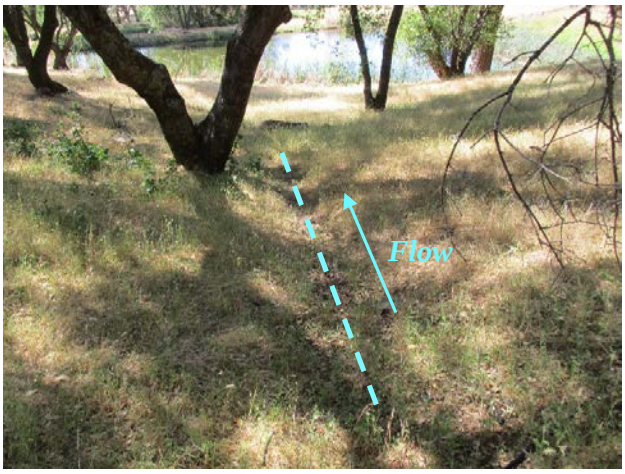


Photo 6. View looking northwest toward Channel 2 (CH-2) as it flows toward Impoundment 2 (IM-3). An OHWM is present only in the segment labeled in blue. 18 May 2021.

Photo 7. View looking northwest toward CH-1a (facing downstream) as it flows toward IM-1. Water is flowing in the channel. 18 May 2021.

Photo 8. View looking southwest toward IM-1. Some cattails (*Typha* sp.) are present in the center of the pond along with floating algae. 18 May 2021.

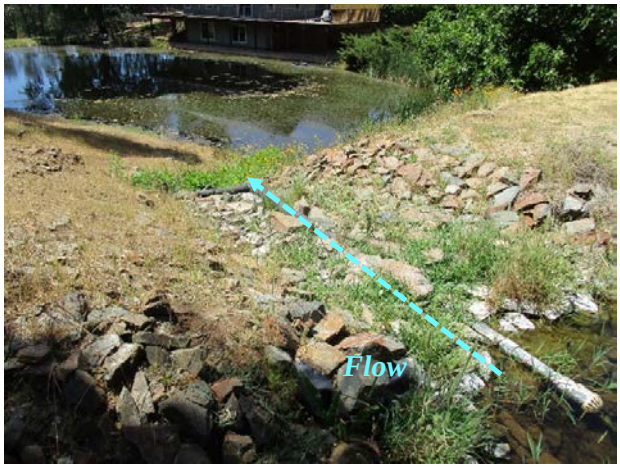


Photo 9. View toward CH-1b, the connection between IM-1 (bottom right) and IM-2 (top left). Water is flowing in the channel. The small pipe delivers water from IM-1 to a fountain that flows into IM-2. 18 May 2021.

Photo 10. View looking northeast toward CH-1c, facing upstream. Water is flowing in the channel. The channel is a created channel on an impoundment and has been lined with rocks. 18 May 2021.

Photo 11. View looking south toward IM-3. Cattails occur in the shallow edgewaters below the OHWM. No adjacent wetlands were observed. 18 May 2021.

Photo 12. View looking southeast toward IM-4. Data Point 4 at shovel in foreground. No water was observed flowing into or out of IM-4 during fieldwork. 18 May 2021.

Appendix C

Plant Species Recorded at Data Points

Lin Lot Split Project

Plant Species Recorded at Data Points

Family	Scientific Name	Common Name	Stratum[1]	Indicator[2]
EUDICOTS				
Asteraceae	*Centaurea solstitialis*	Yellow star-thistle	H	UPL
	Leontodon saxatilis	Hairy hawkbit	H	FACU
Fabaceae	*Acmispon americanus* var. *americanus*	Deervetch, deerweed	H	UPL
	Lupinus bicolor	Miniature lupine	H	UPL
	Trifolium dubium	Little hop clover	H	UPL
Geraniaceae	*Erodium moschatum*	Greenstem filaree	H	UPL
Polygonaceae	*Rumex pulcher*	Fiddle dock	H	FAC
MONOCOTS				
Poaceae	*Avena barbata*	Slender wild oat	H	UPL
	Bromus hordeaceus	Soft chess	H	FACU
	Cynodon dactylon	Bermuda grass	H	FACU
	Festuca myuros	Rattail sixweeks grass	H	FACU
	Hordeum marinum ssp. *gussoneanum*	Meditteranean barley	H	FAC
	Hordeum murinum ssp. *leporinum*	Hare barley	H	FACU
	Polypogon monspeliensis	Annual beard grass, rabbitfoot grass	H	FACW
Themidaceae	*Brodiaea elegans* ssp. *elegans*	Harvest brodiaea	H	FACU

[1] H=herb; S=sapling/shrub; T=tree, WV=woody vine.

[2] Indicators from current version of the National Wetland Plant List for the Arid West Region. Plant species not on the list are treated as UPL. Indicators for plants that could not be identified to species were assigned based on their most likely identity.

Appendix D

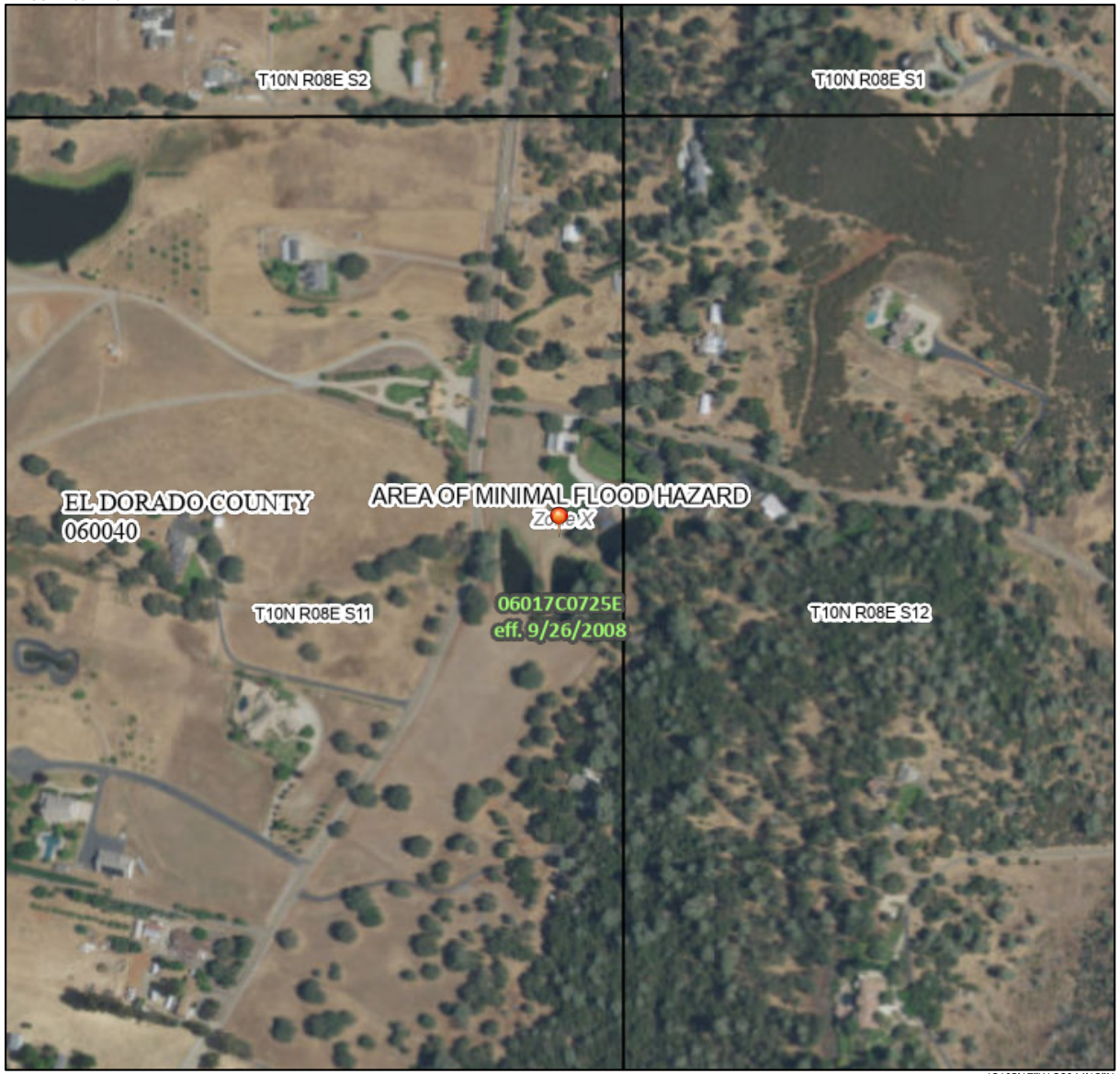
FEMA Flood Insurance Rate Maps (FIRM)

Lin Lot Split Project

National Flood Hazard Layer FIRMette

FEMA

121°3'54"W 38°44'40"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

121°3'17"W 38°44'12"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/15/2021 at 7:09 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix E

Aquatic Resources Table

Lin Lot Split Project

[Excel file with Corps Aquatic Resources Table to be emailed separately]

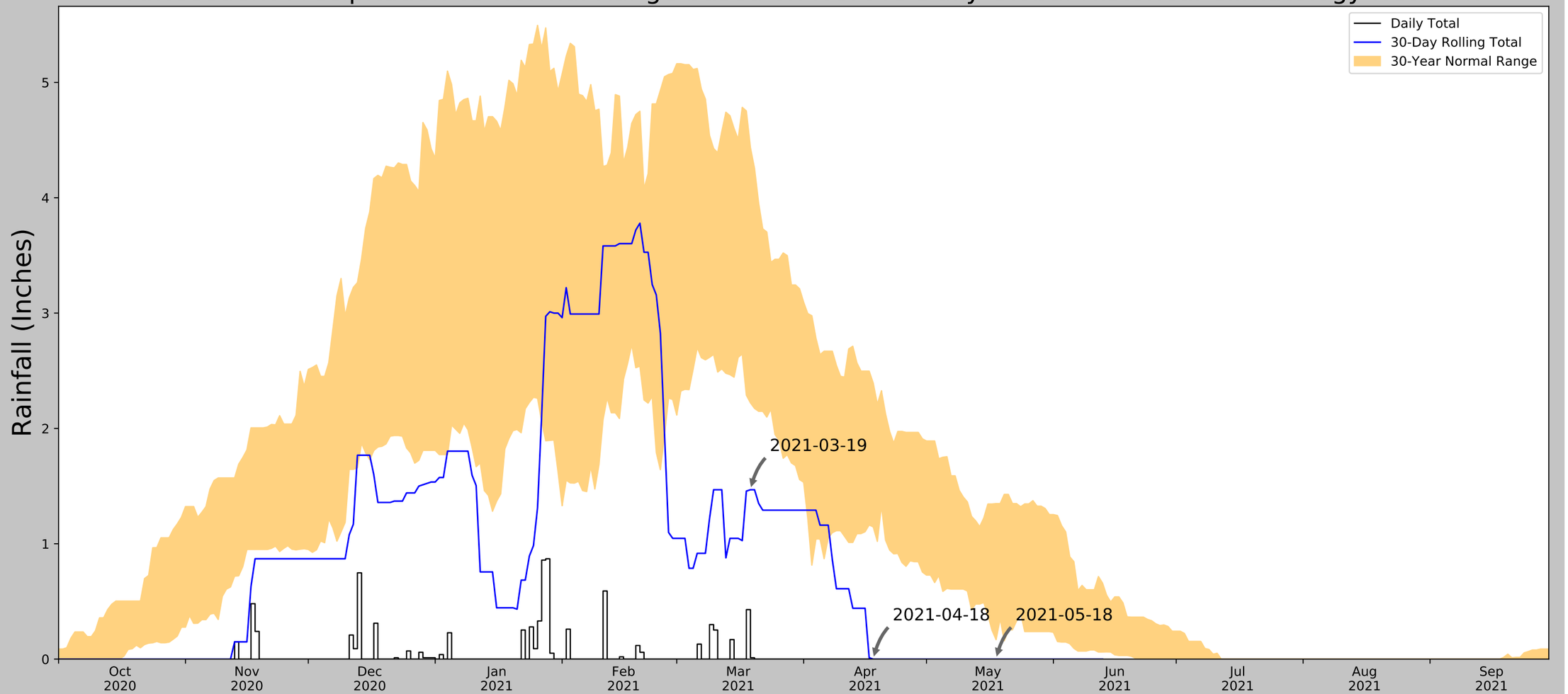
Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	NWPR_Determine_Code	Latitude	Longitude
IM-1	CALIFORNIA	PUB		Area	0.07	ACRE	A3LPIFLOW		38.74063135	-121.05861463
IM-2	CALIFORNIA	PUB		Area	0.33	ACRE	A3LPIFLOW		38.74052538	-121.05917608
IM-3	CALIFORNIA	PUB		Area	0.29	ACRE	A3LPIFLOW		38.74022395	-121.05969858
IM-4	CALIFORNIA	PUB		Area	0.32	ACRE	A3LPIFLOW		38.74034508	-121.06019231
CH-1a	CALIFORNIA	R3RB		Area	0.05	ACRE	A2TRIBPER		38.74058108	-121.05779179
CH-1b	CALIFORNIA	R3RB		Area	0.01	ACRE	A2TRIBPER		38.74057554	-121.05882031
CH-1c	CALIFORNIA	R4		Area	209	SQ_FT	A2TRIBINT		38.74048425	-121.05960418
CH-1d	CALIFORNIA	R6		Area	0.01	ACRE	B3EPHEMERAL	Yes - would NOT have been an (a)	38.74025208	-121.05937166
CH-1e	CALIFORNIA	R4		Area	0.01	ACRE	A2TRIBINT		38.74007135	-121.05996534
CH-1f	CALIFORNIA	R4		Area	0.01	ACRE	A2TRIBINT		38.74017682	-121.06042759
CH-2	CALIFORNIA	R6		Area	30	SQ_FT	B3EPHEMERAL	Yes - would NOT have been an (a)	38.73995450	-121.05935977
CH-3	CALIFORNIA	R6		Area	0.01	ACRE	B5DITCH	Yes - would NOT have been an (a)	38.73908257	-121.06131435

Appendix F

Antecedent Precipitation Tool (APT) Outputs

Lin Lot Split Project

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	38.442062, -121.33816
Observation Date	2021-05-18
Elevation (ft)	60.36
Drought Index (PDSI)	Extreme drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-05-18	0.168504	1.348425	0.0	Dry	1	3	3
2021-04-18	1.145669	2.39252	0.0	Dry	1	2	2
2021-03-19	2.222047	4.434252	1.468504	Dry	1	1	1
Result							Drier than Normal - 6

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
SACRAMENTO 5 ESE	38.5556, -121.4169	38.058	8.926	22.302	4.216	11352	90
SACRAMENTO 5.2 E	38.5625, -121.3712	46.916	8.511	13.444	3.944	1	0