

ENVIRONMENTAL INITIAL STUDY

INITIAL STUDY CHECKLIST References and Documentation Shufelberger Industrial Parcel Map Parcel Map PM-2018-01476

Prepared by:
CITY OF REDDING
Development Services Department
Planning Division
777 Cypress Avenue
Redding, California 96001

08/29/2019

CITY OF REDDING ENVIRONMENTAL CHECKLIST FORM

1. **Project Title:** Shufelberger Industrial Parcel Map
2. **Lead agency name and address:**

CITY OF REDDING
Development Services Department
Planning Division
777 Cypress Avenue
Redding, CA 96001
3. **Contact Person and Phone Number:** Sharrah Dunlap Sawyer, Inc. (530) 221-1792
4. **Project Location:** 3653 Rancho Road, Redding, CA 96002
5. **Applicant's Name and Address:** Alan Shufelberger PO Box 990861 Redding, CA 96099
Representative's Name and Address: Sharrah Dunlap Sawyer, Inc. 6590 Lockheed Drive Redding, CA 96002
6. **General Plan Designation:** General Industrial
7. **Zoning:** General Industrial
8. **Description of Project:** The applicant has requested to divide the 18.1 acre parcel into 21 parcels for future industrial development. As part of the parcel map the developer would be constructing the road and utilities to serve the individual parcels. The site is already zoned for industrial use; the change would allow smaller individual industrial users to develop individual parcels instead of one large industrial project on the entire parcel.
9. **Surrounding Land Uses and Setting:** The site is near the Redding Municipal Airport and is surrounded by vacant or industrial development. The land surrounding the parcel has either been developed or has been cleared in the past for industrial storage or other industrial type uses.

The Project is located in the City of Redding, Shasta County, California, latitude 40.533907, longitude - 122.300702, within the USGS 7.5' "Enterprise, CA" quadrangle, Township 31N, Range 4W, Section 22. The site is relatively flat and is characterized by annual grassland, areas of dense chaparral habitat and mixed oak-foothill pine woodland. A few dirt access roads occur on the site but have been largely overgrown. The Property is bound to the north by Rancho Road, to the west by Airport Road, to the south by Nordona Lane and to the east by an industrial building. Residential buildings occur to the northeast of the site, an industrial building to the east and a large compound with stockpiled materials and vehicles occurs to the southeast. The remaining adjacent land is comprised of open land or land historically used for agricultural purposes. No wetlands or drainages occur within the Project site.
10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):** None
11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? No If so, has consultation begun?**

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 or Potentially Significant Unless Mitigation Incorporated” as indicated by the checklist on the following pages.

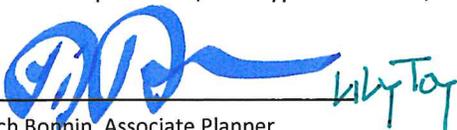
	Aesthetics		Agricultural Resources		Air Quality
X	Biological Resources		Cultural Resources		Geology / Soils
	Greenhouse Gas Emissions		Hazards & Hazardous Materials		Hydrology / Water Quality
	Land Use / Planning		Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
	Transportation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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of the 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 on 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 of NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Copies of the Initial Study and related materials and documentation may be obtained at the Planning Division of the Development Services Department, 777 Cypress Avenue, Redding, CA 96001. Contact Zach Bonnin at (530) 245-7112.


 For Zach Bonnin, Associate Planner
 Development Services Department

August 29, 2019
 Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

This section analyzes the potential environmental impacts associated with the proposed project. The issue areas evaluated in this Initial Study include:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Utilities and Service System
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Circulation
- Tribal Cultural Resources
- Hydrology and Water Quality

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the State *CEQA Guidelines* and used by the City of Redding in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- **No Impact.** The development will not have any measurable environmental impact on the environment.
- **Less Than Significant Impact.** The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.
- **Potentially Significant Impact Unless Mitigation Incorporated.** The development will have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.
- **Potentially Significant Impact.** The development will have impacts which are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.

Prior environmental evaluations applicable to all or part of the project site:

- *City of Redding General Plan, 2000*
- *City of Redding General Plan Final Environmental Impact Report, 2000, SCH #1998072103*

List of attachments/references:

- Attachment A – Location Map
- Attachment B – Gallaway Enterprises - Assessment of Aquatic Resources –May 25, 2018
- Attachment C – Site and Development Plan

SUMMARY OF MITIGATION MEASURES:

BIOLOGICAL

IV.e.1. In order to avoid impacts to nesting raptors or migratory birds, vegetation removal and other ground disturbance activities associated with construction shall be conducted outside of the main nesting season, August 1 through February 29, otherwise a pre-construction survey for nesting birds shall be completed during the nesting season of March 1 through July 31. The survey shall be conducted by a qualified biologist no more than one week prior to vegetation removal. If an active nest more than half completed is located during the survey, a non disturbance buffer shall be established by the qualified biologist in consultation with the California Department of Fish and Wildlife. No vegetation removal or construction activities shall occur within the non-disturbance buffer until the young have fledged, as determined through additional monitoring by the qualified biologist. The results of the preconstruction survey shall be sent to the California Department of Fish and Wildlife. If a lapse in construction activities of 15 or more days occurs, then another pre-construction survey shall be conducted.

I. <u>AESTHETICS</u> : <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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 or 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

Discussion:

- a) The project must comply with the height standards of the City’s Zoning Ordinance. The project would be consistent in height with buildings on adjacent properties and would not obstruct any documented scenic vistas. The proposed project would not represent a significant change to the overall scenic quality of the area.
- b) The project site is not located adjacent to a state-designated scenic highway.
- c) The project will be compatible with the existing visual character of the property and its surroundings.
- d) The project would generate light that is customary for development and comply with the Zoning Ordinance light standards. There would not be an adverse effect on day or nighttime views in the area.

Documentation:

City of Redding General Plan, Natural Resources Element, 2000
City of Redding Zoning Ordinance, Chapter 18.40.090

Mitigation:

None necessary.

II. AGRICULTURE RESOURCES: <i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural, Land Evaluation and Site Assessment Mode (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Statewide Importance (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) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?				X

Discussion:

a-c) The project site has not been historically used for agricultural purposes, nor does it possess soils that are prime for agricultural production.

Documentation:

- City of Redding General Plan, Natural Resources Element, 2000
- City of Redding General Plan Background Report, Chapter 9.4: Agricultural Lands
- California Department of Conservation's Farmland Mapping and Monitoring Program
- United States Department of Agriculture, Soil Conservation Service and Forest Service, Soil Survey of Shasta County Area.

Mitigation:

None necessary.

III. AIR QUALITY: <i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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

Discussion:

a-c) Shasta County, including the far northern Sacramento Valley, currently exceeds the state's ambient standards for ozone (smog) and particulates (fine, airborne particles). Consequently, these pollutants are the focus of local air quality policy, especially when related to land use and transportation planning. Even with application of measures to reduce emissions for individual projects, cumulative impacts are unavoidable when ozone and/or particulate emissions are involved. For example, the primary source of emissions contributing to ozone is from vehicles. Any project that generates vehicle trips has the potential of contributing incrementally to

the problem. The Environmental Impact Report for the *General Plan* acknowledged this dilemma; and as a result, Findings and a Statement of Overriding Considerations were adopted by the City Council for impacts to air quality resulting from growth supported under the *General Plan*.

The City Air Quality Element of the *General Plan* establishes emission-reduction goals of 20 to 25 percent, depending on the projected level of unmitigated emissions for a project. Mitigation thresholds are established for the important regional/local pollutants, including: Reactive Organic Gases (ROG) and Oxides of Nitrogen (NO_x), which are ozone precursors, and Inhalable Particulate Matter, 10 Micron (PM₁₀). The mitigation thresholds for these pollutants are tiered at two levels as follows:

Level "A"	Level "B"
25 pounds per day of NO _x	137 pounds per day of NO _x
25 pounds per day of ROG	137 pounds per day of ROG
80 pounds per day of PM ₁₀	137 pounds per day of PM ₁₀

If a project has unmitigated emissions less than the Level "A" threshold, then it is viewed as a minor project (from an air quality perspective) and only application of Standard Mitigation Measures (SMMs) is required to try to achieve at least a 20 percent reduction in emissions, or the best reduction feasible otherwise. Land uses that generate unmitigated emissions above Level "A" require application of appropriate Best Available Mitigation Measures (BAMMs), in addition to the SMMs, in order to achieve a net emission reduction of 20 percent or more. If, after applying SMMs and BAMMs, a use still exceeds the Level "B" threshold, then a minimum of 25 percent of the unmitigated emissions exceeding 137 pounds per day must be offset by reducing emissions from existing sources of pollution; otherwise, an Environmental Impact Report is required.

Under policy of the Air Quality Element, a project has the potential to impact air quality primarily in two ways: (1) the project would generate vehicle trip emissions (with NO_x, ROG, and PM₁₀) that contribute cumulatively to local and regional air quality conditions; and (2) fugitive dust (particulate/PM₁₀) emissions are possible during construction activities. As a industrial development, a project does have the potential to generate significant emission concentrations of other pollutants subject to state and federal ambient air quality standards but based on the above thresholds it has been determined that the division of land into 21 individual industrial parcels will not increase the impacts to air quality and the individual development of each parcel will address air quality impacts upon development of each parcel.

- d) The property is surrounded by other industrial zoned properties and the Redding Municipal Airport, there is little potential impacts to homes (sensitive receptors) from fugitive dust caused during construction. All construction projects are mitigated by application of the SMMs discussed above.
- e) The parcel map does not involve uses that could generate objectionable odors affecting substantial number of people.

Documentation:

Shasta County APCD Air Quality Maintenance Plan and Implementing Measures
City of Redding General Plan, Air Quality Element
City of Redding General Plan Final Environmental Impact Report, 2000, SCH #1998072103, Chapter 8.6, Air Quality, CEQA Findings of Fact and Statement of Overriding Considerations for the *City of Redding General Plan Final Environmental Impact Report*, as adopted by the Redding City Council on October 3, 2000, by Resolution 2000-166
City of Redding General Plan Background Report, Chapter 9.7, Natural Resources and Air Quality
URBEMIS (2007, v 9.2.4) Air Quality Computer Model Results for [Project] dated March 2, 2016

Mitigation:

None necessary.

IV. <u>BIOLOGICAL RESOURCES</u> : <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species 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?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife 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

Discussion:

a-e) Based on the Biological and Aquatic Resources Assessments provided by Gallaway Enterprises dated June 2018., and May 25, 2018 respectively. Suitable habitat was identified for several avian species protected under the Migratory Bird Treaty Act (MBTA). During the May 23, 2018 field visit, a number of blue elderberry (*Sambucus nigra ssp. caerulea*) shrubs were observed. Therefore, a USFWS protocol-level survey for VELB was performed on June 7, 2018. Elderberry shrubs were inspected for the presence of VELB or exit holes and none were observed. VELB is listed as threatened under the Federal Endangered Species Act. Due to the location of elderberry bushes in upland habitat and the lack of known occurrences of VELB within Shasta County, it is not likely for VELB to occur within the BSA. In addition, no exit holes were observed in the bushes. The listing of VELB as a threatened species applies to wherever the beetle is found, thus if VELB is confirmed to occur in Shasta County consultation with the USFWS may be required. The attached Biological Resource Assessment has a more detailed discussion on the VELB in Shasta County.

There are no approved habitat conservation plans on the site. There would thus be no conflict with Federal or State programs concerning biological resources, nor any conflict with local policies or ordinances.

The natural oak woodland on-site provides attractive habitat for nesting and migratory birds. All of the trees located within the site are proposed to be removed associated with the project. There is the potential that raptors and migratory birds could be impacted by tree removal and other major land-clearing activity necessary to construct the subdivision. To minimize impacts from construction during the nesting season, a nest survey will be required that will include appropriate nest-avoidance measures if sites are located. This will be reflected as a condition of approval of the future individual parcel development to encourage mass tree removal and other land-clearing work to be conducted outside the main nesting period of March 1 to July 31.

The biological study provided looked at the quality of the Oak Woodland on the site and determined that the removal of the trees at this site would not constitute a significant impact to the environment.

The City has adopted a Tree Management Ordinance (Chapter 18.45 of the RMC) that promotes the conservation of mature, healthy trees in the design of new development. The ordinance also recognizes that the preservation of trees will sometimes conflict with necessary land-development requirements. The *City's General Plan EIR* further acknowledges that preservation of native trees will sometimes conflict with normal land development and that implementation of the *General Plan* will ultimately set aside over 7,000 acres of open space, much of which contains oak habitat. But efforts must still be made to retain existing trees if reasonably possible, and to sufficiently plant new trees in the context of the new development. A tree survey was prepared for the project by Sharrah Dunlap Sawyer Inc. The tree study identified 295 trees over 6" DBH. The proposed grading/improvement plan reflects that all of the trees will eventually have to be removed to allow the proposed development.

The developers of each lot will be obligated through the Zoning Ordinance to replant suitable new trees at the time of development of the lot.

- f) No habitat conservation plans or other similar plans have been adopted for the project site or project area. No impact would occur in this regard.

Documentation:

Aquatic Resource Assessment, Dated May 25, 2019 by Gallaway Enterprises
 Biological Resource Assessment, Dated June 2018 by Gallaway Enterprises
 California Department of Fish and Wildlife: Natural Diversity Data Base
 City of Redding General Plan, Natural Resources Element, 2000
 City of Redding Municipal Code, Chapter 18.45, Tree Management Ordinance
 City of Redding General Plan Environmental Impact Report, 2000, SCH #1998072103

Mitigation:

IV.e.1. Tree removal activities are required to be conducted outside the main nesting period of March 1 to July 31, if any work must occur during the nesting season the applicant shall be required to prepare a nest survey that will include appropriate nest-avoidance measures if sites are located.

V. CULTURAL RESOURCES: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?				X
b) Cause a substantial adverse change in the significance of an 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 dedicated cemeteries?				X

Discussion

a-d) Based upon archaeological reports, records searches, and information contained in the *General Plan* EIR pertinent to the vicinity of the subject property, it has been determined that the project site is not in an area of archaeological or cultural sensitivity. No impacts in this area are anticipated.

c) No unique geologic features, fossil-bearing strata, or paleontological sites are known to exist on the project site.

Documentation:

City of Redding General Plan Background Report, 1998

City of Redding General Plan Final Environmental Impact Report, 2000, SCH #1998072103

Mitigation:

None necessary.

VI. GEOLOGY AND SOILS: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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: <ul style="list-style-type: none"> 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 known fault? Refer to Division of Mines and Geology Special Publications 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? 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 wastewater disposal systems where sewers are not available for the disposal of waste water?				X

Discussion:

a, c, d) There are no Alquist-Priolo earthquake faults designated in the Redding area of Shasta County. There are no other documented earthquake faults in the immediate vicinity that pose a significant risk, and the site is located in an area designated in the Health and Safety Element of the *General Plan* as having a low ground-shaking potential. The project is not located on or near any documented landslide hazard areas, and there is no evidence of ground slippage or subsidence occurring naturally on the site. The type of soils and underlying geology is identified as having no potential for liquefaction. No portion of the site falls within the 100-year floodplain of the Sacramento River or any creek.

- b) The project is subject to certain erosion-control requirements mandated by existing City and State regulations. These requirements include:
- ◆ *City of Redding Grading Ordinance.* This ordinance requires the application of “Best Management Practices” (BMPs) in accordance with the City Erosion and Sediment Control Standards Design Manual (Redding Municipal Code Section 16.12.060, Subsections C, D, E). In practice, specific erosion-control measures are determined upon review of the final project improvement plans and are tailored to project-specific grading impacts.
 - ◆ *California Regional Water Quality Board “Construction Activity Storm Water Permit.”* This permit somewhat overlaps the City’s Grading Ordinance provision by applying state standards for erosion-control measures during construction of the project.

- ◆ *California Regional Water Quality Control Board "Project Storm Water Pollution Prevention Plan (SWPPP)." This plan emphasizes stormwater best management practices and is required as part of the Construction Activity Storm Water Permit. The objectives of the SWPPP are to identify the sources of sediment and other pollutants that affect the quality of stormwater discharges and to describe and ensure the implementation of practices to reduce sediment and other pollutants in stormwater discharges.*

Actions for compliance with these regulations are addressed under standard conditions of approval, which are uniformly applied to all land development projects. Since the project is subject to uniformly applied ordinances and policies and the overall risk of erosion is low, potential impacts related to soil erosion and sedimentation are less than significant.

- e) The proposed project does not involve the use of septic tanks or alternative wastewater disposal. No impact has been identified.

Documentation:

- City of Redding Health and Safety Element, figures 4-1 (Ground Shaking Potential) and 4.2 (Liquefaction Potential)*
- City of Redding General Plan Final Environmental Impact Report*
- City of Redding General Plan Background Report, 1998*
- City of Redding Grading Ordinance, RMC Chapter 16.12*
- City of Redding Standard Specifications, Grading Practices*
- City of Redding Standard Development Conditions for Discretionary Approvals (subdivisions, use permits, site development permits, etc.)*
- Soil Survey of Shasta County Area, United States Department of Agriculture, Soil Conservation Service and Forest Service, August 1974*
- Division of Mines and Geology Special Publication 42*
- State Regional Water Quality Control Board, Central Valley Region, Regulations related to Construction Activity Storm Water Permits and Storm Water Pollution Prevention Plans*

Mitigation:

None necessary.

VII. GREENHOUSE GAS EMISSIONS: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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

Discussion:

- a) In 2005, the Governor of California signed Executive Order S-3-05, establishing that it is the State of California's goal to reduce statewide greenhouse gas (GHG) emission levels. Subsequently, in 2006, the California State Legislature adopted Assembly Bill AS 32, the California Global Warming Solutions Act. In part, AB 32 requires the California Air Resources Board to develop and adopt regulations to achieve a reduction in the State's GHG emissions to year 1990 levels by year 2020.

California Senate Bill SB97 established that an individual project's effect on GHG emission levels and global warming must be assessed under CEQA. SB97 further directed that the State Office of Planning and Research (OPR) develop guidelines for the assessment of a project's GHG emissions. Those guidelines for GHG emissions were subsequently included as amendments to the CEQA Guidelines. The guidelines did not establish thresholds of significance and there are currently no state, regional, county, or city guidelines or thresholds with which to direct project-level CEQA review. As a result, the City of Redding has utilized the best available information to develop a threshold until a specific quantitative threshold is adopted by the state or regional air district.

As the Lead Agency, the City has opted to utilize a quantitative non-zero project-specific threshold using a methodology recommended by the California Air Pollution Officers (CAPCOA) and accepted by the California Air Resources Board. According to

CAPCOA's *Threshold 2.3, CARB Reporting Threshold*, 10,000 metric tons of carbon-dioxide equivalents per year (mtCO₂eq/yr) is recommended as a quantitative non-zero threshold. According to the CAPCOA, this threshold would be equivalent to 550 dwelling units, 400,000 square feet of office use, 120,000 square feet of retail, or 70,000 square feet of supermarket use. This approach is estimated to capture over half the future residential and commercial development projects and is designed to support the goals of AB 32 and not hinder it.

The United States Environmental Protection Agency (EPA) identifies four primary constituents that are most representative of the GHG emissions. They are:

- **Carbon Dioxide (CO₂):** Emitted primarily through the burning of fossil fuels. Other sources include the burning of solid waste and wood and/or wood products and cement manufacturing.
- **Methane (CH₄):** Emissions occur during the production and transport of fuels, such as coal and natural gas. Additional emissions are generated by livestock and agricultural land uses, as well as the decomposition of solid waste.
- **Nitrous Oxide (N₂O):** The principal emitters include agricultural and industrial land uses and fossil fuel and waste combustion.
- **Fluorinated Gases:** These can be emitted during some industrial activities. Also, many of these gases are substitutes for ozone-depleting substances, such as CFC's, which have been used historically as refrigerants. Collectively, these gases are often referred to as "high global-warming potential" gases.

The primary generators of GHG emissions in the United States are electricity generation and transportation. The EPA estimates that nearly 85 percent of the nation's GHG emissions are comprised of carbon dioxide (CO₂). The majority of CO₂ is generated by petroleum consumption associated with transportation and coal consumption associated with electricity generation. The remaining emissions are predominately the result of natural-gas consumption associated with a variety of uses.

With regard to the project, the predominant associated GHG is CO₂ generated by motor-vehicle travel to and from the site. To a substantially lesser degree, the project will result in CH₄ emissions associated with use of electric power generated by the Redding Electric Utility (REU), though it should be noted that REU distributes power from a variety of sources, including hydroelectric, wind, and natural gas.

On a larger scale, the City of Redding's General Plan acknowledges that land use decisions have an impact on climate and air quality. Land use decisions that result in low or very low density on the periphery of the community increase the amount of vehicle-miles traveled (VMT), which increases vehicle emissions. In response to this impact, the City's *General Plan* includes a number of goals and policies in the Community Development and Design Element, Transportation Element, and Housing Element that promote a compact urban form and encourage infill development, advocate higher housing density, and ensure connectivity to citywide bikeways and pedestrian plans. The goal of these policies is to reduce VMT, which also reduces emissions and reduces a wide variety of air quality impacts. Since automobiles are considered a major source of GHG emission, each vehicle trip reduced also reduces GHG emissions.

¹ CPCOA website, July 19, 2010

² California Office of the Attorney General, "The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level," updated May 21, 2008.

Documentation:

City of Redding General Plan, 2000

Mitigation:

None necessary.

VIII. <u>HAZARDS AND HAZARDOUS MATERIALS</u> : <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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

VIII. HAZARDS AND HAZARDOUS MATERIALS: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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

Discussion:

- a, b, c, d) The nature of the project as a parcel map does not present a significant risk related to hazardous materials or emissions. There is no documented hazardous material sites located on or near the project.
- e, f) The project is located at the edge of the established approach/departure clear zones for Redding Municipal Airport. The project's land use of general industrial would not conflict with operations of the Airport or present a safety hazard to people working in one of the future industrial developments.
- g) The project does not involve a use or activity that could interfere with emergency-response or emergency-evacuation plans for the area.
- h) The project site does not have a wildland fire-hazard potential. The site has been disturbed in the past and is surrounded primarily by developed industrial lots.

Documentation:

City of Redding General Plan, Health and Safety Element, 2000

Mitigation:

None necessary.

IX. HYDROLOGY AND WATER QUALITY: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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 new 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 offsite?				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 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

Discussion:

- a) Since the project would be served by City sanitary sewer service, the project would not involve any permitted discharges of waste material into ground or surface waters.
- b) The project would utilize City water service for domestic uses and fire protection. The proposed project would not impact groundwater supplies.
- c, f) The project is subject to standard requirements defined under Section VI., *Geology and Soils*, and mitigation measures (if any) under Section IV., *Biological Resources*, above that minimize the potential for erosion or siltation on- or off-site. The final improvement plans for the project must also incorporate specific design measures intended to limit pollutant discharges in stormwater from urban improvements as established under the State's National Pollutant Elimination System (NPDES) general permit, which the City is now obligated to follow in accordance with State Water Quality Control Order No. 2003-0005-DWQ. Feasible Best Management Practices (BMPs) would be incorporated in the final design of the project's storm-drain system, as approved by the City Engineer, based on the BMPs listed in the latest edition of the California Storm Water Quality Association Storm Water Best Management Practices Handbook.

- d, e) City of Redding Policy 1806 requires that all subdivision development include stormwater detention facilities designed to maintain existing predevelopment rates of runoff during a 10-, 25-, and 100-year storm event with a 6-hour duration. The project application includes a stormwater hydrology analysis prepared by Sharrah Dunlap Sawyer Inc. that concludes that: the project will adequately detain stormwater, in addition the development will provide a facility to clean the water per the City of Redding MS4 permit requirements.
- g, h, i) The property is not located within any agency or otherwise-documented flood-hazard boundary.
- j) The threat of a tsunami wave is not applicable to inland, central valley communities such as Redding. Seiches could potentially be generated in either Shasta or Whiskeytown Lakes during an earthquake. However, neither lake has been identified in the Health and Safety Element of the General Plan as having any risk to the City under such circumstances. There is no documented threat of mudflows affecting the project site.

Documentation:

City of Redding General Plan Background Report, Chapter 10, Health and Safety Element, 1998
 Federal Emergency Management Agency Floodplain regulations, FIRM map [Number], dated March 17, 2011
 City of Redding Storm Drain Master Plan, Montgomery-Watson Engineers 1993

Mitigation:

None necessary.

X. LAND USE AND PLANNING: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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

Discussion:

- a) The project does not have the potential to physically divide an established community.
- b) The project is compatible with the applicable policies and regulations of the City General Plan and Zoning Ordinance and is not in conflict with any other Plan adopted by a jurisdictional agency for the purpose of avoiding or mitigating an environmental effect.
- c) There is no habitat conservation or natural community conservation plans that are applicable to the site.

Documentation:

City of Redding General Plan, Community Development Element, 2000
City of Redding General Plan Environmental Impact Report, 2000, SCH #1998072103
City of Redding General Plan, Natural Resources Element, 2000

Mitigation:

None necessary.

XI. MINERAL RESOURCES: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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

Discussion:

a, b) The project site is not identified in the General Plan as having any known mineral-resource value or as being located within any "Critical Mineral Resource Overlay" area.

Documentation:

City of Redding General Plan, Natural Resources Element, 2000

Mitigation:

None necessary.

XII. NOISE: <i>Would the project result in:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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 ground-borne vibration or ground-borne 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 levels?				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

Discussion:

a, b, c) The project site is located in a General Industrial district and is not in close proximity to residentially zoned property. In addition it is near the Redding Municipal Airport approach zone which has existing noise impacts.

d) During the construction of the proposed project, there will be a temporary increase in noise in the project vicinity above existing

ambient noise levels. The most noticeable construction noise will be related to grading, utility excavation, and land-clearing activity. The City's Grading Ordinance (RMC Chapter 16.12.120.H) limits grading-permit-authorized activities to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday. No operations are allowed on Sunday. Since heavy construction work associated with the project is limited in scope and by existing regulation, the anticipated noise impact to neighboring properties is considered less than significant.

e, f) The proposed site is located within the noise contours of Redding Municipal Airport but since it is zoned industrial it is appropriate to locate potential noise generators in proximity to the airport.

Documentation:

- City of Redding General Plan, Noise Element, 2000
- City of Redding Grading Ordinance Redding Municipal Code, Section 16.12.120
- City of Redding General Plan, Transportation Element, 2000
- City of Redding Zoning Ordinance Redding Municipal Code, Section 18.40.100
- City of Redding Municipal Airport Area Plan

Mitigation:

None necessary.

XIII. POPULATION AND HOUSING: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, 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

Discussion:

a, b, c) The proposed industrial parcel map will have the potential to locate new industrial uses or businesses, this new development could attract new employees and thereby the need for additional housing. This site is not substantial enough in size to potentially cause a significant effect to the housing market in the Redding area.

Documentation:

- City of Redding General Plan, Housing Element, 2014

Mitigation:

None necessary.

XIV. PUBLIC SERVICES: <i>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:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Fire Protection?			X	
Police Protection?			X	
Schools?			X	

XIV. PUBLIC SERVICES: <i>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:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Parks?			X	
Other public facilities?			X	

Discussion:

Fire and Police Protection:

The City would provide police and fire protection to the project from existing facilities and under existing service levels. The size of the project would not mandate the need for additional police or fire facilities.

The project is subject to Chapter 16.20 of the Redding Municipal Code, which requires new development to pay a citywide fire facilities-impact fee calculated to mitigate a project's fair share of cumulative impacts to the City's fire-protection infrastructure based upon improvements necessary to accommodate new development under the City's *General Plan*.

Schools:

Industrial Development has little impact on the schools other than the secondary impact by the need for more employers, as stated earlier this impact would be minor.

Parks:

The project will not cause a physical deterioration of an existing park facility or cause an adverse physical impact associated with a new park facility. The project is subject to Chapter 16.20 of the Redding Municipal Code, which requires new residential development to pay a citywide park and recreation-facilities impact fee calculated to mitigate a project's fair share of cumulative impacts to the City's parks and recreation infrastructure based upon improvements necessary to accommodate new development under the City's *General Plan*. See discussion under Item XVI (Recreation) below.

Other public facilities:

See discussion under Item XVIII (Utilities and Service Systems) below.

Documentation:

City of Redding General Plan, Public Facilities Element, 2000

Mitigation:

None necessary.

XV. RECREATION:	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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
---	--	--	--	---

Discussion:

- a) The project will not cause a physical deterioration of an existing recreation facility or cause an adverse physical impact associated with a new recreation facility.
- b) There would not be any potentially significant impacts to recreation associated with the project.

Documentation:

City of Redding General Plan, Natural Resources Element, 2000
City of Redding General Plan, Recreation Element, 2000
City of Redding General Plan, Public Facilities Element, 2000

Mitigation:

None necessary.

XVI. TRANSPORTATION/TRAFFIC: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highway?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			X	
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?				X

Discussion:

- a, b, d) Access to the subdivision would be derived from Rancho Road. The developer would construct an element of the Airport Road plan identified as the frontage road to access the property. The frontage road will eventually serve other developments to the south on the east side of Airport Road. The development of this road is consistent with the City of Redding General Plan transportation element and development plans adopted for this area.

The Transportation Element of the *General Plan* establishes acceptable peak-hour “Level of Service” (LOS) criteria for roadways and intersections for use in transportation planning and project review. The LOS methodology is an established way of ranking the degree of traffic-flow efficiency and congestion. For most of the City, LOS “C” or “acceptable delay” is identified as the maximum allowable threshold before a more congested and potentially significant traffic condition occurs. For state highway interchange connections with local streets, a maximum LOS “D” or “tolerable delay” is established. A thorough explanation of LOS methodology is provided in the Transportation Element and the Transportation and Circulation Section of the *General Plan* Environmental Impact Report (EIR).

The industrial parcel map will have little impact on traffic until the individual parcels develop. At the time of development of each parcel, the City would determine if the individual project would require a discretionary permit for large projects which could trigger additional traffic studies for projects with the potential to effect streets and roads in the area.

The project is subject to Chapter 16.20 of the Redding Municipal Code, which requires new development to pay a citywide transportation development impact fee calculated to mitigate a project’s fair share of cumulative impacts to the City’s street- and traffic-control infrastructure based upon improvements necessary to accommodate new development under the City’s *General Plan*.

Based on these findings, the project’s traffic-related impact(s) associated with the parcel map. The project’s potential cumulative contribution to traffic impacts citywide is mitigated by payment of the City’s traffic impact fee in accordance with Chapter 16.20 of the Redding Municipal Code, which is collected at the time of issuance of a building permit for each new development.

- c) The project site is located adjacent to the Approach Zones for the Redding Municipal Airport; therefore, there is some potential to effect airport operations, but industrial development is consistent with Airport Specific Plan and allows for the open space necessary around the approach zones, typically industrial developments have few employees that work in relatively large buildings.
- e) Access to the site is provided by way of Rancho Road and the Airport Road frontage road. The Redding Fire Marshal has deemed this to be adequate access for fire protection.
- e) All future industrial developments within the map will be required to provide parking spaces in accordance with the City’s Off-Parking Ordinance.
- f) The project would not conflict with adopted policies, plans, or programs supporting alternative transportation. The City’s Active Transportation Plan identifies Airport Road as a future bike lane.

Documentation:

City of Redding General Plan, Transportation Element, 2000
City of Redding General Plan Environmental Impact Report, 2000, SCH #1998072103
City of Redding Parks, Trails, and Open Space Master Plan, 2002
City of Redding Traffic Impact Fee Program
City of Redding Bikeway Action Plan 2010–2015
Redding Area Bus Authority System Map and Route Guide, October 2000

Mitigation:

None necessary.

<u>XVII. TRIBAL CULTURAL RESOURCES:</u> <i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 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:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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 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

Discussion: The project was referred to the appropriate tribal entities and no response was received. The parcel map will not develop the property but allow for future development. Any future discretionary permits will also be referred to the appropriate tribal entities.

Mitigation: None

<u>XVIII. UTILITIES AND SERVICE SYSTEMS:</u> <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	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 which serves or may 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

Discussion:

- a) Wastewater generated from the project would be that associated with industrial development and be discharged into the City sanitary sewer system. This type and intensity of land use activity does not generate wastewater demands that would exceed treatment requirements of the Regional Water Quality Control Board.
- b) The proposed development does not generate the need for the construction of new water or wastewater-treatment facilities.
- c) Project-related stormwater-management improvements consist of construction of collection and conveyance systems in accordance with City construction standards and City Policy 1806 pertaining to stormwater detention (also see IX, *Hydrology and Water Quality*, d and e).

The project is subject to Chapter 16.20 of the Redding Municipal Code, which requires new development to pay a storm-drainage impact fee calculated to mitigate a project's fair share of cumulative impacts to the City's storm-drain infrastructure based upon improvements necessary to accommodate new development under the City's *General Plan*.

- d) Potable water is available from the City to serve the project with adequate pressure and flows for fire suppression. The demands of the project can be accommodated within the City's existing water resources.
- e) The project will utilize the City's sanitary sewer system to dispose of wastewater. Adequate sewer capacity is available in the City's existing system. The development will require the development of a sanitary sewer lift station on the adjacent City of Redding parcel. The City has determined that this project will necessitate the construction of the lift station but the City of Redding will size it appropriately to allow for other future developments in the area to utilize the lift station to prevent the placement of multiple lift stations throughout the area. The site plan shows the location of the lift station located directly east of the project site.
- f, g) The City provides solid waste disposal. Adequate capacity is available to serve the needs of the project without need of special accommodation. The City regulates and operates programs that promote the proper disposal of toxic and hazardous materials from developments.
- b, d, e) The project is subject to Chapter 16.20 of the Redding Municipal Code, which requires new development to pay water- and sewer-impact fees calculated to mitigate a project's fair share of cumulative impacts to the City's water and sewer distribution, collection, and treatment infrastructure based upon improvements necessary to accommodate new development under the City's *General Plan*.

Documentation:

City of Redding General Plan, Public Facilities Elements, 2000
City of Redding Water and Sewer Atlas

Mitigation:

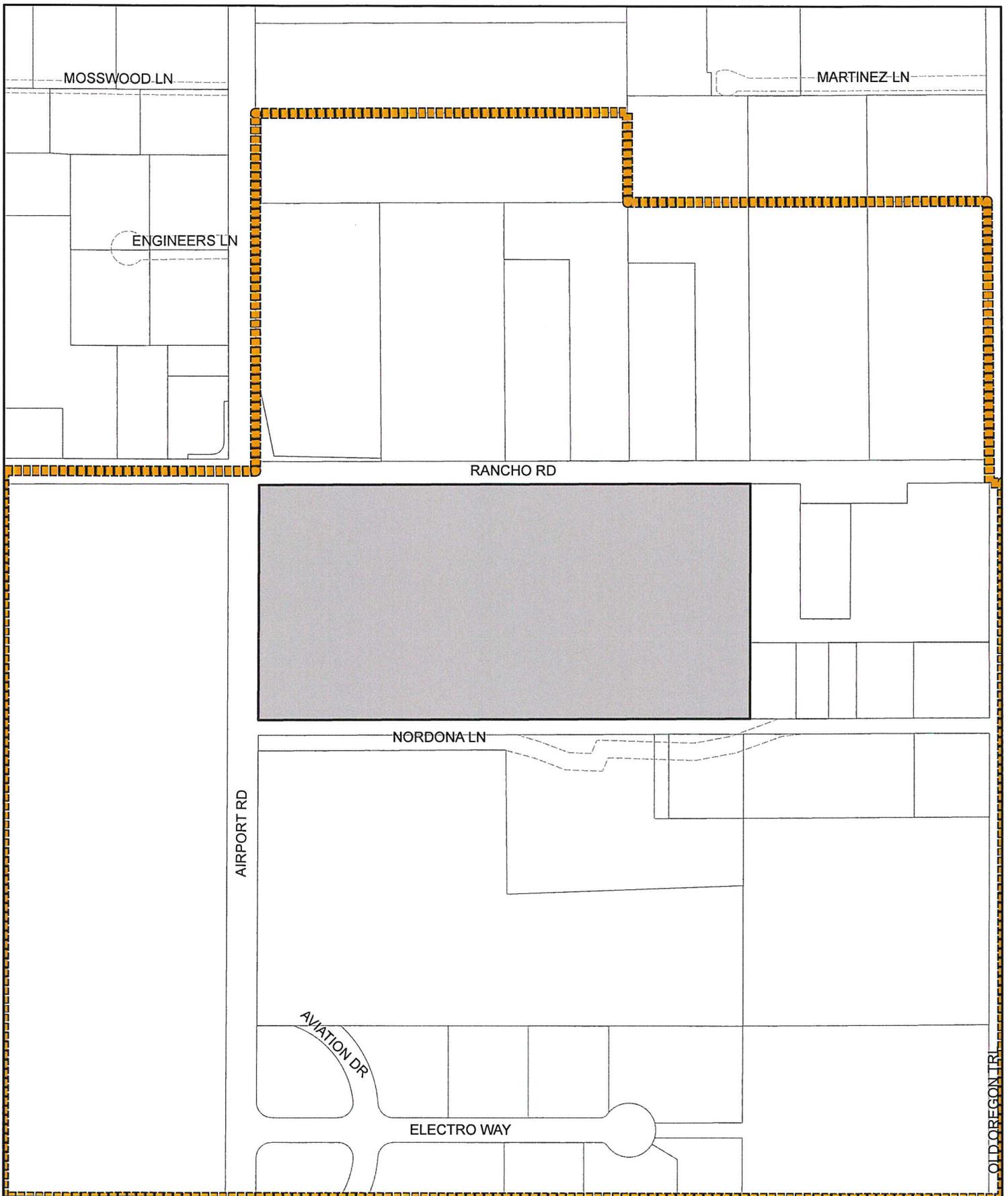
None necessary.

XVIV. <u>MANDATORY FINDINGS OF SIGNIFICANCE:</u>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Does the project 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 the 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) Does the project 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) Does the project have potential environmental effects which may cause substantial adverse effects on human beings, either directly or indirectly?				X

Discussion:

Based on the analysis undertaken as part of this Initial Study, the following findings can be made:

- a) The project does not have the potential to degrade the quality of the environment, reduce or degrade wildlife habitat, or eliminate examples of history or prehistory.
- b) As discussed in Item III, the project will contribute to regionwide cumulative air quality impacts. However, under policy of the *General Plan*, application of Standard Mitigation Measures (SMMs) will eliminate the potential for air quality impacts from this project.
- c) As discussed herein, the project does not have characteristics which could cause substantial adverse effects on human beings, either directly or indirectly.



	<p>GIS DIVISION INFORMATION TECHNOLOGY DEPARTMENT</p>	<p>LOCATION MAP</p> <p>PM-2018-01476 ALAN SHUFELBERGER 3653 RANCHO ROAD AP# 054-200-072</p>	<p>MTG. DATE:</p>
	<p>DATE PRODUCED: DECEMBER 18, 2018</p>		<p>ITEM:</p>
	<p>0 200 400 Feet</p>		<p>ATTACHMENT:</p>
<p>P:\Planning\MapDocuments\Commission Maps\PM-2018-01476.aprx</p>			

gallaway ENTERPRISES

117 Meyers Street • Suite 120 • Chico CA 95928 • 530-332-9909

May 25, 2018

Sharrah Dunlap and Sawyer

Attn: Mike Dormer

6590 Lockhead Drive

Redding, CA 96002

RE: Aquatic Resources Assessment of the Rancho Road Property, Redding, Shasta County, CA. (Project No. 18-0121-000)

Dear Mr. Dormer,

On May 23, 2018, Gallaway Enterprises senior botanist, Elena Gregg, conducted a delineation of US Army Corps of Engineers (Corps) jurisdictional waters of the United States within the Rancho Road property (Property) consisting of an approximately 18-acre site located in the City of Redding, Shasta County, CA. The Project site is located on the southeast corner of the intersection of Airport Road and Rancho Road (Exhibit A). The following summarizes the results of the wetland delineation survey.

Environmental Setting and Site Conditions

The Project is located within the City limits of Redding, Shasta County, CA. The Project site lies within the Enterprise USGS 7.5' Quadrangle in Section 22, Township 31N, Range 4W.

The site is relatively flat and is characterized by annual grassland, areas of dense manzanita chaparral habitat and mixed oak-foothill pine woodland. A few dirt access roads occur on the site but have been largely overgrown. The Property is bound to the north by Rancho Road, to the west by Airport Road, to the south by Nordona Lane and to the east by an industrial building. Residential buildings occur to the northeast of the site, an industrial building to the east and a large compound with stockpiled materials and vehicles occurs to the southeast. The remaining adjacent land is comprised of open land or land historically used for agricultural purposes.

Survey Methods

The Property was surveyed on-foot by Gallaway Enterprises staff on May 23, 2018 to identify any potentially jurisdictional features. The survey, mapping efforts, and report production were performed according to the valid legal definitions of waters of the United States (WOTUS) in effect on May 23, 2018. The boundaries of non-tidal, non-wetland waters, when present, were

delineated at the ordinary high water mark (OHWM) as defined in 33 Code of Federal Regulations (CFR) 328.3. The OHWM represents the limit of potential United States Army Corps of Engineers (Corps) jurisdiction over non-tidal waters (e.g., streams and ponds) in the absence of adjacent wetlands (33 CFR 328.04) (Curtis, et. al. 2011). Wetland perimeters based on the *United States Army Corps of Engineers Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region* (2008) (Arid West Manual) were recorded and defined, when present, according to their topographic and hydrologic orientation.

Survey Results

Gallaway Enterprises found no evidence of jurisdictional features according to the valid legal definitions of WOTUS in effect on May 23, 2018. Two man-made ditches occur on the site. One was created along Airport Road and one was created along Rancho Road. These two ditches do not connect to each other and begin and end within the confines of the Property boundary. The ditch along Rancho Road starts at the gravel pull-out near the intersection with Airport road and continues the entire length of the Property boundary, however there is no outfall. Similarly, the ditch along Airport Road has no outfall associated with it. Both of these ditches are completely isolated, were constructed in uplands, contain upland vegetation and do not exhibit a bed, bank, scour, or ordinary high water mark (see pictures in **Exhibit B**).

The review of historic aerial photographs of the site prior to the field survey identified patches of a brighter green color scattered throughout the site. When ground-truthed, these patches were identified to be patches of winter vetch (*Vicia villosa*) (NL) and yellow star-thistle (*Centaurea solstitialis*) (UPL).

If you have any questions, please do not hesitate to contact me at our office (530) 332-9909.

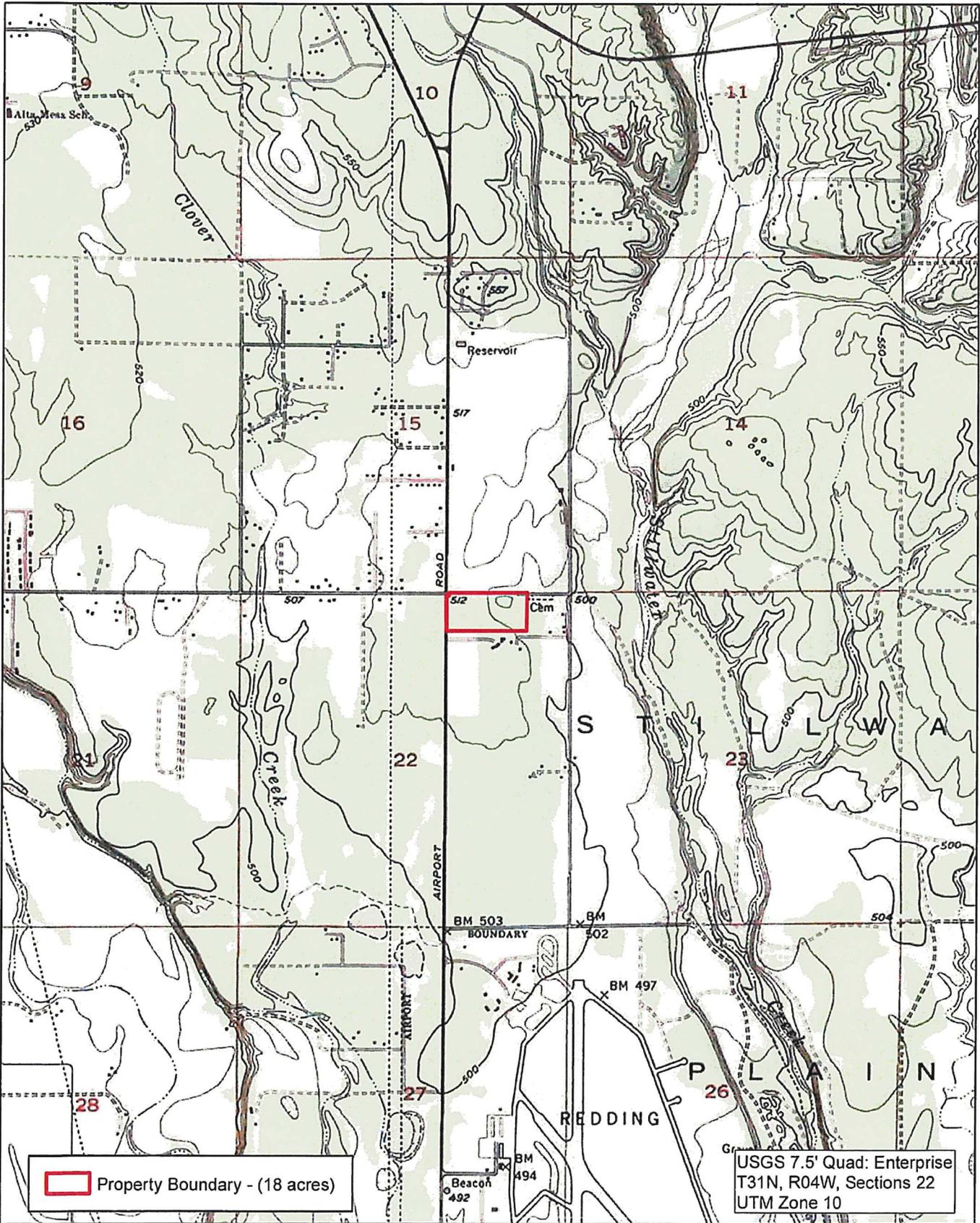
Sincerely,



Elena Gregg, Botanist
Gallaway Enterprises

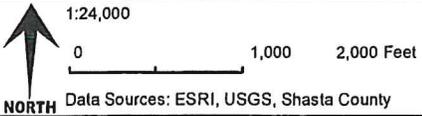
Encl.: Exhibit A. Property Location Map
Exhibit B. Site Photographs

Exhibit A: Property Location Map



 Property Boundary - (18 acres)

USGS 7.5' Quad: Enterprise
T31N, R04W, Sections 22
UTM Zone 10



Rancho Road Property
Location
Exhibit A

gallaway
ENTERPRISES

GE: #18-054 Map Date: 05/15/18

Exhibit B: Site Photographs

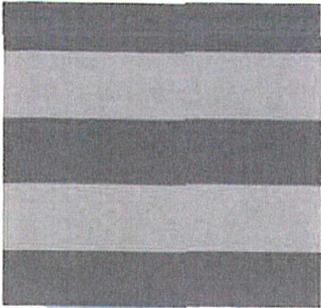
Site Photographs Taken on May 23, 2018



Picture of the man-made upland ditch along Airport Road looking south



Picture of the man-made upland ditch along Rancho Road looking east



BIOLOGICAL RESOURCE ASSESSMENT

Aquatic and Terrestrial Wildlife, and Botanical Resources

Rancho Road Project

June 2018



Prepared for:

Sharrah Dunlap and Sawyer

Attn: Mike Dormer
6590 Lockhead Drive
Redding, CA 96002

Prepared by:

Gallaway Enterprises

117 Meyers Street, Suite 120
Chico CA 95928
530-332-9909

www.gallawayenterprises.com



CONTENTS

INTRODUCTION.....	1
Purpose and Overview	1
Project Location and Environmental Setting	1
Biological Survey Area.....	4
Project Description.....	4
METHODS.....	4
References Consulted	4
Special-Status Species	6
Critical Habitat	6
Sensitive Natural Communities.....	6
Waters of the United States	6
Biological and Botanical Surveys.....	6
Habitat Assessment	7
Rare Plant Survey	7
Valley Elderberry Longhorn Beetle Survey	7
RESULTS	7
Vegetation Communities	7
Annual Grassland (AGS)	7
Blue Oak-Foothill Pine (BOP)	8
Mixed Chaparral (MCH)	8
Non-vegetated Habitat	8
Barren (BAR).....	8
Critical Habitat	8
Sensitive Natural Communities.....	8
Special-Status Species.....	9
Endangered, Threatened and Rare Plants	9
Endangered, Threatened and Special Status Wildlife.....	15
Migratory Birds and Raptors.....	15
Valley Elderberry Longhorn Beetle (VELB).....	16
REGULATORY FRAMEWORK.....	19

Federal	19
Waters of the United States, Clean Water Act, Section 404	19
Clean Water Act, Section 401	19
Federal Endangered Species Act	20
Migratory Bird Treaty Act	20
State of California	21
California Endangered Species Act	21
California Fish and Game Code (§3503.5).....	21
Lake and Streambed Alteration Agreement, CFGC (§1602)	21
Rare and Endangered Plants.....	21
California Environmental Quality Act Guidelines §15380.....	22
CONCLUSIONS AND RECOMMENDATIONS.....	22
Endangered, Threatened, and Special-status Wildlife.....	22
Migratory Birds and Raptors	22
Valley Elderberry Longhorn Beetle	23
REFERENCES.....	24
LIST OF PREPARERS	25

FIGURES

Figure 1. Regional Location.....	2
Figure 2. Biological Survey Area.....	3
Figure 3. CNDDDB and Critical Habitat Occurrences.....	5
Figure 4. VELB Location Map	18

TABLES

Table 1. Special-status Species and Sensitive Natural Communities and Their Potential to Occur in the BSA of the Rancho Road Project, Redding, CA.....	9
Table 2. VELB Survey Results for the Rancho Road Project, Redding, CA.....	17

APPENDICES

Appendix A.....	Species Lists
Appendix B.....	Observed Species
Appendix C.....	Site Photos Taken May 23, 2018

BIOLOGICAL RESOURCE ASSESSMENT

Rancho Road Project

Project Location:

Redding, Shasta County, California
Section 22 Township 31N Range 4W
Enterprise USGS 7.5' Quadrangle

INTRODUCTION

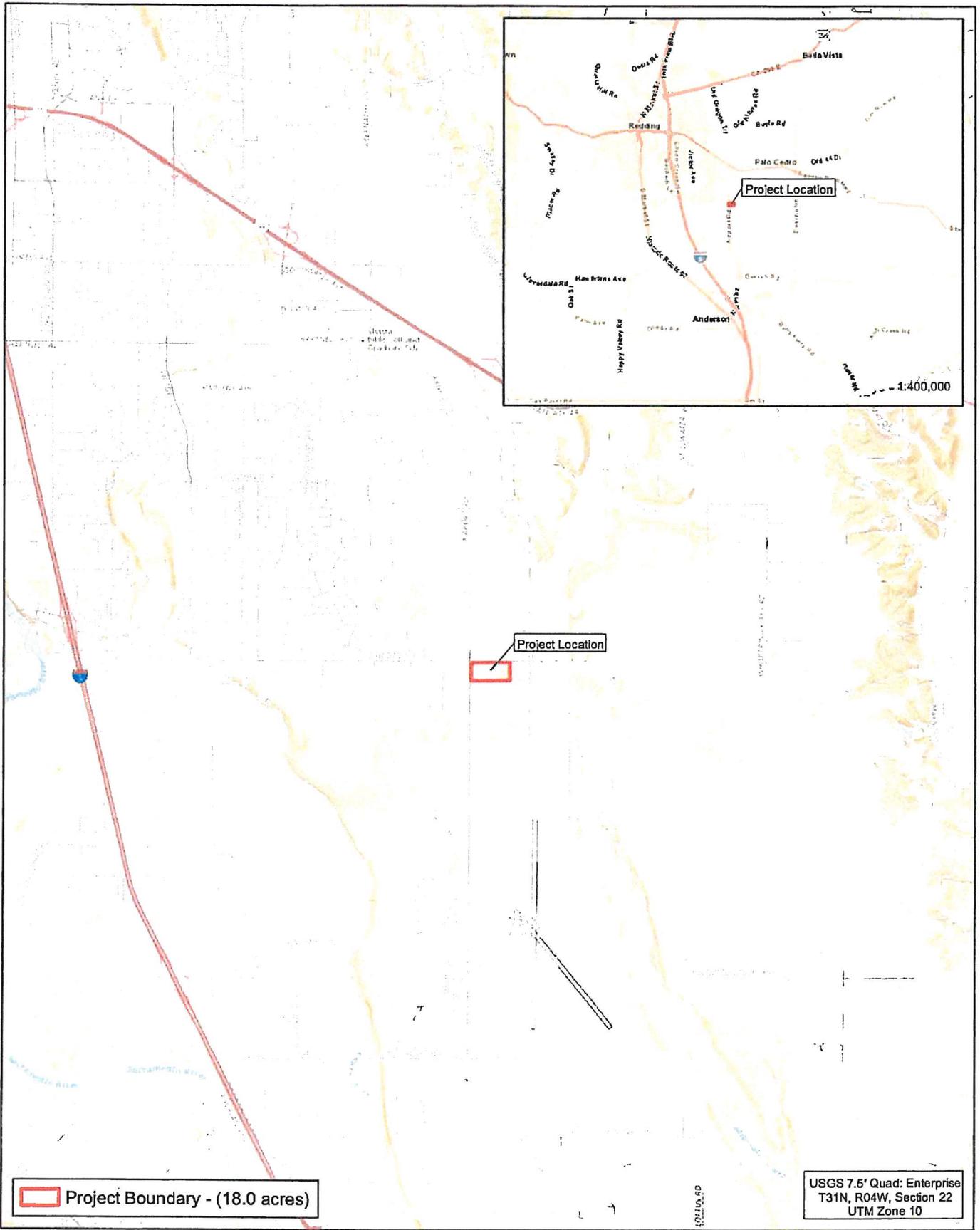
Purpose and Overview

The purpose of this biological resource assessment (BRA) is to document the endangered, threatened, sensitive and rare species, and their habitats that occur or may occur in the biological survey area (BSA) of the Rancho Road Project (Project) located within the City Limits of Redding, Shasta County, California (Figure 1). The Project area is approximately 18 acres. The proposed Project involves the construction of a residential development.

The BSA is the area where the focus of biological surveys is conducted (Figure 2). Gallaway Enterprises conducted a habitat assessment, protocol-level rare plant survey, and protocol-level survey for valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphs*) in the BSA to evaluate site conditions and potential for rare and listed species to occur. Other primary references consulted include species lists and information gathered using the United States Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System (IPaC), California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB), the California Native Plant Society's (CNPS) list of rare and endangered plants, and literature review. The results of the BRA are the findings of surveys, habitat assessments, and recommendations for avoidance and minimization measures.

Project Location and Environmental Setting

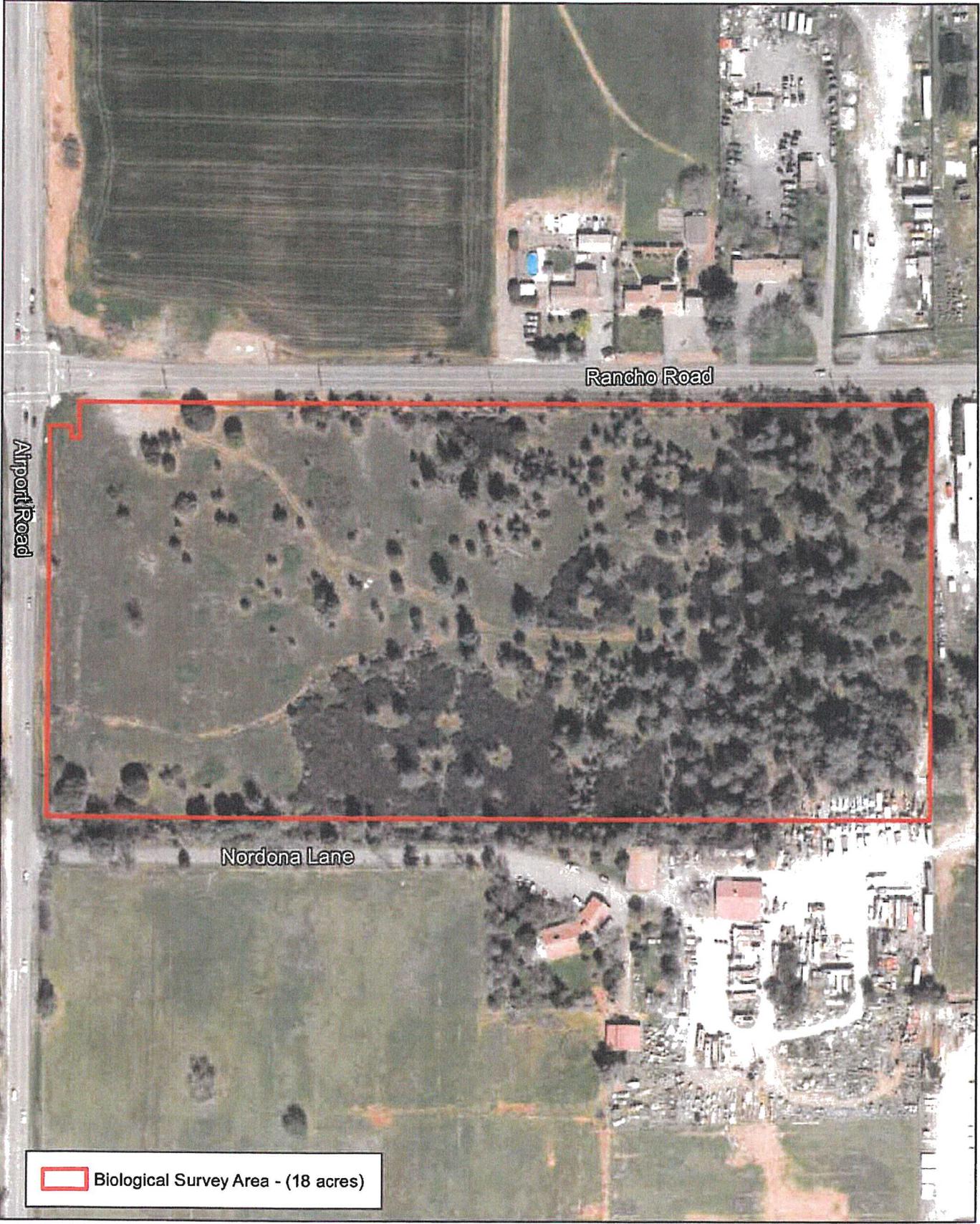
The Project is located in the City of Redding, Shasta County, California, Latitude 40.533907, Longitude -122.300702, within the USGS 7.5' "Enterprise, CA" quadrangle, Township 31N, Range 4W, Section 22. The site is relatively flat and is characterized by annual grassland, areas of dense chaparral habitat and mixed oak-foothill pine woodland. A few dirt access roads occur on the site but have been largely overgrown. The Property is bound to the north by Rancho Road, to the west by Airport Road, to the south by Nordona Lane and to the east by an industrial building. Residential buildings occur to the northeast of the site, an industrial building to the east and a large compound with stockpiled materials and vehicles occurs to the southeast. The remaining adjacent land is comprised of open land or land historically used for agricultural purposes. No wetlands or drainages occur within the Project site.




 1:50,000
 0 0.5 1 Miles
NORTH Data Sources: ESRI; USGS; Shasta County

Rancho Road
 Regional Location
Figure 1


 GE: #18-054 Map Date: 05/24/18



Rancho Road

Airport Road

Nordona Lane

 Biological Survey Area - (18 acres)



1:2,200

0 100 200 Feet

Data Sources: ESRI, USGS, Shasta County

Rancho Road Property
Biological Survey Area
Figure 2

galloway
ENTERPRISES

GE: #18-054

Map Date: 05/25/18

Soils within the Project range from gravelly to clay loams with a restrictive layer occurring more than 80 inches in depth. The average annual precipitation for the area is 34.23 inches and the average temperature is 62.5° F (Western Regional Climate Center 2018).

Biological Survey Area

For the purposes of this BRA, the BSA is the area in which biological surveys are conducted. The BSA includes all areas to be affected directly by the Project. For the proposed project, the BSA was limited to the parcel boundary.

Project Description

The proposed Project is currently in the planning stages but will likely result in the complete build-out of the Project site for residential or commercial purposes.

METHODS

References Consulted

Gallaway Enterprises obtained lists of special-status species that occur in the vicinity of the BSA. The CNDDDB Geographic Information System (GIS) database was also consulted and showed special-status species within a five (5) mile radius of the BSA (Figure 3). Other primary sources of information regarding the occurrence of federally listed threatened, endangered, proposed and candidate species, and their habitats within the BSA used in the preparation of this BRA are:

- The USFWS Official Species List for the BSA, May 22, 2018, (**Appendix A; Species Lists**);
- The results of a species record search of the CDFW CNDDDB, RareFind 5, for the 7.5 minute USGS “Enterprise, Balls Ferry, Olinda, Cottonwood, Bella Vista, Project City, Shasta Dam, Redding, and Palo Cedro” quadrangles (**Appendix A; Species Lists**);
- The review of the CNPS Inventory of Rare and Endangered Vascular Plants of California for the 7.5 minute USGS “Enterprise, Balls Ferry, Olinda, Cottonwood, Bella Vista, Project City, Shasta Dam, Redding, and Palo Cedro” quadrangles (**Appendix A; Species Lists**);
- USFWS Critical Habitat Portal, May 22, 2018;
- Withdrawal of the Proposed Rule to Remove the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife, September 17, 2014, (Federal Register 79: 55874-55917) (Withdrawal Rule)
- Results from the field survey conducted by Gallaway Enterprises on May 23, 2018; and,
- Results from the protocol-level VELB survey conducted on June 07, 2018.

Special-Status Species

Special-status species that have potential to occur in the BSA are those that fall into one of the following categories:

- Listed as threatened or endangered, or are proposed or candidates for listing under the California Endangered Species Act (CESA, 14 California Code of Regulations 670.5) or the Federal Endangered Species Act (ESA, 50 Code of Federal Regulations 17.12);
- Listed as a SSC by CDFW or protected under the California Fish and Game Code (i.e Fully Protected Species);
- Ranked by the CNPS as 1A, 1B, or 2;
- Protected under the Migratory Bird Treaty Act (MBTA);
- Protected under the Bald and Golden Eagle Protection Act; or
- Species that are otherwise protected under policies or ordinances at the local or regional level as required by the California Environmental Quality Act (CEQA, §15380).

Critical Habitat

The Endangered Species Act requires that critical habitat be designated for all species listed under the Endangered Species Act. Critical habitat is designated for areas that provide essential habitat elements that enable a species survival and which are occupied by the species during the species listing under the Endangered Species Act. Areas outside of the species range of occupancy during the time of its listing can also be determined as critical habitat if the agency decides that the area is essential to the conservation of the species. The USFWS Critical Habitat Portal was accessed on May 22, 2018 to determine if critical habitat occurs within the BSA. Appropriate Federal Registers were also used to confirm the presence or absence of critical habitat.

Sensitive Natural Communities

Sensitive Natural Communities (SNCs) are monitored by CDFW with the goal of preserving these areas of habitat that are rare or ecologically important. Many SNCs are designated because they represent a historical landscape and are typically preserved as valued components of California's diverse habitat assemblage.

Waters of the United States

A delineation of waters of the United States (WOTUS) was conducted by Gallaway Enterprises on May 23, 2018. No WOTUS or waters of the State were observed within the Project site.

Biological and Botanical Surveys

A field survey was conducted on May 23, 2018 by Gallaway Enterprises senior botanist, Elena Gregg, and biologist Leah Cochran. A second site visit was conducted by Mrs. Gregg on June 7, 2018. A habitat

assessment and protocol-level botanical survey were conducted to determine the presence of special-status species and their habitats within the BSA. The habitat assessment was conducted by walking all areas of the BSA and taking inventory of observed species and habitat elements. A list of observed species is provided as **Appendix B**. In addition, a protocol-level VELB survey was conducted.

Habitat Assessment

A habitat assessment of the BSA was conducted on May 23, 2018. The purpose of the habitat assessment was to determine if suitable habitat occurs within the BSA for special-status species. The habitat assessment was conducted by walking the entire BSA and recording specific habitat types and elements. If habitat was observed for special-status species it was then evaluated for quality based on vegetation composition and structure, physical features (e.g. soils, elevation), micro-climate, surrounding area, presence of predatory species and available resources (e.g. prey items, nesting substrates), and land use patterns. Specifically, a habitat assessment was performed to make a determination regarding the habitat suitability for VELB. Current information contained in the CNND, Withdrawal Rule and the USFWS *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* was reviewed.

Rare Plant Survey

A rare plant survey and habitat evaluation for rare plants was conducted on May 23, 2018. The survey and evaluation were conducted by walking all accessible areas of the project boundary and taking inventory of observed botanical species. Plant surveys were conducted to coincide with known blooming periods.

Valley Elderberry Longhorn Beetle Survey

A USFWS protocol level VELB survey was conducted on June 7, 2018 using the guidelines under the USFWS 1999 USFWS Conservation Guidelines for Valley Elderberry Longhorn Beetle. The protocol level VELB survey was conducted by walking all areas within the BSA where accessible. When an elderberry shrub was found, a detailed data sheet was filled out describing the size of the shrub, habitat where it was found and the presence of exit holes. The shrub was located and mapped using a Trimble Geo Explorer 6000 Series GPS Receiver and marked with flagging.

RESULTS

Vegetation Communities

Annual Grassland (AGS)

Annual grassland is the dominant vegetation community within the western portion of the BSA. Portions of the site that had previously been disturbed are now occupied by ruderal annuals. Common species

that were observed in the annual grasslands were medusahead (*Elymus caput-medusae*), winter vetch (*Vicia villosa*), wild oats (*Avena barbata*), rip-gut brome (*Bromus diandrus*), yellow star thistle (*Centaurea solstitialis*), soft chess (*Bromus hordeaceus*), and rose clover (*Trifolium hirtum*). There were also a few small patches of yerba santa (*Eriodictyon californicum*) present. This habitat type provides foraging ground for a variety of wildlife species and breeding habitat for a variety of terrestrial reptiles and ground nesting mammals. The singular trees or isolated stands of trees within the annual grassland could provide valuable perches to foraging raptors.

Blue Oak-Foothill Pine (BOP)

Blue Oak-Foothill Pine is the dominant vegetation community within the eastern portion of the BSA. Common species observed within the BSA were foothill pine (*Pinus sabiniana*), blue oak (*Quercus douglasii*), live oak (*Quercus wislizeni*), and a few valley oaks (*Quercus lobata*), with an understory ranging from mixed shrub vegetation to annual grasses and forbs. Portions of the blue oak-foothill pine habitat had patches of the non-native tree of heaven (*Ailanthus altissima*). The Blue Oak-Foothill Pine habitat type provides foraging ground for a variety of wildlife species and breeding habitat for terrestrial reptiles and ground nesting mammals.

Mixed Chaparral (MCH)

Mixed chaparral habitat occurs in dense patches within the central portion of the BSA. Within the BSA the mixed chaparral habitat is dominated by common manzanita (*Arctostaphylos manzanita*). Some other species observed were buckbrush (*Ceanothus cuneatus*), foothill honeysuckle (*Lonicera interrupta*), and poison oak (*Toxicodendron diversilobum*). The understory was largely bare due to the density of the shrub canopy. The mixed chaparral habitat type provides foraging ground for a wide variety of wildlife species and breeding habitat for terrestrial reptiles.

Non-vegetated Habitat

Barren (BAR)

Barren habitat is typified by non-vegetated soil, rock, paved roads and gravel. There are several dirt roads and a gravel turn-out within the BSA. The barren habitat type provides low quality habitat to wildlife.

Critical Habitat

There is no critical habitat within the BSA. Critical designated by the USFWS for slender Orcutt grass and federally listed steelhead occur in close proximity to the BSA, but habitat for these species do not occur within the BSA.

Sensitive Natural Communities

No Sensitive Natural Communities occur within the BSA.

Special-Status Species

A summary of special-status species assessed for potential occurrence within the BSA based on the USFWS, IPaC species list, CNDDDB, and the CNPS list of rare and endangered plants within the 7.5 minute USGS "Enterprise, Balls Ferry, Olinda, Cottonwood, Bella Vista, Project City, Shasta Dam, Redding, and Palo Cedro" quadrangles, and their potential to occur within the BSA are described in Table 1. Potential for occurrence was determined by reviewing database queries from federal and state agencies and evaluating habitat characteristics. Species were not included in the special-status species summary table if the habitat the species occurs in or the species' range does not occur in the BSA [ex. Sulphur Creek brodiaea (*Brodiaea matsonii*) is only known to occur within the Sulphur Creek watershed, and the BSA is not within the Sulphur Creek watershed].

The following special-status species have potential to occur within the BSA based on the presence of suitable habitat and/or known records of species occurrence within the vicinity of the BSA.

Endangered, Threatened and Rare Plants

Protocol-level botanical surveys were conducted within the BSA on May 23, 2018. There were no endangered, threatened or rare plants observed within the BSA. A list of the plant species observed during the protocol-level surveys is provided in Appendix B.

Table 1. Special-status Species and Sensitive Natural Communities and Their Potential to Occur in the BSA of the Rancho Road Project, Redding, CA.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
SENSITIVE NATURAL COMMUNITIES			
Great Valley Cottonwood Riparian Forest	_ / SNC / _	Riparian forest.	<u>None</u> . There is no designated Great Valley Cottonwood Riparian Forest within the BSA.
Great Valley Valley Oak Riparian Forest	_ / SNC / _	Riparian forest.	<u>None</u> . There is no designated Great Valley Cottonwood Riparian Forest within the BSA.
Great Valley Willow Scrub	_ / SNC / _	Riparian scrub.	<u>None</u> . There is no designated Great Valley Willow Scrub within the BSA.
PLANTS			
Ahart's paronychia (<i>Paronychia ahartii</i>)	_ / 1B.1	Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland. Blooms: Feb-Jun.	<u>None</u> . Suitable habitat was present and species was not detected during the protocol-level survey.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
PLANTS			
Baker's navarretia (<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>)	✓✓1B.1	Cismontane woodland, Lower montane coniferous forest, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland. Blooms: Apr-Jul.	<u>None</u> . Suitable habitat was present and species was not detected during the protocol-level survey.
Bellinger's meadowfoam (<i>Limnanthes floccosa</i> ssp. <i>bellingermana</i>)	✓✓1B.2	Edges of meadows and seeps, vernal wet sites including damp stony flats. 984 ft (BP: Apr – Jun)	<u>None</u> . There is no suitable habitat within the BSA and the species was not observed during the protocol-level botanical survey.
Big-scale balsamroot (<i>Balsamorhiza macrolepis</i>)	✓✓1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland. Blooms: Mar-Jun.	<u>None</u> . Marginally suitable habitat was present but species was not detected during the protocol-level survey.
Boggs Lake hedge-hyssop (<i>Gratiola heterosepala</i>)	✓SE/1B.2	Freshwater marsh, Marsh & swamp, Vernal pool, Wetland. Blooms: Apr-Aug.	<u>None</u> . There is no suitable habitat within the BSA and the species was not detected during the protocol-level survey.
Legenere (<i>Legenere limosa</i>)	✓✓1B.1	Vernal pool, Wetland. Blooms: Apr-Jun.	<u>None</u> . There is no suitable habitat within the BSA and the species was not detected during the protocol-level survey.
Northern clarkia (<i>Clarkia borealis</i> ssp. <i>borealis</i>)	✓✓1B.3	Chaparral, cismontane woodland, and lower montane coniferous forest, often found in roadcuts. (BP: Jun – Sep)	<u>None</u> . There is no suitable habitat within the BSA and the BSA is outside of northern clarkia's known elevation range.
Oval-leaved viburnum (<i>Viburnum ellipticum</i>)	✓✓2B.3	Chaparral, cismontane woodland, lower montane coniferous forest above 705 feet in elevation. (BP: May – Jun)	<u>None</u> . The species was not detected during the protocol-level survey, and the BSA is outside of the species' known elevation range.
Pink creamsacs (<i>Castilleja rubicundula</i> var. <i>rubicundula</i>)	✓✓1B.2	Chaparral, Cismontane woodland, Meadow & seep, Ultramafic, Valley & foothill grassland. Blooms: Apr-Jun.	<u>None</u> . There is no suitable habitat within the BSA and the species was not detected during the protocol-level survey.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
PLANTS			
Red Bluff dwarf rush (<i>Juncus leiospermus</i> <i>var. leiospermus</i>)	_/_1B.1	Chaparral, Cismontane woodland, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland. Blooms: Mar-Jun.	<u>None</u> . There is no suitable habitat within the BSA and the species was not detected during the protocol-level survey.
Sanford's arrowhead (<i>Sagittaria sanfordii</i>)	_/_1B.2	Marsh & swamp, Wetland. Blooms: May-Oct(Nov).	<u>None</u> . There is no suitable habitat within the BSA.
Shasta fawn lily (<i>Erythronium shastense</i>)	_/_1B.2	Cismontane woodland, lower montane coniferous forest. Microhabitat is usually carbonate, rocky, north-facing or shaded. (BP: [Feb] Mar – Apr)	<u>None</u> . There is no suitable habitat within the BSA and the BSA is outside of the species' known elevation range.
Shasta huckleberry (<i>Vaccinium shastense</i> ssp. <i>shastense</i>)	_/_1B.3	Chaparral, cismontane woodland, lower montane coniferous forest, riparian forest, subalpine coniferous forest. Microhabitat is acidic, mesic; often streambanks; sometimes seeps, rocky outcrops, roadsides, and disturbed areas. (BP: Dec – May [Sep])	<u>None</u> . The species was not detected during the protocol-level survey, and the BSA is outside of the species' known elevation range.
Shasta snow-wreath (<i>Neviusia cliftonii</i>)	_/_1B.2	Cismontane woodland, Lower montane coniferous forest, Riparian woodland in the mountains around Lake Shasta. Often found by streambanks; sometimes carbonate, volcanic, or metavolcanic. (BP: Apr – Jun)	<u>None</u> . The species was not detected during the protocol-level survey, and the BSA is outside of the species' known elevation range.
Slender Orcutt grass (<i>Orcuttia tenuis</i>)	FT/SE/1B.1	Vernal pool, Wetland. Blooms: May-Sep(Oct).	<u>None</u> . There is no suitable habitat within the BSA.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
PLANTS			
Silky cryptantha (<i>Cryptantha crinita</i>)	_/_/1B.2	Cismontane woodland, Lower montane coniferous forest, Riparian forest, Riparian woodland, Valley & foothill grassland. Blooms: Apr-May.	<u>None</u> . There is no suitable habitat within the BSA and the species was not detected during the protocol-level survey.
Sulphur Creek brodiaea (<i>Brodiaea matsonii</i>)	_/_/1B.1	Cismontane woodland, Meadow & seep. Blooms: May-Jun.	<u>None</u> . There is no suitable habitat within the BSA and the species was not detected during the protocol-level survey.
Watershield (<i>Brasenia schreberi</i>)	_/_/2B.3	Shallow ponds, lakes, and slow-moving streams. It grows in water 0.5-3 m deep. Blooms: Jun-Sep.	<u>None</u> . There is no suitable habitat within the BSA.
INVERTEBRATES			
Valley Elderberry Longhorn Beetle (<i>Desmocerus californicus dimorphus</i>)	FT/_/_	Blue elderberry shrubs usually associated with riparian areas.	<u>Low</u> . Blue elderberry shrubs were observed within the BSA; literature indicates that habitat is unsuitable and unoccupied by VELB (USFWS 2014)
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT/_/_	Vernal pools and seasonally ponded areas.	<u>None</u> . There is no suitable vernal habitat within the BSA.
Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	FE/_/_	Deep vernal pools.	<u>None</u> . There is no suitable vernal habitat within the BSA.
FISH			
The BSA does not support any habitat for federally listed fish species due to the lack of streams or drainages.			

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
AMPHIBIANS			
California Red-legged Frog (<i>Rana draytonii</i>)	FT/SSC/_	Ponds in humid forests, woodlands, grasslands, coastal scrub, and streamsid es with plant cover.	<u>None.</u> There is no suitable breeding habitat within the BSA and CRLFs have been extirpated from the Central Valley since 1960 (USFWS 2002).
Foothill yellow-legged frog (<i>Rana boylei</i>)	_JSC/_	Streams with consistent flow, slow side waters with cobble and boulders for oviposition.	<u>None.</u> There is no suitable habitat within the BSA.
Western spadefoot (<i>Spea hammondi</i>)	_JSSC/_	Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland.	<u>None.</u> There is no suitable habitat within the BSA.
REPTILES			
Western pond turtle (<i>Emys marmorata</i>)	_JSSC/_	Perennial bodies of water with deep pools, locations for haul out, and locations for oviposition.	<u>None.</u> There is no suitable habitat within the BSA.
Shasta salamander (<i>Hydromantes shastae</i>)	_JST/_	Occurs in rocky talus near Lake Shasta at 1,000-3,000 feet elevation.	<u>None.</u> The BSA is outside of Shasta salamander's known elevation range and no suitable limestone areas occur in the BSA.
BIRDS			
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	BCC/SE, FP/_	Coast, large lakes and river systems with open forests with large trees and snags near permanent water.	<u>None.</u> There are no nearby CNDDDB occurrences and there is no suitable nesting habitat within the BSA.
Bank swallow (<i>Riparia riparia</i>)	MBTA/ST/_	Banks and bridges near perennial bodies of water.	<u>None.</u> There is no suitable nesting habitat within the BSA and none detected during the site visit.
Northern Spotted Owl (<i>Strix occidentalis caurina</i>)	FT/ SC/_	Old growth forests.	<u>None.</u> There are no old growth forests within the BSA.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
BIRDS			
Osprey (<i>Pandion haliaetus</i>)	MBTA/CFGC/_	Riparian forest, forest near water bodies that support fish resources.	<u>None.</u> There are no permanent water bodies that support fish within the BSA.
Tricolored blackbird (<i>Agelaius tricolor</i>)	_/SSC,SC/_	Freshwater marsh, Marsh Swamp and Wetland.	<u>None.</u> There is no suitable habitat within the BSA.
MAMMALS			
Pallid bat (<i>Antrozous pallidus</i>)	_/SSC/_	Chaparral, Coastal scrub, Desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Riparian woodland, Sonoran desert scrub, Upper montane coniferous forest, Valley & foothill grassland.	<u>None.</u> CNDDDB occurrences of roosting pallid bats in Shasta County are limited to bridges (#111, 112, and 428) and there are no bridges present in the BSA.
Spotted Bat (<i>Eduerma maculatum</i>)	_/SSC/_	Wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Needs rock crevices in cliffs or caves for roosting.	<u>None.</u> There are no cliffs or caves suitable for roosting habitat within the BSA.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	_/SSC/_	Roosts in mines, open caverns, and occasionally bridges.	<u>None.</u> There is no suitable roosting habitat within the BSA.
Western red bat (<i>Lasiurus blossevillii</i>)	_/SSC/_	Cismontane woodland, Lower montane coniferous forest, Riparian forest, Riparian woodland.	<u>None.</u> Western red bats are known to roost on oak trees, but are generally only found in riparian areas which do not occur within the BSA. Also, there are no nearby CNDDDB occurrences.

CODE DESIGNATIONS	
<p>FE = Federally-listed Endangered FT = Federally-listed Threatened FC = Federal Candidate Species BCC = Federal Bird of Conservation Concern MBTA = Protected by the federal Migratory Bird Treaty Act</p> <p>SE = State-listed Endangered ST = State-listed Threatened SC = State Candidate for Listing as Threatened or Endangered SR = State-listed Rare SSC = State Species of Special Concern</p> <p>S1 = State Critically Imperiled S2 = State Imperiled S3 = State Vulnerable S4 = State Apparently Secure</p>	<p>FP = CDFW Fully Protected Species SNC = CDFW Sensitive Natural Community</p> <p>CRPR 1B = Rare or Endangered in California or elsewhere CRPR 2 = Rare, Threatened or Endangered in California, more common elsewhere CRPR 3 = More information is needed CRPR 4 = Plants with limited distribution, not considered rare, threatened or endangered</p> <p>0.1 = Seriously Threatened 0.2 = Fairly Threatened 0.3 = Not very Threatened</p>
<p>Potential for Occurrence: Any bird or bat species could fly over the BSA, but this is not considered a potential occurrence. The categories for the potential for occurrence include:</p> <p>None: The species or natural community does not occur, and has no potential to occur in the BSA based on sufficient surveys, the lack suitable habitat, and/or the BSA is well outside of the known distribution of the species.</p> <p>Low: Potential habitat in the BSA is sub-marginal and/or the species is known to occur in the vicinity of the BSA.</p> <p>Moderate: Suitable habitat is present in the BSA and/or the species is known to occur in the vicinity of the BSA. Pre-construction surveys may be required.</p> <p>High: Habitat in the BSA is highly suitable for the species and there are reliable records close to the BSA, but the species was not observed. Pre-construction surveys required.</p> <p>Known: Species was detected in the BSA or a recent reliable record exists for the BSA.</p>	

Endangered, Threatened and Special Status Wildlife

A wildlife habitat assessment was conducted within the BSA on May 23, 2018. Suitable habitat was identified for several avian species protected under the Migratory Bird Treaty Act (MBTA). During the May 23, 2018 field visit, a number of blue elderberry (*Sambucus nigra ssp. caerulea*) shrubs were observed. Therefore, a USFWS protocol-level survey for VELB was performed on June 7, 2018. Elderberry shrubs were inspected for the presence of VELB or exit holes. VELB is listed as threatened under the Federal Endangered Species Act.

Migratory Birds and Raptors

Nesting birds are protected under the Migratory Bird Treaty Act (MBTA) (16 USC 703) and the California Fish and Game Code (CFG) (§3503). The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e. exotic) species (50 Code of Federal Regulations §10.13). Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance has the potential to affect bird species protected by the MBTA.

The CFGC (§3503.5) states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that “it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.”

CNDDDB Occurrences

The majority of migratory birds and raptors protected under the MBTA and CFGC are not recorded on the CNDDDB because they are abundant and widespread.

Status of Migratory Birds and Raptors occurring in the BSA

There is suitable nesting habitat for a variety of ground, shrub and tree nesting avian species throughout the BSA. A high diversity of avian species has the potential to nest in the BSA based on the variety of habitat types. A list of the bird species observed flying through or utilizing the BSA during the field survey is provided as **Appendix B**.

Valley Elderberry Longhorn Beetle (VELB)

The VELB is listed as threatened under the ESA. The VELB is a medium sized (0.8 inch long) beetle that is endemic to the Central Valley of California. The beetle is found only in association with its host plant, elderberry shrubs. Adults feed on the foliage and flowers of elderberry shrubs and are present from March through early June. During this period the beetles mate, and females lay eggs on living elderberry plants. The first instar larvae bore to the center of elderberry stems where they feed on the pith of the plant for one to two years as they develop. Prior to forming their pupae, the elderberry wood boring larvae chew through the bark and then plug the holes with wood shavings. In the pupal chamber, the larvae metamorphose into their pupae and then into adults where upon they emerge between mid-March through June (USFWS 1991). Larvae appear to be distributed in stems that are 1.0 inch or greater in diameter at ground level (**Table 2**). Current threats to VELB consist primarily of riparian habitat destruction, causing extirpation, fragmentation and isolation of beetle populations (USFWS 1991).

VELB spend their entire lifecycle on their host plant, blue elderberry and red elderberry (*Sambucus racemosa*). VELB most commonly occur in elderberry shrubs that are associated with riparian forests and not in upland communities. The most influential elderberry shrub characteristics that appear to effect VELB occupancy include shrub density, shrub size, and number of stems and range of branch sizes (Talley et al. 2007). The historical and current known range of VELB does not include Shasta County.

CNDDDB Occurrences

According to the CNDDDB, the Federal Register (USFWS 2014, Withdrawal Rule), and the USFWS there have been no confirmed observations of a male VELB in Shasta County. Observations of adult female VELB have been reported in Shasta County and exit holes in elderberry bushes have been recorded (CNDDDB EO 218). There are no known museum or archived VELB specimens for Shasta County. Galloway Enterprises requested status information from the USFWS in May 2015 regarding confirmed observations of VELB in Shasta County and the USFWS could not confirm any known or verified observations of VELB.

Status of VELB occurring in the BSA

Occupancy of elderberry beetles is determined by identifying emergence holes also known as exit holes in the stems of blue elderberry bushes. However in Shasta County, the non-listed California elderberry beetle is known to occur and its range overlaps with the range of VELB in northern California. The California elderberry beetle and VELB make the same exist holes, thus observations of exit holes alone cannot be used to predict VELB occupancy of a site. An adult male VELB is needed to make a positive identification regarding the presence of VELB when the range of both elderberry beetles overlap due to the difficulty in distinguishing between the females of California and valley longhorn beetles. An adult male VELB has not been confirmed in Shasta County. The listing of VELB as a threatened species applies to wherever the beetle is found, thus if VELB are confirmed in Shasta County than consultation with the USFWS may be required. No individual VELB were detected within the BSA nor were any exit holes observed (Figure 4). Seven (7) elderberry shrubs were observed within the BSA. The elderberry shrubs were found scattered throughout the BSA in the all of the upland habitats types present. The results of the survey and presence of exit holes is summarized in Table 2.

Table 2. VELB Survey Results for the Rancho Road Project, Redding, CA.

Project:	Rancho Road Project					
Survey Date:	06/7/2018					
Surveyors:	Elena Gregg					
Cluster #	Riparian/Upland	Exit Holes		Number of Stems		
		Y/N	Quantity	1-3"	3-5"	>5"
1	Upland	N	0	15	3	0
2	Upland	N	0	4	0	1
3	Upland	N	0	1	0	0
4	Upland	N	0	3	0	0
5	Upland	N	0	1	4	1
6	Upland	N	0	11	5	1
7	Upland	N	0	2	0	0
Total			0	37	12	3



 Property Boundary - (18 acres)
 Elderberry

 1:2,200
 0 100 200 Feet
 Data Sources: ESRI (Basemap sourced: 06/07/18),
 USGS, Shasta County

Rancho Road Property
 Elderberry Shrub Location Map
 Figure 4


 GE: #18-054 Map Date: 06/07/18

REGULATORY FRAMEWORK

The following describes federal, state, and local environmental laws and policies that may be relevant if the BSA were to be developed or modified.

Federal

Waters of the United States, Clean Water Act, Section 404

The Corps and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into jurisdictional waters of the United States, under the Clean Water Act (§404). The term “waters of the United States” is an encompassing term that includes “wetlands” and “other waters.” Wetlands have been defined for regulatory purposes as follows: “those areas that are inundated or saturated by surface or groundwater 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 (33 CFR 328.3, 40 CFR 230.3). Wetlands generally include swamps, marshes, bogs, and similar areas.” other waters of the United States are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark but lack positive indicators for one or more of the three wetland parameters (i.e., hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4).

The Corps may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits are general permits issued to cover particular fill activities. All nationwide permits have general conditions that must be met for the permits to apply to a particular project, as well as specific conditions that apply to each nationwide permit.

Clean Water Act, Section 401

The Clean Water Act (§401) requires water quality certification and authorization for placement of dredged or fill material in wetlands and Other Waters of the United States. In accordance with the Clean Water Act (§401), criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. The resulting requirements are used as criteria in granting National Pollutant Discharge Elimination System (NPDES) permits or waivers, which are obtained through the Regional Water Quality Control Board (RWQCB) per the Clean Water Act (§402). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect species that are endangered or threatened with extinction. The ESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

Under the FESA, species may be listed as either “endangered” or “threatened.” Endangered means a species is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. All species of plants and animals, except non-native species and pest insects, are eligible for listing as endangered or threatened. The USFWS also maintains a list of “candidate” species. Candidate species are species for which there is enough information to warrant proposing them for listing, but that have not yet been proposed. “Proposed” species are those that have been proposed for listing, but have not yet been listed.

The FESA makes it unlawful to “take” a listed animal without a permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” Through regulations, the term “harm” is defined as “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”

Migratory Bird Treaty Act

The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e. exotic) species (50 Code of Federal Regulations §10.13). Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance has the potential to affect bird species protected by the MBTA. Thus, vegetation removal and ground disturbance in areas with breeding birds should be conducted outside of the breeding season (approximately March 1 through August 31 in the Central Valley). If vegetation removal or ground disturbance activities are conducted during the breeding season, then a qualified biologist must determine if there are any nests of bird species protected under the MBTA present in the construction area prior to commencement of construction. If active nests are located or presumed present, then appropriate avoidance measures (e.g. spatial or temporal buffers) must be implemented.

State of California

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the ESA, but pertains to state-listed endangered and threatened species. The CESA requires state agencies to consult with the CDFW when preparing documents to comply with the California Environmental Quality Act (CEQA). The purpose is to ensure that the actions of the lead agency do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species. In addition to formal listing under the federal and state endangered species acts, “species of special concern” receive consideration by CDFW. Species of special concern are those whose numbers, reproductive success, or habitat may be threatened.

California Fish and Game Code (§3503.5)

The CFGC (§3503.5) states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (all owls except barn owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that “it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.”

Lake and Streambed Alteration Agreement, CFGC (§1602)

The CDFW is a trustee agency that has jurisdiction under the CFGC (§1600 et seq.). The California Fish and Game Code (§1602), requires that a state or local government agency, public utility, or private entity must notify CDFW if a proposed project will “substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds... except when the department has been notified pursuant to Section 1601.” If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures.

Rare and Endangered Plants

The CNPS maintains a list of plant species native to California with low population numbers, limited distribution, or otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS California Rare Plant Rank (CRPR) plants receive consideration under CEQA review. The CNPS CRPR categorizes plants as follows:

- Rank 1A: Plants presumed extinct in California;

- Rank 1B: Plants rare, threatened, or endangered in California or elsewhere;
- Rank 2A: Plants presumed extirpated or extinct in California, but not elsewhere;
- Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere;
- Rank 3: Plants about which we need more information; and
- Rank 4: Plants of limited distribution.

The California Native Plant Protection Act (CFGC §1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered as defined by CDFW. An exception to this prohibition allows landowners, under specific circumstances, to take listed plant species, provided that the owners first notify CDFW and give the agency at least 10 days to retrieve (and presumably replant) the plants before they are destroyed. Fish and game Code §1913 exempts from the 'take' prohibition "the removal of endangered or rare native plants from a canal, lateral channel, building site, or road, or other right of way."

California Environmental Quality Act Guidelines §15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines §15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled based on the definition in the ESA and the section of the CFGC dealing with rare, threatened, and endangered plants and animals. The CEQA Guidelines (§15380) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (e.g. candidate species, species of concern) would occur. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

CONCLUSIONS AND RECOMMENDATIONS

Endangered, Threatened, and Special-status Wildlife

Migratory Birds and Raptors

To avoid impacts to avian species protected under the MBTA and the CFGC the following are recommended avoidance and minimization measures for migratory birds and raptors:

- Project activities including site grubbing and vegetation removal shall be initiated outside of the bird nesting season (February 1 – August 31).
- If Project activities cannot be initiated outside of the bird nesting season then the following will occur:
 - A qualified biologist will conduct a pre-construction survey within 250 feet of the BSA, where accessible, within 7 days of starting Project activities.

- If an active nest (i.e. containing egg(s) or young) is observed within the BSA or in an area adjacent to the BSA where impacts could occur, then a species protection buffer will be established. The species protection buffer will be defined by the qualified biologist based on the species, nest type and tolerance to disturbance. Construction activity shall be prohibited within the buffer zones until the young have fledged or the nest fails. Nests shall be monitored by a qualified biologist once per week and a report submitted to the CEQA lead agency weekly.

Valley Elderberry Longhorn Beetle

Due to the location of elderberry bushes in upland habitat and the lack of known occurrences of VELB within Shasta County, it is not likely for VELB to occur within the BSA. In addition, no exit holes were observed in the bushes. The listing of VELB as a threatened species applies to wherever the beetle is found, thus if VELB is confirmed to occur in Shasta County consultation with the USFWS may be required.

REFERENCES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: vascular plants of California, second edition. University of California Press, Berkeley.

California Native Plant Society (CNPS), Rare Plant Program. 2018. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). California Native Plant Society, Sacramento, CA.

California Natural Diversity Database (CNDDB). 2017. Rarefind 5. California Department of Fish and Wildlife. Sacramento, California.

Mayer, K.E and Laudenslayer, W.F. 1988. A guide to Wildlife Habitats of California. California Department of Forestry and Fire Protection. Sacramento, California.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Talley, T. S., E. Fleishman, M. Holyoak, D. D. Murphy, and A. Ballard. 2007. Rethinking a rare species conservation strategy in an urban landscape: The case of the valley elderberry longhorn beetle. *Biological Conservation* 135:21-32.

US Fish and Wildlife Service (USFWS). 1991. The Distribution, Habitat, and Status of the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). USFWS. Sacramento, California.

USFWS. 1999. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. USFWS, Sacramento, California.

USFWS. 2014. Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule To Remove the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife. FR DOC # 2014-21585. Pages 55873 – 55917.

USFWS. 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). U.S. Fish and Wildlife Service; Sacramento, California. 28 pp.

Western Regional Climate Center (WRCC). 2018. Local Climate Data 2008 Summary for Redding, CA. Online access.

LIST OF PREPARERS

Elena Gregg. Senior Botanist. B.S. in Environmental Biology and Management, University California, Davis, Davis, California. Mrs. Gregg has over 13 years of experience conducting protocol-level botanical surveys, analyzing data, and preparing reports.

Jody Gallaway. Senior Biologist and President of Gallaway Enterprises, Inc. M.S. Biology. B.S. Biology. California State University, Chico. Mrs. Gallaway has had over 20 years of extensive work experience in the Sacramento Valley and surrounding areas working with local, state and federal agencies, agricultural communities, and the private sector conducting environmental surveys and reports.

Appendix A

Species Lists

FISH and WILDLIFE **RareFind**

Query Summary:

Quad IS (Enterprise (4012253) OR Balls Ferry (4012242) OR Olinda (4012244) OR Cottonwood (4012243) OR Palo Cedro (4012252) OR Redding (4012254) OR Bella Vista (4012262) OR Project City (4012263) OR Shasta Dam (4012284))

[Print](#) [Close](#)

CNDDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	951	9	None	Candidate Endangered	G2G3	S1S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Wetland
Agrostis hendersonii	Henderson's bent grass	Monocots	PMPOA040K0	26	9	None	None	G2Q	S2	3.2	null	Valley & foothill grassland, Vernal pool, Wetland
Anthicus antiochensis	Antioch Dunes anthicid beetle	Insects	IICOL49020	6	1	None	None	G1	S1	null	null	Interior dunes
Anthicus sacramento	Sacramento anthicid beetle	Insects	IICOL49010	13	1	None	None	G1	S1	null	IUCN_EN-Endangered	Interior dunes
Antrozous pallidus	pallid bat	Mammals	AMACC10010	415	2	None	None	G5	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive, WBWG_H-High Priority	Chaparral, Coastal scrub, Desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Riparian woodland, Sonoran desert scrub, Upper montane coniferous forest, Valley & foothill grassland
Ardea alba	great egret	Birds	ABNGA04040	43	1	None	None	G5	S4	null	CDF_S-Sensitive, IUCN_LC-Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
Balsamorhiza macrolepis	big-scale balsamroot	Dicots	PDAST11061	50	1	None	None	G2	S2	1B.2	BLM_S-Sensitive, USFS_S-Sensitive	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Branchinecta lynchi	vernal pool fairy shrimp	Crustaceans	ICBRA03030	766	14	Threatened	None	G3	S3	null	IUCN_VU-Vulnerable	Valley & foothill grassland, Vernal pool, Wetland
Brodiaea matsonii	Sulphur Creek brodiaea	Monocots	PMLILOCOH0	2	2	None	None	G1	S1	1B.1	null	Cismontane woodland, Meadow & seep
Castilleja rubicundula var. rubicundula	pink creamsacs	Dicots	PDSCR0D482	30	1	None	None	G5T2	S2	1B.2	BLM_S-Sensitive	Chaparral, Cismontane woodland, Meadow & seep, Ultramafic, Valley & foothill grassland

Clarkia borealis ssp. borealis	northern clarkia	Dicots	PDONA05062	112	2	None	None	G3T3	S3	1B.3	BLM_S- Sensitive, USFS_S- Sensitive	Chaparral, Cismontane woodland, Lower montane coniferous forest
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	626	1	None	None	G3G4	S2	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern, USFS_S- Sensitive, WBWG_H- High Priority	Broadleaved upland forest, Chaparral, Chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, Lower montane coniferous forest, Meadow & seep, Mojavean desert scrub, Riparian forest, Riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, Upper montane coniferous forest, Valley & foothill grassland
Cryptantha crinita	silky cryptantha	Dicots	PDBOR0A0Q0	57	24	None	None	G2	S2	1B.2	BLM_S- Sensitive, USFS_S- Sensitive	Cismontane woodland, Lower montane coniferous forest, Riparian forest, Riparian woodland, Valley & foothill grassland
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Insects	IICOL48011	271	6	Threatened	None	G3T2	S2	null	null	Riparian scrub
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1343	10	None	None	G3G4	S3	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, IUCN_VU- Vulnerable, USFS_S- Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Entosphenus tridentatus	Pacific lamprey	Fish	AFBAA02100	9	1	None	None	G4	S4	null	AFS_VU- Vulnerable, BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, USFS_S- Sensitive	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters, South coast flowing waters
Erethizon dorsatum	North American porcupine	Mammals	AMAFJ01010	508	2	None	None	G5	S3	null	IUCN_LC- Least Concern	Broadleaved upland forest, Cismontane woodland, Closed-cone coniferous forest, Lower montane coniferous forest, North coast coniferous forest, Upper montane coniferous forest
Euderma maculatum	spotted bat	Mammals	AMACC07010	68	1	None	None	G4	S3	null	BLM_S- Sensitive,	null

												CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern, WBGW_H- High Priority	
Fluminicola seminalis	nugget pebblesnail	Mollusks	IMGASG3110	8	1	None	None	G2	S1S2	null	USFS_S- Sensitive	Aquatic	
Gratiola heterosepala	Boggs Lake hedge- hyssop	Dicots	PDSCR0R060	99	2	None	Endangered	G2	S2	1B.2	BLM_S- Sensitive	Freshwater marsh, Marsh & swamp, Vernal pool, Wetland	
Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	Riparian	CTT61410CA	56	4	None	None	G2	S2.1	null	null	Riparian forest	
Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	Riparian	CTT61420CA	68	4	None	None	G2	S2.2	null	null	Riparian forest	
Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	Riparian	CTT61430CA	33	7	None	None	G1	S1.1	null	null	Riparian forest	
Great Valley Willow Scrub	Great Valley Willow Scrub	Riparian	CTT63410CA	18	2	None	None	G3	S3.2	null	null	Riparian scrub	
Haliaeetus leucocephalus	bald eagle	Birds	ABNKC10010	327	21	Delisted	Endangered	G5	S3	null	BLM_S- Sensitive, CDF_S- Sensitive, CDFW_FP- Fully Protected, IUCN_LC- Least Concern, USFS_S- Sensitive, USFWS_BCC- Birds of Conservation Concern	Lower montane coniferous forest, Oldgrowth	
Helminthoglypta hertelini	Oregon shoulderband	Mollusks	IMGASC2280	16	2	None	None	G1	S1S2	null	BLM_S- Sensitive	Riparian forest, Talus slope	
Hydromantes shastae	Shasta salamander	Amphibians	AAAAD09030	75	16	None	Threatened	G1G2	S3	null	BLM_S- Sensitive, IUCN_VU- Vulnerable, USFS_S- Sensitive	Cismontane woodland, Limestone	
Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	Monocots	PMJUN011L2	62	24	None	None	G2T2	S2	1B.1	BLM_S- Sensitive, USFS_S- Sensitive	Chaparral, Cismontane woodland, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland	
Lanx patelloides	kneecap lanx	Mollusks	IMGASL7030	26	2	None	None	G2	S2	null	USFS_S- Sensitive	Aquatic, Sacramento/San Joaquin flowing waters	
Lasionycteris noctivagans	silver-haired bat	Mammals	AMACC02010	139	2	None	None	G5	S3S4	null	IUCN_LC- Least Concern, WBGW_M- Medium Priority	Lower montane coniferous forest, Oldgrowth, Riparian forest	
Lasiurus blossevillii	western red bat	Mammals	AMACC05060	126	1	None	None	G5	S3	null	CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern, WBGW_H- High Priority	Cismontane woodland, Lower montane coniferous forest, Riparian forest, Riparian woodland	
Lasiurus cinereus	hoary bat	Mammals	AMACC05030	236	1	None	None	G5	S4	null	IUCN_LC- Least Concern, WBGW_M- Medium Priority	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous	

													forest, North coast coniferous forest
<i>Lathyrus sulphureus</i> var. <i>argillaceus</i>	dubious pea	Dicots	PDFAB25101	7	1	None	None	G5T1T2	S1S2	3	null		Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest
<i>Legenere limosa</i>	legenere	Dicots	PDCAM0C010	83	6	None	None	G2	S2	1B.1	BLM_S-Sensitive		Vernal pool, Wetland
<i>Lepidurus packardii</i>	vernal pool tadpole shrimp	Crustaceans	ICBRA10010	324	24	Endangered	None	G4	S3S4	null	IUCN_EN-Endangered		Valley & foothill grassland, Vernal pool, Wetland
<i>Limnanthes floccosa</i> ssp. <i>bellingiana</i>	Belling's meadowfoam	Dicots	PDLIM02041	5	1	None	None	G4T2T3	S1	1B.2	BLM_S-Sensitive, USFS_S-Sensitive		Cismontane woodland, Meadow & seep, Wetland
<i>Limnanthes floccosa</i> ssp. <i>floccosa</i>	woolly meadowfoam	Dicots	PDLIM02043	54	5	None	None	G4T4	S3	4.2	null		Chaparral, Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland
<i>Linderiella occidentalis</i>	California linderiella	Crustaceans	ICBRA06010	434	13	None	None	G2G3	S2S3	null	IUCN_NT-Near Threatened		Vernal pool
<i>Margaritifera falcata</i>	western pearlshell	Mollusks	IMBIV27020	78	1	None	None	G4G5	S1S2	null	null		Aquatic
<i>Monadenia troglodytes wintu</i>	Wintu sideband	Mollusks	IMGASC7092	10	3	None	None	G1G2T1T2	S1S2	null	IUCN_DD-Data Deficient, USFS_S-Sensitive		null
<i>Myotis yumanensis</i>	Yuma myotis	Mammals	AMACC01020	263	1	None	None	G5	S4	null	BLM_S-Sensitive, IUCN_LC-Least Concern, WBGW_LM-Low-Medium Priority		Lower montane coniferous forest, Riparian forest, Riparian woodland, Upper montane coniferous forest
<i>Navaretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navaretia	Dicots	PDPLM0C0E1	58	1	None	None	G4T2	S2	1B.1	BLM_S-Sensitive		Cismontane woodland, Lower montane coniferous forest, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
<i>Neviusia cliffonii</i>	Shasta snow-wreath	Dicots	PDROS14020	24	3	None	None	G2	S2	1B.2	BLM_S-Sensitive, SB_RSABG-Rancho Santa Ana Botanic Garden, USFS_S-Sensitive		Cismontane woodland, Limeslone, Lower montane coniferous forest, Riparian woodland
<i>Oncorhynchus mykiss irideus</i> pop. 11	steelhead - Central Valley DPS	Fish	AFCHA0209K	31	6	Threatened	None	G5T2Q	S2	null	AFS_TH-Threatened		Aquatic, Sacramento/San Joaquin flowing waters
<i>Oncorhynchus tshawytscha</i> pop. 6	chinook salmon - Central Valley spring-run ESU	Fish	AFCHA0205A	13	2	Threatened	Threatened	G5	S1	null	AFS_TH-Threatened		Aquatic, Sacramento/San Joaquin flowing waters
<i>Oncorhynchus tshawytscha</i> pop. 7	chinook salmon - Sacramento River winter-run ESU	Fish	AFCHA0205B	2	1	Endangered	Endangered	G5	S1	null	AFS_EN-Endangered		Aquatic, Sacramento/San Joaquin flowing waters
<i>Orcuttia tenuis</i>	slender Orcutt grass	Monocots	PMPOA4G050	100	12	Threatened	Endangered	G2	S2	1B.1	SB_UCBBG-UC Berkeley Botanical Garden		Vernal pool, Wetland
<i>Pandion haliaetus</i>	osprey	Birds	ABNKC01010	502	7	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List,		Riparian forest

												IUCN_LC- Least Concern	
Paronychia ahartii	Ahart's paronychia	Dicots	PDCAR0L0V0	58	6	None	None	G3	S3	1B.1	BLM_S- Sensitive	Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland	
Pekania pennanti	fisher - West Coast DPS	Mammals	AMAJF01021	737	6	None	Candidate Threatened	G5T2T3Q	S2S3	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, USFS_S- Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest	
Progne subis	purple martin	Birds	ABPAU01010	71	6	None	None	G5	S3	null	CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern	Broadleaved upland forest, Lower montane coniferous forest	
Rana boylii	foothill yellow- legged frog	Amphibians	AAABH01050	1808	12	None	Candidate Threatened	G3	S3	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, IUCN_NT- Near Threatened, USFS_S- Sensitive	Aquatic, Chaparral, Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian forest, Riparian woodland, Sacramento/San Joaquin flowing waters	
Riparia riparia	bank swallow	Birds	ABPAU08010	297	5	None	Threatened	G5	S2	null	BLM_S- Sensitive, IUCN_LC- Least Concern	Riparian scrub, Riparian woodland	
Sagittaria sanfordii	Sanford's arrowhead	Monocots	PMALI040Q0	108	1	None	None	G3	S3	1B.2	BLM_S- Sensitive	Marsh & swamp, Wetland	
Spea hammondii	western spadefoot	Amphibians	AAABF02020	463	3	None	None	G3	S3	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, IUCN_NT- Near Threatened	Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland	
Trilobopsis roperi	Shasta chaparral	Mollusks	IMGASA2030	40	8	None	None	G1	S1	null	USFS_S- Sensitive	null	
Trilobopsis tahamana	Tehama chaparral	Mollusks	IMGASA2040	12	1	None	None	G1	S1	null	BLM_S- Sensitive, USFS_S- Sensitive	null	
Vaccinium shastense ssp. shastense	Shasta huckleberry	Dicots	PDER181Z1	21	6	None	None	G4T3	S3	1B.3	null	Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian forest, Subalpine coniferous forest	
Vespericola shasta	Shasta hesperian	Mollusks	IMGASA4070	8	1	None	None	G1	S1	null	USFS_S- Sensitive	Riparian forest	
Viburnum ellipticum	oval-leaved viburnum	Dicots	PDCPR07080	38	2	None	None	G4G5	S3?	2B.3	null	Chaparral, Cismontane woodland, Lower montane coniferous forest	

Plant List

Inventory of Rare and Endangered Plants

30 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 4012264, 4012263, 4012262, 4012254, 4012253, 4012252, 4012244 4012243 and 4012242;

[🔍 Modify Search Criteria](#)
[📄 Export to Excel](#)
[🔧 Modify Columns](#)
[⬆️⬆️ Modify Sort](#)
[📷 Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<u>Adiantum shastense</u>	Shasta maidenhair fern	Pteridaceae	perennial herb	Apr-Aug	4.3	S3	G3
<u>Agrostis hendersonii</u>	Henderson's bent grass	Poaceae	annual herb	Apr-Jun	3.2	S2	G2Q
<u>Allium sanbornii</u> var. <u>sanbornii</u>	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S3S4	G4T3T4
<u>Anomobryum julaceum</u>	slender silver moss	Bryaceae	moss		4.2	S2	G5?
<u>Arnica venosa</u>	Shasta County arnica	Asteraceae	perennial rhizomatous herb	May-Jul(Sep)	4.2	S3	G3
<u>Astragalus pauperculus</u>	depauperate milk-vetch	Fabaceae	annual herb	Mar-Jun	4.3	S4	G4
<u>Balsamorhiza macrolepis</u>	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
<u>Brasenia schreberi</u>	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
<u>Brodiaea matsonii</u>	Sulphur Creek brodiaea	Themidaceae	perennial bulbiferous herb	May-Jun	1B.1	S1	G1
<u>Bulbostylis capillaris</u>	thread-leaved beakseed	Cyperaceae	annual herb	Jun-Aug	4.2	S3	G5
<u>Castilleja rubicundula</u> var. <u>rubicundula</u>	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	1B.2	S2	G5T2
<u>Clarkia borealis</u> ssp. <u>borealis</u>	northern clarkia	Onagraceae	annual herb	Jun-Sep	1B.3	S3	G3T3
<u>Cryptantha crinita</u>	silky cryptantha	Boraginaceae	annual herb	Apr-May	1B.2	S2	G2
<u>Cypripedium montanum</u>	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
<u>Erythronium shastense</u>	Shasta fawn lily	Liliaceae	perennial bulbiferous herb	(Feb)Mar-Apr	1B.2	S2	G2
<u>Gratiola heterosepala</u>	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2
<u>Juncus leiospermus</u> var. <u>leiospermus</u>	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	1B.1	S2	G2T2
<u>Lathyrus sulphureus</u> var. <u>argillaceus</u>	dubious pea	Fabaceae	perennial herb	Apr-May	3	S1S2	G5T1T2
<u>Legenere limosa</u>	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2

<u>Limnanthes floccosa ssp. bellingeriana</u>	Bellinger's meadowfoam	Limnanthaceae	annual herb	Apr-Jun	1B.2	S1	G4T2T3
<u>Limnanthes floccosa ssp. floccosa</u>	woolly meadowfoam	Limnanthaceae	annual herb	Mar-May(Jun)	4.2	S3	G4T4
<u>Navarretia leucocephala ssp. bakeri</u>	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G4T2
<u>Nevisia cliftonii</u>	Shasta snow-wreath	Rosaceae	perennial deciduous shrub	Apr-Jun	1B.2	S2	G2
<u>Orcuttia tenuis</u>	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	1B.1	S2	G2
<u>Paronychia ahartii</u>	Ahart's paronychia	Caryophyllaceae	annual herb	Feb-Jun	1B.1	S3	G3
<u>Sagittaria sanfordii</u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
<u>Sidalcea celata</u>	Redding checkerbloom	Malvaceae	perennial herb	Apr-Aug	3	S2S3	G2G3
<u>Thermopsis gracilis</u>	slender false lupine	Fabaceae	perennial rhizomatous herb	Mar-Jul	4.3	S4	G4
<u>Vaccinium shastense ssp. shastense</u>	Shasta huckleberry	Ericaceae	perennial deciduous shrub	Dec-May(Jun-Sep)	1B.3	S3	G4T3
<u>Viburnum ellipticum</u>	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3	S3?	G4G5

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 22 May 2018].

Search the Inventory

[Simple Search](#)

[Advanced Search](#)

[Glossary](#)

Information

[About the Inventory](#)

[About the Rare Plant Program](#)

[CNPS Home Page](#)

[About CNPS](#)

[Join CNPS](#)

Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

[California Natural Diversity Database](#)

[The Jepson Flora Project](#)

[The Consortium of California Herbaria](#)

[CalPhotos](#)

Questions and Comments

rareplants@cnps.org



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

May 22, 2018

Consultation Code: 08ESMF00-2018-SLI-2174

Event Code: 08ESMF00-2018-E-06403

Project Name: Rancho Rd Property

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- **Official Species List**

|

|

|

|

|

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2018-SLI-2174

Event Code: 08ESMF00-2018-E-06403

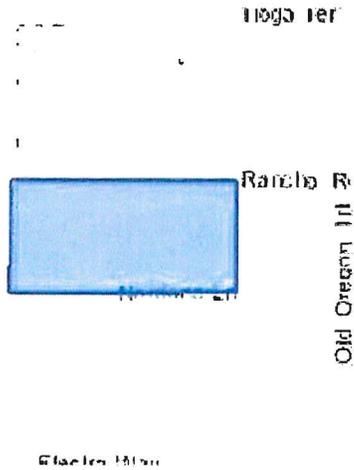
Project Name: Rancho Rd Property

Project Type: DEVELOPMENT

Project Description: Housing

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/40.53383037794664N122.30032284457363W>



Counties: Shasta, CA

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [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.

Birds

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME

STATUS

Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

Species profile: <https://ecos.fws.gov/ecp/species/7850>

Habitat assessment guidelines:

<https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf>

Crustaceans

NAME

STATUS

Conservancy Fairy Shrimp *Branchinecta conservatio*

Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.

Species profile: <https://ecos.fws.gov/ecp/species/8246>

Vernal Pool Fairy Shrimp *Branchinecta lynchi*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

Species profile: <https://ecos.fws.gov/ecp/species/498>

Vernal Pool Tadpole Shrimp *Lepidurus packardii*

Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.

Species profile: <https://ecos.fws.gov/ecp/species/2246>

Flowering Plants

NAME

STATUS

Slender Orcutt Grass *Orcuttia tenuis*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

Species profile: <https://ecos.fws.gov/ecp/species/1063>

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix B

Observed Species

Plant Species Observed within the Rancho Road Project May 23, 2018

Scientific Name	Common Name
<i>Acmispon americanus</i>	Spanish lotus
<i>Ailanthus altissima</i>	Tree-of-heaven
<i>Aira caryophylla</i>	Silver hairgrass
<i>Anthoxanthum odoratum</i>	Sweet vernal grass
<i>Arctostaphylos manzanita ssp. manzanita</i>	Big manzanita
<i>Avena barbata</i>	Wild oats
<i>Briza maxima</i>	Greater quaking-grass
<i>Bromus diandrus</i>	Rip-gut brome
<i>Bromus hordeaceus</i>	Soft chess
<i>Bromus madritensis ssp. rubens</i>	Red brome
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Castilleja attenuata</i>	Valley tassels
<i>Centaurea solstitialis</i>	Yellow star thistle
<i>Cynosurus echinatus</i>	Hedgehog dogtail
<i>Elymus caput-medusae</i>	Medusahead
<i>Elymus glaucus</i>	Blue wildrye
<i>Eriodictyon californicum</i>	Yerba santa
<i>Erodium botrys</i>	Long-beaked stork's-bill
<i>Erodium brachycarpum</i>	Foothill filaree
<i>Festuca myuros</i>	Rattail fescue
<i>Festuca perennis</i>	Rye-grass
<i>Galium parisiense</i>	Wall bedstraw
<i>Grindelia hirsutula var. davyi</i>	Foothill gumplant
<i>Hypericum perforatum</i>	Klamathweed
<i>Hypochaeris glabra</i>	Smooth cat's ear
<i>Leontodon saxatilis</i>	Hawkbit
<i>Logfia gallica</i>	Narrowleaf cottonrose
<i>Lupinus sp.</i>	Lupine
<i>Madia sp.</i>	Common madia
<i>Petrorhgia dubia</i>	Grass-pink
<i>Phytolacca americana</i>	American pokeweed
<i>Pinus sabiniana</i>	Gray pine/Foothill pine
<i>Plantago coronopus</i>	Cut-leaf plantain
<i>Quercus douglasii</i>	Blue oak
<i>Quercus lobata</i>	Valley oak
<i>Quercus wislizeni</i>	Live oak
<i>Raphanus sativus</i>	Radish
<i>Rumex crispus</i>	Curly dock
<i>Sambucus nigra ssp. caerulea</i>	Blue elderberry
<i>Silybum marianum</i>	Milk thistle
<i>Spergularia rubra</i>	Ruby sandspurry
<i>Torilis arvensis</i>	Hedge parsley
<i>Toxicodendron diversilobum</i>	Poison oak

Scientific Name	Common Name
<i>Tragopogon dubius</i>	Yellow salsify
<i>Trifolium campestre</i>	Low hop clover
<i>Trifolium dubium</i>	Shamrock clover
<i>Trifolium hirtum</i>	Rose clover
<i>Triticum aestivum</i>	Bread wheat
<i>Verbascum blattaria</i>	Moth mullein
<i>Vicia villosa</i>	Winter vetch

Wildlife Species Observed Within the Rancho Road Project BSA May 23, 2018	
Scientific Name	Common Name
Birds	
<i>Aphelocoma californica</i>	Scrub jay
<i>Calypte anna</i>	Anna's hummingbird
<i>Cathartes aura</i>	Turkey vulture
<i>Corvus corax</i>	Common raven
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Pipilo maculatus</i>	Spotted towhee
<i>Melospiza crissalis</i>	California towhee
<i>Sayornis nigricans</i>	Black phoebe
<i>Spinus psaltria</i>	Lesser goldfinch
<i>Spizella passerina</i>	Chipping sparrow
<i>Myiarchus cinerascens</i>	Ash-throated flycatcher
<i>Haemorhous mexicanus</i>	House finch
<i>Buteo lineatus</i>	Red-shouldered hawk
<i>Molothrus ater</i>	Brown-headed cowbird
<i>Streptopelia decaocto</i>	Eurasian collared dove
Mammals	
<i>Odocoileus sp.</i>	Deer
<i>Sciurus griseus</i>	Western gray squirrel
<i>Lepus californicus</i>	Jackrabbit
<i>Mephitis mephitis</i>	Striped skunk (remains observed)
Reptiles and Amphibians	
<i>Elgaria coerulea</i>	Northern alligator lizard
<i>Sceloporus occidentalis</i>	Western fence lizard
<i>Plestiodon skiltonianus</i>	Western skink

Appendix C

Site Photos Taken May 23, 2018



Overview of annual grassland habitat with elderberry shrub # 1 in background.



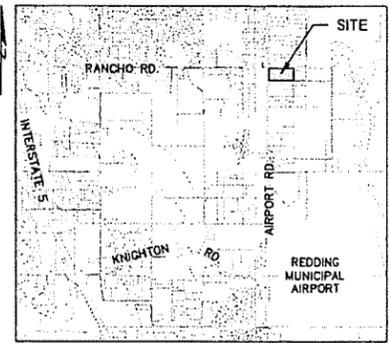
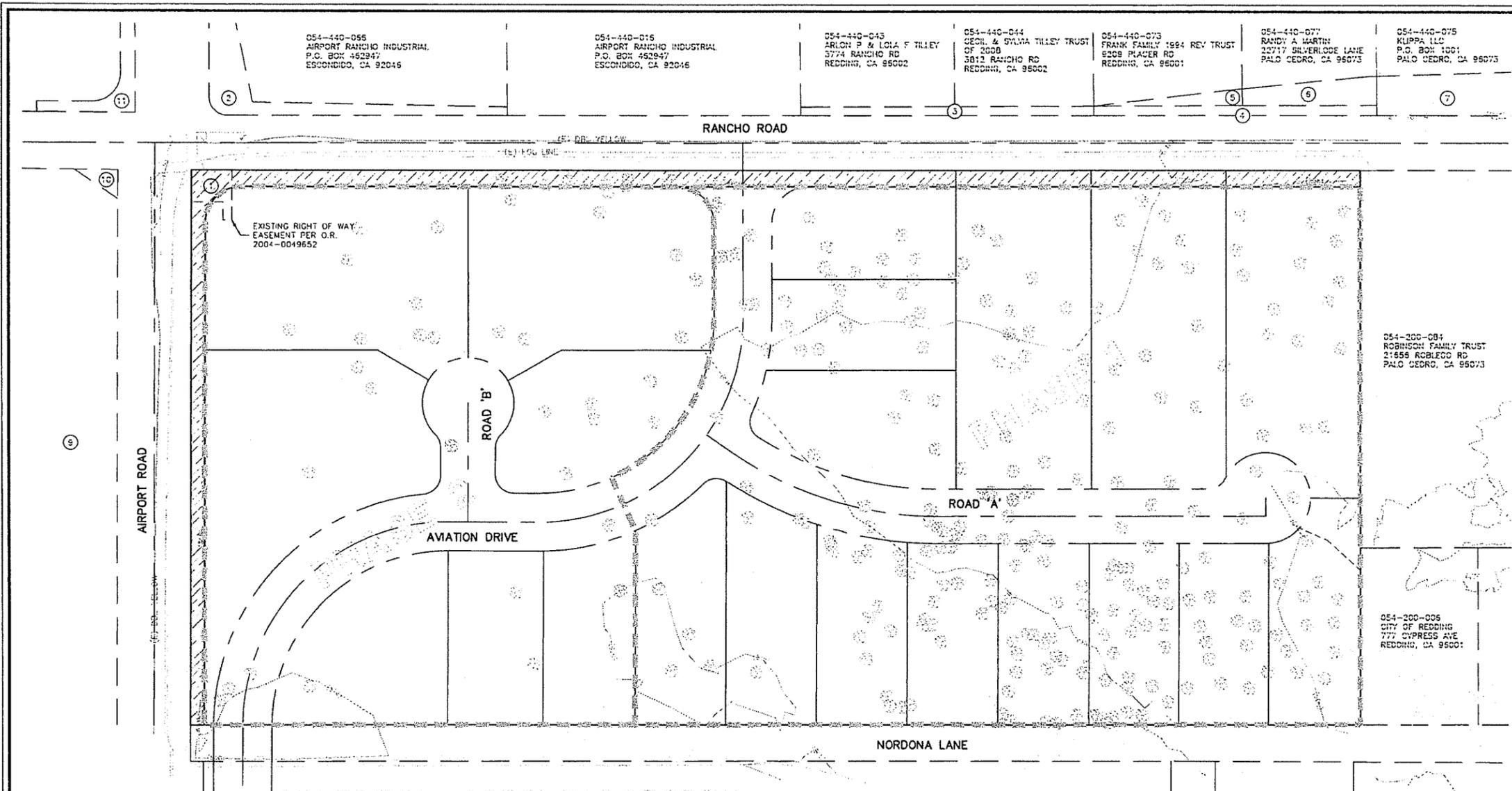
Example of mixed oak-foothill pine habitat present within the BSA.



Example of chaparral habitat present within the BSA.



Close up of elderberry shrub # 2.



SITE MAP
SCALE: NTS

CLIENT:
ALAN SHUFELBERGER
P.O. BOX 861
REDDING, CA 96099

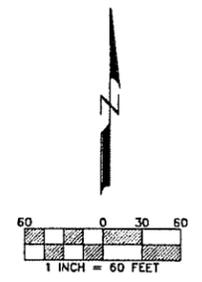
OWNER:
ALAN & SHERRY SHUFELBERGER REV TRUST
P.O. BOX 990861
REDDING, CA 96099

ENGINEER:
SHARRAH DUNLAP SAWYER, INC.
6590 LOCKHEED DRIVE
REDDING, CA 96002

SITE DATA
A.P.# 054-200-072
GENERAL PLAN: G1
ZONING: G1
EXISTING USE: VACANT
PROPOSED USE: 21 LOT INDUSTRIAL PROJECT
SITE AREA: 18.1 AC
AREA OF R.O.W. DEDICATION: 0.7 AC
(AIRPORT RD AND RANCHO RD)
NET PROJECT AREA: 17.4 AC
ELECTRICITY: CITY OF REDDING
WATER: CITY OF REDDING
SEWER: CITY OF REDDING
TELEPHONE: AT&T

LEGEND

- AREA OF RIGHT OF WAY DEDICATION
- EXISTING TREES - ALL 295 TO BE REMOVED
- PROPOSED PHASE LINE



AIRPORT & RANCHO INDUSTRIAL TENTATIVE MAP COVER SHEET
PM-2018-01476

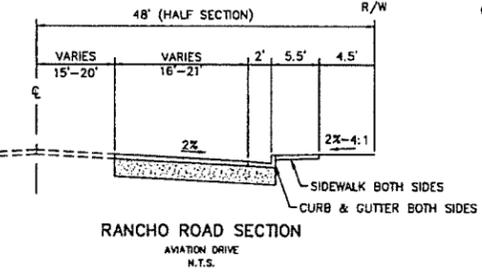
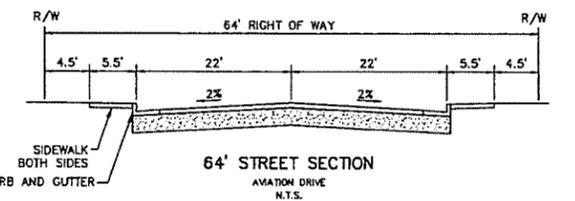
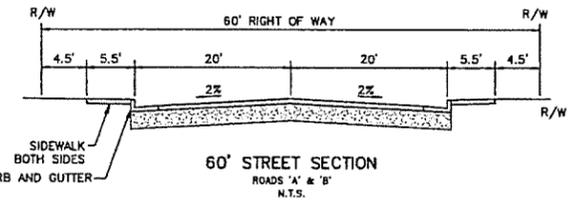
BEING A PORTION OF THE NORTHEAST 1/4 OF SEC. 22 AND THE NORTHWEST 1/4 OF SEC. 23, T. 31N., R. 4W., M.D.M., IN THE CITY OF REDDING, COUNTY OF SHASTA, CALIFORNIA

FOR
ALAN SHUFELBERGER

BY
SHARRAH DUNLAP SAWYER, INC.
Civil Engineering • Land Planning • Surveying & Mapping
Landscape Architecture • Environmental Consulting
4100 Lockwood Drive, Redding, CA 96002
970221-1991 • Fax: 970221-8363 • shdunlapengineering.com

ADJACENT PARCEL OWNERS

- 1 054-200-073
CITY OF REDDING
777 CYPRESS AVE
REDDING, CA 96001
- 2 054-440-057
CITY OF REDDING
777 CYPRESS AVE
REDDING, CA 96001
- 3 054-440-045
COUNTY OF SHASTA
1855 PLACER ST
REDDING, CA 96001
- 4 054-440-057
COUNTY OF SHASTA
1855 PLACER ST
REDDING, CA 96001
- 5 054-440-074
CITY OF REDDING
777 CYPRESS AVE
REDDING, CA 96001
- 6 054-440-078
CITY OF REDDING
777 CYPRESS AVE
REDDING, CA 96001
- 7 054-440-076
CITY OF REDDING
777 CYPRESS AVE
REDDING, CA 96001
- 8 054-200-037
E R WEISSNER
3707 ELECTRO WAY
REDDING, CA 96002
- 9 054-200-059
CURTO FAMILY TRUST
3184 PINOT PATH
REDDING, CA 96001-1300
- 10 054-200-071
CITY OF REDDING
777 CYPRESS AVE
REDDING, CA 96001
- 11 054-400-032
COUNTY OF SHASTA
1855 PLACER ST
REDDING, CA 96001



POINT TABLE	
POINT #	DESCRIPTION
10011	12IN.PINE
10012	11IN.PINE
10013	8IN.PINE
10014	FPINE 5-12/16
10015	11IN.PINE
10018	MFO 6IN.MINUS/14
10019	8IN.PINE
10020	8IN.PINE
10021	18IN.PINE
10384	11IN.OAK
10394	MULTI BRANCH OAK 7IN.MINUS 4BIN.BASE
10395	MULTI BRANCH OAK 10IN.MINUS 60IN.BASE
10408	8IN.OAK
10464	11IN.PINE
10468	FOAK 10-18/26
10473	MULTI BRANCH OAK 13IN.MINUS 42IN.BASE
10493	7IN.PINE
10497	10IN.PINE
10549	MFO 6IN.MINUS/18IN.BASE
10550	MFO 6IN.MINUS/15IN.BASE
10551	10IN.PINE
10552	FOAK 8-12/16
10553	15IN.OAK
10554	25IN.PINE
10555	6IN.OAK
10556	FOAK 7-9/14
10557	6IN.OAK
10558	9IN.PINE
10559	24IN.PINE
10560	16IN.PINE
10561	FOAK 8-8/11
10562	18IN.PINE
10563	15IN.PINE
10564	10IN.PINE
10555	20IN.PINE
10566	6IN.OAK
10567	MFO 9IN.MINUS/25
10568	FOAK 9-5/11
10569	FOAK 5-8/14
10570	6IN.PINE
10571	6IN.OAK
10572	8IN.PINE
10573	13IN.PINE
10574	6IN.PINE
10575	FOAK 6-7/17
10576	MFO 7IN.MINUS/28
10577	MFO 6IN.MINUS/20
10578	12IN.PINE
10579	15IN.PINE
10580	MFO 7IN.MINUS/22

POINT TABLE	
POINT #	DESCRIPTION
10581	MFO 14IN.MINUS/29
10582	10IN.PINE
10583	MFO 8IN.MINUS/32
10584	7IN.OAK
10585	13IN.PINE
10586	MFO 6IN.MINUS/18
10604	7IN.OAK
10610	10IN.PINE
10611	7IN.OAK
10613	8IN.PINE
10614	19IN.PINE
10617	19IN.PINE
10619	FOAK 5-8/12
10620	23IN.PINE
10624	7IN.OAK
10628	21IN.PINE
10629	FRKD PINE 12-18/34
10634	21IN.PINE
10641	8IN.OAK
10642	8IN.OAK
10643	8IN.OAK
10644	12IN.OAK
10646	9IN.PINE
10647	9IN.PINE
10648	7IN.PINE
10649	6IN.PINE
10652	9IN.OAK
10653	10IN.OAK
10654	FOAK 8-8/11
10655	FOAK 10-7/13
10656	FOAK 5-10/12
10657	10IN.PINE
10659	10IN.PINE
10660	12IN.PINE
10661	26IN.PINE
10662	7IN.OAK
10663	FOAK 7-9/12
10664	FOAK 8-8/18
10665	7IN.PINE
10666	MFO 8IN.MINUS/15
10667	10IN.PINE
10668	10IN.PINE
10669	7IN.PINE
10670	7IN.PINE
10671	8IN.PINE
10672	7IN.PINE
10673	6IN.PINE
10674	7IN.PINE
10675	7IN.PINE
10676	6IN.PINE

POINT TABLE	
POINT #	DESCRIPTION
10677	9IN.OAK
10678	11IN.PINE
10679	FOAK 7-10/11
10680	16IN.PINE
10681	13IN.PINE
10682	22IN.PINE
10684	20IN.PINE
10685	24IN.PINE
10686	16IN.PINE
10687	7IN.OAK
10688	7IN.PINE
10689	7IN.PINE
10690	8IN.PINE
10691	12IN.PINE
10692	7IN.PINE
10693	FRKD PINE 16-21/39
10694	MFO 6IN.MINUS/12
10695	MFO 6IN.MINUS/10
10696	8IN.PINE
10697	18IN.PINE
10698	MFO 7IN.MINUS/12
10699	MFO 8IN.MINUS/13
10700	12IN.PINE
10701	16IN.PINE
10702	17IN.PINE
10703	15IN.PINE
10704	12IN.PINE
10705	FOAK 6-9/10
10706	FOAK 6-9/17
10708	7IN.PINE
10709	6IN.PINE
10710	8IN.PINE
10711	8IN.PINE
10712	6IN.PINE
10713	8IN.PINE
10714	7IN.PINE
10720	MFO 9IN.MINUS/16
10721	14IN.PINE
10722	15IN.PINE
10723	21IN.PINE
10724	12IN.PINE
10725	13IN.PINE
10726	13IN.PINE
10727	10IN.PINE
10728	12IN.PINE
10729	24IN.PINE
10730	7IN.OAK
10733	11IN.OAK
10734	18IN.PINE
10735	14IN.PINE

POINT TABLE	
POINT #	DESCRIPTION
10736	27IN.PINE
10737	13IN.PINE
10738	16IN.PINE
10739	FOAK 4-6/9
10740	FOAK 4-7/8
10741	16IN.PINE
10742	7IN.OAK
10743	9IN.OAK
10744	7IN.OAK
10745	9IN.OAK
10746	22IN.PINE
10747	29IN.PINE
10748	10IN.PINE
10749	6IN.OAK
10750	7IN.OAK
10751	16IN.PINE
10752	9IN.PINE
10753	20IN.PINE
10754	23IN.PINE
10755	FOAK 3-6/8
10756	12IN.PINE
10757	11IN.PINE
10758	16IN.PINE
10759	12IN.PINE
10760	13IN.PINE
10761	14IN.PINE
10762	9IN.PINE
10763	13IN.PINE
10764	14IN.PINE
10800	7" PINE
10801	12" OAK
10802	9" OAK
10803	12" OAK
10804	15" OAK
10805	23" OAK
10806	15" OAK
10807	5" OAK
10808	18" OAK
10809	10" OAK
10810	7" OAK
10811	8" OAK
10812	12" OAK
10813	15" OAK
10814	15" OAK
10815	12" OAK
10816	12" OAK
10817	15" OAK
10818	12" OAK
10819	12" OAK
10820	15" OAK

POINT TABLE	
POINT #	DESCRIPTION
10821	MFO 16IN.MINUS/31
10822	15" OAK
10823	18" OAK
10824	MFO 14IN.MINUS/48
10825	18" OAK
10826	15" OAK
10827	12" OAK
10828	15" OAK
10829	12" OAK
10830	12" OAK
10831	18" OAK
10832	15" OAK
10833	12" OAK
10834	10" OAK
10835	15" OAK
10836	30" PINE
10837	15" OAK
10838	12" OAK
10839	12" OAK
10840	15" OAK
10841	18" OAK
10842	15" OAK
10843	18" OAK
10844	18" OAK
10845	18" OAK
10846	12" OAK
10847	15" OAK
10848	15" OAK
10849	18" PINE
10850	12" PINE
10851	20" PINE
10852	15" PINE
10853	28" PINE
10854	MFO 9IN.MINUS/16
10855	12" PINE
10856	27" PINE
10857	22" PINE
10858	20" PINE
10859	24" PINE
10860	18" PINE
10861	20" PINE
10862	18" PINE
10863	26" PINE
10864	15" PINE
10865	20" PINE
10866	20" PINE
10867	33" PINE
10868	15" PINE
10869	24" PINE
10870	12" PINE

POINT TABLE	
POINT #	DESCRIPTION
10871	20" PINE
10872	12" PINE
10873	18" PINE
10874	26" PINE
10875	17" PINE
10876	16" PINE
10877	15" PINE
10878	12" PINE
10879	24" PINE
10880	27" PINE
10881	23" PINE
10882	15" PINE
10883	12" PINE
10884	18" PINE
10885	15" PINE
10886	20" PINE
10887	18" PINE
10888	23" PINE
10889	22" PINE
10890	20" PINE
10891	27" PINE
10892	18" PINE
10893	28" PINE
10894	20" PINE
10895	22" PINE
10896	20" PINE
10897	24" PINE
10898	24" PINE
10899	11" PINE
10900	12" PINE
10901	18" PINE
10902	28" PINE
10903	10" PINE
10904	20" PINE
10905	53" PINE
10906	13" PINE
10907	20" PINE
10908	15" PINE
10909	13" PINE
10910	22" PINE
10911	12" PINE
10912	14" PINE
10913	15" PINE
10914	20" PINE
10915	22" PINE

**AIRPORT & RANCHO
TREE DATA
PM-2018-01476**

BEING A PORTION OF THE NORTHEAST
1/4 OF SEC. 22 AND THE NORTHWEST 1/4
OF SEC. 23, T. 31N., R. 4W., M.D.M.,
IN THE CITY OF REDDING, COUNTY OF
SHASTA, CALIFORNIA

FOR

ALAN SHUFELBERGER

BY

SHARRAH DUNLAP SAWYER, INC.



Civil Engineering - Land Planning & Surveying & Mapping
Landscape Architecture - Plant Material Credits
4709 Leeward Drive, Redding, CA 96001
253-221-1142 www.sdsai.com