

**PRELIMINARY BIOLOGICAL RESOURCES REPORT
2514 BLUCHER VALLEY ROAD
SONOMA COUNTY, CALIFORNIA**



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TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 Purpose of this Preliminary Biological Resources Report	1
1.2 Location	2
1.3 Project Description	2
2.0 REGULATORY SETTING	3
2.1 Federal Regulations	3
2.2 State Regulations	6
2.3 Local Policies	10
2.4 Other	11
3.0 METHODS	13
3.1 Definitions	13
3.1.1 Special Status Species	13
3.1.2 Sensitive Natural Communities	13
3.2 Desktop Review	13
3.3 Field Surveys	14
3.4 Potential Special Status Species Presence Assessment	15
4.0 RESULTS	17
4.1 Land Use	17
4.2 Climate	17
4.3 Topography and Soils	17
4.4 Hydrology	18
4.5 Plant Communities	18
4.6 Animal Populations	21
4.7 Wetlands	23
4.8 Special Status Species	24
4.8.1 Special Status Plants	24
4.8.2 Special Status Animals	25
4.8.3 Sensitive Natural Communities	30
4.9 Wildlife Movement/Corridors	31
4.10 Critical Habitat	31
5.0 PROJECT IMPACTS AND MITIGATION MEASURES	32
5.1 Standards of Significance	32
5.2 Special Status Species	33
5.2.1 Special Status Plant Species	33

5.2.2	Special Status Animal Species	34
5.3	Sensitive Natural Communities and Wetlands	37
5.4	Animal Populations	38
5.5	Compliance with Local Policies	42
5.6	Compliance with Conservation Plans	42
6.0	REFERENCES.....	43

LIST OF APPENDICES

APPENDIX A. FIGURES

Figure 1.	Review Area Location
Figure 2.	USGS Topographic Map of the Review Area
Figure 3.	Aerial Image of the Review Area
Figure 4.	Vegetation Map
Figure 5.	NRCS Soils Map
Figure 6.	FEMA Flood Zone Mapping
Figure 7.	Potential Biological and Regulatory Constraints Map

APPENDIX B. BIOLOGICAL SPECIES TABLES

Table 1.	Vascular Plant Species Observed in the Review Area During 2023, 2024, and 2025 Plant Surveys
Table 2.	Special Status Plants with Potential to Occur within a 10-Mile Radius of the Review Area, Sonoma County, California
Table 3.	Special Status Animal Species that Have Been Reported within a 10-Mile Radius of the Review Area, Sonoma County, California

APPENDIX C. IPaC INFORMATION

This report should be cited as: Huffman-Broadway Group, Inc. 2025. *Preliminary Biological Resources Report, 2514 Blucher Valley Road, Sonoma County, California*. San Rafael, California. 48 pp. plus appendices. Prepared for Josh Malgieri. August 2025 Update.

1.0 INTRODUCTION

1.1 Purpose of this Preliminary Biological Resources Report

At the request of Josh Malgieri, Huffman-Broadway Group, Inc. (HBG) prepared a Preliminary Biological Resources Assessment related to the potential planned land division of a 10-acre property (Review Area) near Sebastopol in Sonoma County, California. The land division consists of a minor subdivision of a single approximately 10-acre parcel into two separate approximately 5-acre parcels, with the possibility of the development of a new single-family residence on the new parcel.

The purpose of this Biological Resources Report is to: (1) assess the Review Area for the potential occurrence of special-status plant and animal species and their habitats and sensitive natural communities, (2) analyze the potential for substantial adverse project effects to special-status species and sensitive natural communities following the *California Environmental Quality Act (CEQA) Checklist* questions regarding biological resources, and (3) provide mitigation recommendations based on a review of existing literature, the results of the site reconnaissance, a preliminary review of the boundaries of potentially regulated aquatic resources, pedestrian wildlife and botanical surveys, and an evaluation of the impacts of the proposed future development within the proposed project development area or Building Envelope (BLD).

HBG's analysis included: (1) a review of the habitat characteristics of the site and species of plants and animals expected to utilize the site; (2) review of the California Natural Diversity Data Base (CNDDB) to determine if any populations of endangered, threatened, or rare species have occurred historically or are currently known to exist in the Review Area; (3) field surveys of the site by HBG biologists, and (4) an evaluation of whether the proposed project has the potential to result in impacts to sensitive habitats or special status species within the BLD or adjacent areas.

A preliminary biotic assessment was prepared by HBG for the 10-acre property dated July 13, 2023, and submitted to the Sonoma County Permit and Resource Management Department, who requested that a more detailed Biological Resources Report be prepared. This more detailed report is based on updated literature review and additional field studies and contains a preliminary analysis of impacts and recommended measures to mitigate any potentially significant biological impacts. Subsequently, additional detail was requested by the County, which has been included within this updated report.

Based on this more detailed evaluation, we find that the proposed land division and minor subdivision could be accomplished without causing significant biological impacts, as the location of a building envelope for a new single-family residence within the new 5-acre parcel would not encroach within biological constraints identified herein regarding setbacks from riparian corridors and intermittent streams. In addition, mitigation measures are recommended herein and would be implemented to address potentially significant impacts to nesting birds protected by the Migratory Bird Treaty Act and California Fish and Game Code and potential impacts to special status animal species. A preconstruction survey is required as a mitigation measure to determine the presence or absence of nesting birds (if construction occurs during the breeding season) and for the following special status species: western bumble bee, California red-legged frog, northwestern pond turtle, burrowing owl, and American badger.

1.2 Location

The 10-acre Review Area is at 2514 Blucher Valley Road in Sonoma County, California, on unincorporated lands southwest of the City of Sebastopol (Appendix A, Figures 1 - 3). The approximate center point of the Review Area is at Latitude 38.350349° north and Longitude 122.831317° west and is within Assessor's Parcel Number (APN) 025-011-038. The regional location of the Review Area is shown in Appendix A, Figure 1. Appendix A, Figure 2 shows the location of the site on the Two Rock 7.5-minute USGS quadrangle map. Appendix A, Figure 3 shows an aerial photo of the Review Area and the surrounding area.

1.3 Project Description

Owners of the 10-acre property at 2514 Blucher Valley Road near the City of Sebastopol in Sonoma County have proposed a land division consisting of a minor subdivision of a single approximately 10-acre parcel into two parcels (aka Review Area). The land division consists of a minor subdivision of a single approximately 10-acre parcel into two separate approximately 5-acre parcels, with the possibility of the development of a new single-family residence on the new parcel (aka BLD). Given geotechnical and biological constraints and the necessity of avoiding the southeastern portion of the parcel where prior landsliding is an issue and the northwestern portion of the parcel where an unnamed stream traverses the property, the property owner proposes that the new single-family residence be constructed on the new lot within the southwest portion of the site where there would be total avoidance of biological constraints (BLD) (Appendix A, Figure 7).

2.0 REGULATORY SETTING

The following is a description of relevant federal, state, and local environmental regulations and policies designed to protect sensitive plants and animals, their habitats, and sensitive natural communities that may impact development planning and ultimate project approval.

2.1 Federal Regulations

Clean Water Act - Section 404. The U.S. Army Corps of Engineers (USACE or Corps) regulates discharges of dredged or fill material into Waters of the United States under Section 404 of the Clean Water Act (CWA). “Discharge of fill material” is defined as the addition of fill material into Waters of the U.S., including but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 C.F.R. §328.2(f)). In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

The USACE and the U.S. Environmental Protection Agency (US EPA) are responsible for implementing the Section 404 program. Section 404(a) authorizes the Corps to issue permits, after notice and opportunity for comment, for discharges of dredged or fill material into Waters of the United States (WOTUS). Section 404(b) requires that the Corps issue permits in compliance with EPA guidelines, known as the Section 404(b)(1) Guidelines. Specifically, Section 404(b)(1) guidelines require that the Corps only authorize the “least environmentally damaging practicable alternative” (LEDPA) and include all practicable measures to avoid and minimize impacts to the aquatic ecosystem. The guidelines also prohibit discharges that would cause significant degradation of the aquatic environment or violate state water quality standards.

Waters of the U.S. include both wetlands and “other Waters of the U.S.” Wetlands and other Waters of the U.S. are described by US EPA and Corps regulations (40 CFR § 230.3(s) and 33 CFR § 328.3(a), respectively). US EPA and the Corps define wetlands as “...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” (US EPA regulations at 40 CFR § 230.3(t); Corps’ regulations at 33 CFR § 328.3(b)). Both natural and manmade wetlands and other waters (not vegetated by a dominance of rooted emergent vegetation) are subject to regulation. Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows.

The geographic extent of wetlands is defined by the collective presence of a dominance of wetland vegetation, wetland hydrology conditions, and wetland soil conditions as determined following the Corps’ 1987 Wetlands Delineation Manual (1987 Manual); the Corps’ 2008 Regional Supplement to Corps of Engineers Wetland Delineation Manual: Arid West, Version 2.0 (Arid West Regional Supplement); and supporting guidance documents. The geographic extent of other Waters of the U.S.

is defined by an ordinary high-water mark (OHWM) in non-tidal waters (33 CFR. §328.3(e)) and by the High Tide Line within tidal waters (33 CFR. §328.3(d)). The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 C.F.R. §328.3(e)). Tidal waters are also under the jurisdiction of the Corps. The landward limits of jurisdiction in tidal waters extend to the high tide line... “or, when adjacent non-tidal Waters of the United States are present, to the limits of jurisdiction for such non-tidal waters” (33 C.F.R. §328.4(b)) High tide is further defined to include the line reached by spring high tides and other high tides that occur with periodic frequency (33 C.F.R. §328.3(d)).

Clean Water Act - NPDES Requirements. In 1972, the Clean Water Act was amended to provide that the discharge of pollutants to Waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollution Discharge Elimination System (NPDES) permit. The 1987 amendments established a framework for regulating municipal, industrial, and construction-related stormwater discharges under the NPDES Program. On November 16, 1990, the US EPA published final regulations that establish stormwater permit application requirements for specified categories of industries. The regulations provide that discharges of stormwater from construction projects that encompass one or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit.

The California State Water Resource Control Board has developed a general construction stormwater permit to implement the requirements for the federal NPDES permit. The permit requires submittal of a Notice of Intent to comply, fees, and the implementation of a Storm Water Pollution Prevention Plan that specifies Best Management Practices (BMPs) that will prevent construction pollutants from entering stormwater and keep products of erosion from migrating off-site into downstream receiving waters. The Construction General Permit includes post-construction requirements that site design provides no increase in overall site runoff or the concentration of drainage pollutants and requires implementation of Low Impact Development (“LID”) design features. The Construction General Permit is implemented and enforced by California’s nine Regional Water Quality Control Boards (Water Boards).

The Water Boards have also adopted requirements for NPDES stormwater permits for medium and large municipalities, and the State Water Resources Control Board (Water Board) has adopted a General Permit for the discharge of stormwater from small municipal storm sewer systems. This General Permit requires projects to develop and implement a post-construction Storm Water Management Plan (SWMP) to reduce the discharge of pollutants to the maximum extent practicable.

Federal Endangered Species Act. The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA 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. The FESA establishes an official listing process for plants and animals considered to be in danger of extinction, requires development of specific plans of action for the recovery of listed species, and restricts activities perceived to harm or kill listed species or affect critical habitat (16 USC 1532, 1536).

The FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3). Taking can result in civil or criminal penalties. Federal regulation 50 CFR 17.3 further defines the term “harm” in the take definition to mean any act that actually kills or injures a federally listed species, including significant habitat modification or degradation. Additionally, FESA prohibits the destruction or adverse modification of designated critical habitat. In the Service’s regulations at 50 CFR 402.2, destruction or adverse modification is defined as a “direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species.

Critical Habitat is defined in Section 3 of ESA as: 1) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and 2) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features essential to the conservation of the species (16 USC 1533). Critical Habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements). Primary constituent elements are the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following: 1) space for individual and population growth and for normal behavior, 2) food, water, air, light, minerals, or other nutritional or physiological requirements. 3) cover or shelter, 4) sites for breeding, reproduction, or rearing (or development) of offspring, and 5) habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.

The ESA also requires federal agencies to ensure that their actions do not jeopardize the continued existence of listed species or adversely modify critical habitat (16 USC 1536). Therefore, the ESA is invoked when the property contains a federally listed threatened or endangered species that may be affected by a permit decision. If listed species are involved and a Corps permit is required for impacts to jurisdictional waters, the Corps must initiate consultation with US Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service, (NMFS) pursuant to Section 7 of the ESA (16 USC 1536; 40 CFR § 402). If formal consultation is required, USFWS or NMFS will issue a biological opinion stating whether the permit action is likely to jeopardize the continued existence of the listed species, recommending reasonable and prudent measures to ensure the continued existence of the species, establishing terms and conditions under which the project may proceed, and authorizing incidental take of the species.

For discretionary permit actions by non-federal entities, Section 10 of the ESA provides a mechanism for obtaining take authorization through submittal and approval of a Habitat Conservation Plan that

details species impacts, measures to minimize or mitigate such impacts, and funding mechanisms to implement mitigation requirements.

U.S. Fish and Wildlife Service Birds of Conservation Concern. The 1988 amendment to the Fish and Wildlife Conservation Act mandates USFWS “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA.” To meet this requirement, USFWS published a list of Birds of Conservation Concern (BCC) (USFWS 2008) for the United States. The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS’ highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) implements international treaties devised to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The regulations governing migratory bird permits are in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. Most bird species within California fall under the provisions of the Act. Excluded species include nonnative species such as house sparrow, starling, and ring-necked pheasant and native game species such as quail.

Fish and Wildlife Coordination Act. The USFWS also has responsibility for project review under the Fish and Wildlife Coordination Act. This statute requires that all federal agencies consult with USFWS, NMFS, and the state’s wildlife agency (California Department of Fish and Wildlife, CDFW) for activities that affect, control, or modify streams and other water bodies. Under the authority of the Fish and Wildlife Coordination Act, USFWS, NMFS, and CDFW review applications for permits issued under Section 404 and provide comments to the Corps about potential environmental impacts.

2.2 State Regulations

Section 401 of the Federal Clean Water Act/Porter Cologne Water Quality Control Act. Pursuant to section 401 of the federal Clean Water Act, projects that require a Corps permit for the discharge of dredge or fill material must obtain water quality certification that confirms a project complies with state water quality standards before the Corps permit is valid. State water quality is regulated/administered by the Water Board and its nine Regional Water Quality Control Boards (Water Boards). A water quality certification from a Water Board must be consistent with not only the Clean Water Act, but with the California Environmental Quality Act (CEQA), the California Endangered Species Act (CESA), and the SWRCB’s requirement to protect beneficial uses of waters of the State.

The State also maintains independent regulatory authority over the placement of waste, including fill, into waters of the State under the Porter-Cologne Water Quality Control Act. Waters of the State are defined more broadly than “waters of the US” to mean “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code section 13050(e)). Examples include, but are not limited to, rivers, streams, lakes, bays, marshes, mudflats, unvegetated seasonally ponded areas, drainage swales, sloughs, wet meadows, natural ponds, vernal pools, diked baylands, seasonal wetlands, and riparian woodlands. Waters of the State include all waters within the state’s boundaries, whether private or public, including waters in both natural and artificial channels. They include all

“Waters of the United States”, and all surface waters that are not “Waters of the United States, e.g., non-jurisdictional wetlands, groundwater, and the territorial seas.

The Water Board’s State Wetland Definition and Procedures for Discharges of Dredge or Fill Material to Waters of the State adopted April 2, 2019 (the Procedures) along with the Implementation Guidance for the Procedures dated April 2020 (the Implementation Guidance) defines a wetland as an area that under normal circumstances, (1) has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation. The Procedures, along with the Implementation Guidance, state that the permitting authority (e.g. State Water Quality Control Board or Regional Water Quality Control Boards) shall rely on any wetland area delineation from a final aquatic resource report verified by the Corps. If the Corps does not require an aquatic resource delineation report, an applicant must submit a delineation of all waters to Water Board staff during application review.

The Procedures, along with the Interim Guidance, also include procedures for the submission, review, and approval of applications for activities that could result in the discharge of dredged or fill material to any Waters of the State and include elements of the Clean Water Act Section 404(b)(1) Alternatives Analysis Guidelines, thereby bringing uniformity to SWCQB’s regulation of discharges of dredged or fill material to all waters of the state. Typically, the Corps requires a Clean Water Act 404(b)(1) Alternatives Analysis for wetland impacts greater than 0.50 acres. The Procedures require an Alternatives Analysis to be completed in accordance with a three-tier system. The level of effort required for an alternatives analysis within each of the three tiers shall be commensurate with the significance of the impacts resulting from the discharge.

The California State Water Resource Control Board has also developed a general construction stormwater permit to implement the requirements of the federal National Pollution Discharge Elimination System (NPDES) permit. Projects approved by a Water Board must, therefore, include the preconstruction requirement for a Stormwater Pollution Prevention Plan and the post-construction requirement for a Stormwater Management Plan.

California Endangered Species Act. The State of California enacted the California Endangered Species Act (CESA) in 1984. The CESA is similar to the FESA but pertains to state listed endangered and threatened species. CESA requires state agencies to consult with the CDFW when preparing CEQA documents to ensure that the state lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that “overriding considerations” exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

The CESA generally prohibits the taking of state listed endangered or threatened plant and wildlife species, however, for projects resulting in impacts to state listed species, CDFW may authorize take

through issuance of an Incidental Take Permit (ITP) pursuant to Section 2081 of the California Fish and Game Code. Section 2081 requires that such projects implement an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy. CDFW requires preparation of mitigation plans in accordance with published guidelines that require, among other things, measures to fully mitigate impacts to State listed species. CDFW exercises authority over mitigation projects involving state listed species, including those resulting from CEQA mitigation requirements. No authorization of take under Section 2081 is permitted for species listed in state statutes as Fully Protected Species. Where Fully Protected Species are involved, projects must be designed to avoid all take of the species. CDFW cannot issue an ITP until the CEQA Lead Agency has provided documentation in the form of a Notice of Determination that the project has complied with CEQA.

California Department of Fish and Wildlife - Lake and Streambed Alteration Agreement. Section 1602 of the California Fish and Game Code requires any person, governmental agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel or bank of any river, stream, or lake, or proposing to use any material from a streambed, to first notify CDFW of such proposed activity. Based on the information contained in the notification form and a possible field inspection, CDFW may propose reasonable modifications in the proposed construction as would allow for the protection of fish and wildlife resources. Upon request, the parties may meet to discuss the modifications. If the parties cannot agree and execute a Lake and Streambed Alteration Agreement, then the matter may be referred to arbitration. CDFW cannot issue a Streambed Alteration Agreement until the CEQA Lead Agency has provided documentation in the form of a Notice of Determination that the project has complied with CEQA.

CDFW's regulations implementing the Fish and Game Code define the relevant rivers, streams, and lakes over which the agency has jurisdiction to constitute "all rivers, streams, lakes, and streambeds in the State of California, including all rivers, streams and streambeds which have intermittent flows of water." (Title 14 *California Code of Regulations* [CCR] § 720). The CDFW takes jurisdiction under its Lake and Streambed Alteration Agreement Program for any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. CDFW does not have a methodology for the identification and delineation of the jurisdictional limits of streams except for the general guidance provided in *A Field Guide to Lake and Streambed Alteration Agreements, Section 1600-1607 California Fish and Game Code* (CDFG 1994). In making jurisdictional determinations, CDFW staff typically rely on field observation of physical features that provide evidence of water flow through a bed and channel such as observed flowing water, sediment deposits and drift deposits and that the stream supports fish or other aquatic life. Riparian habitat is not specifically defined by the Fish and Game Code, but CDFW takes jurisdiction over areas within the flood plain of a body of water where the vegetation (grass, sedges, rushes, forbs, shrubs, and trees) is supported by the surface or subsurface flow.

California Fish and Game Code Special Protections for Birds. In addition to protections contained within the California ESA and California Fish and Game Code § 3511 described above, the California Fish and Game Code includes a number of sections that specifically protect certain birds.

- Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.
- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests.
- Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic nonnative species, or any part of these birds.
- Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

California Department of Fish and Wildlife - Fish and Game Code Section 4150. Bats and other non-game mammals are protected in California. Section 4150 of the Fish and Game Code states that all non-game mammals or parts thereof may not be taken or possessed except as otherwise provided in the code or in accordance with regulations adopted by the Fish and Game Commission. Thus, destruction of an occupied, nonbreeding, bat roost, resulting in the death of bats, or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), is prohibited.

California Department of Fish and Wildlife - Sensitive Plant Communities. CDFW has designated special status natural communities which are considered rare in the region, rank as threatened or very threatened, support special status species, or otherwise receive some form of regulatory protection. Sensitive plant communities are those natural plant communities identified in local or regional plans, policies, ordinances, regulations, or by the CDFW which provide special functions or values. Documentation pertaining to these communities and special status species (including species of special concern) is kept by CDFW as part of the California Natural Diversity Data Base (CNDDB). All known occurrences of sensitive habitats are mapped onto 7.5-minute US Geological Survey (USGS) topographic quadrangle maps maintained by the CNDDB. Sensitive plant communities are also identified by CDFW on their List of California Natural Communities Recognized by the CNDDB. Impacts to sensitive natural communities must be considered and evaluated under CEQA.

California Department of Fish and Wildlife - Species of Special Concern. CDFW tracks species in California whose numbers, reproductive success, or habitat may be threatened. Species that may be considered for review are included on a list of “Species of Special Concern” developed by the CDFW. Even though these species may not be formally listed under FESA or CESA, such plant and wildlife species must be evaluated during the CEQA review of development projects, and mitigation should be developed to prevent significant impacts to such species.

California Department of Fish and Wildlife - Fully Protected Animal Species. The classification of Fully Protected was an effort by the State of California in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Most Fully Protected species

have also been listed as threatened or endangered species under state endangered species laws and regulations. Species classified as Fully Protected Species by the CDFW may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock (as per California Fish and Game Code Section 3511(a)(1)).

Native Plant Protection Act. The NPPA of 1977 (California Fish and Game Code §§ 1900-1913) was established with the intent to “preserve, protect and enhance rare and endangered plants in this state.” The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as “endangered” or “rare”. The NPPA prohibits the take of plants listed under the NPPA, but the NPPA contains exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the California ESA brought under its protection all plants previously listed as endangered under NPPA. Plants listed as rare under NPPA are not protected under the California ESA but are still protected under the provisions of NPPA. The Fish and Game Commission no longer lists plants under NPPA, reserving all listings to the California ESA.

2.3 Local Policies

Sonoma County

The Sonoma County General Plan includes the following biological resources protections:

Stream Setbacks for Structures (SCC §7-14.5): All structures requiring a building permit or an agricultural exemption shall be set back from streams, as measured from the toe of the stream bank outward, a distance of 2.5 times the height of the stream bank plus 30 feet, or 30 feet outward from the top of the stream bank, whichever distance is greater, unless a greater distance is established in the General Plan, Local Coastal Plan, and/or Zoning Code. If the top of the stream bank cannot be determined by visual analysis, it shall be determined by hydraulic analysis as the water surface elevation for the 100-year storm event plus 1.5 feet. Stream bank height is the change in elevation from the top of bank and the lowest toe of bank.

Stream Setbacks for Riparian Corridors (SCC §26.65.030): The Riparian Corridor (RC) combining zone includes the stream bed, bank, and adjacent streamside conservation area on each side of a designated stream as measured from the top of the higher bank. Land uses and development, including grading, vegetation removal, agricultural cultivation, structures, roads, utility lines, and parking lots, is prohibited within the Riparian Corridor, except as allowed by SCC §26.65.030 and 26.65.040. The minimum setback for development and agricultural cultivation is indicated by the zoning for each property. For example, a parcel zoned “RC 100/50” indicates that there is a 100-foot setback for development and a 50-foot setback for agricultural cultivation.

Stream Setbacks for Septic Systems and Water Wells:

1. Stream Setbacks for Septic Systems (Sonoma County Onsite Wastewater Treatment Systems Regulations and Technical Standards). Septic systems shall be set back 50 feet from the top of ephemeral stream banks and 100 feet from the top of perennial stream banks.

2. Stream Setbacks for Water Wells (SSC §25B-6.b). Wells shall be set back 30 feet from the top of stream banks.

Stream and Water Feature Setbacks for Grading Work:

1. Stream Setbacks for Grading Work (SCC §11.14.100). Grading work and land disturbance shall be set back 25 feet from top of stream banks, unless a greater setback is required by general plan, local coastal plan, or zoning code.
2. Setbacks for Grading Work near Lakes, Ponds, and Reservoirs (SCC §11.14.090). Grading work and land disturbance shall be set back 50 feet from the high water mark of lakes, ponds, and reservoirs, unless a greater setback is required by general plan, local coastal plan, or zoning code.
3. Setbacks for Grading Work near Wetlands (SCC §11.14.110). Grading work and land disturbance shall be set back from wetlands in compliance with the county's requirements, unless a greater setback is required by general plan, local coastal plan, or zoning code. These setback requirements shall not apply where all necessary state and federal permits, approvals, authorizations to fill wetlands have been obtained.
 - *Wetlands designated in zoning code* - a setback totaling 100 feet from the delineated wetland boundary is required.
 - *All other wetlands* - a setback totaling 50 feet from the assessed wetland boundary is required, unless the wetland assessment recommends a greater or lesser setback.

Existing vegetation shall be retained in setback areas to filter soil and other pollutants carried in stormwater. Vegetative filter strips may be installed in setback areas in compliance with Sonoma County's best management practices guide to enhance filtration.

Sec. 26-88-015 Tree Protection Ordinance: The intent of this ordinance is to: a. Support essential community and ecosystem functions of trees by requiring their protection and requiring mitigations for their removal; and b. Facilitate hazard reduction, forest health, and property maintenance by exempting qualifying activities from permits or mitigations.

2.4 Other

California Native Plant Society

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2024:

<https://www.cnps.org/cnps/rareplants/inventory/>).

Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review, especially for those plant species included in California Rare Plant Ranks 1 and 2 (see below).

CNPS Rank	Status
California Rare Plant Rank 1A	Plants presumed extirpated in California and either rare or extinct elsewhere.
California Rare Plant Rank 1B	Plants rare, threatened, or endangered in California and elsewhere.
California Rare Plant Rank 2A	Plants presumed extirpated in California, but more common elsewhere.
California Rare Plant Rank 2B	Plants rare, threatened, or endangered in California, but more numerous elsewhere.
California Rare Plant Rank 3	Plants about which more information is needed – a review list.
California Rare Plant Rank 4	Plants of limited distribution – a watch list.
<i>Threat Code Extensions</i>	
.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2	Moderately threatened in California (20-80% of occurrences threatened / moderate degree and immediacy of threat)
.3	Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

The following link identifies the definitions of the CNPS listings:

<https://www.cnps.org/cnps/rareplants/ranking.php>

3.0 METHODS

Both desktop and field surveys were conducted. The following describes how special status species and sensitive natural communities are defined, and methods used to assess their potential to be present in the Review Area.

3.1 Definitions

3.1.1 *Special Status Species*

CEQA requires that impacts to special status species be considered and evaluated under CEQA. Special status species include plants or animals that:

1. are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA).
2. are listed or are candidates for future listing as threatened or endangered under the California ESA.
3. meet the definitions of endangered or rare under § 15380 of the CEQA Guidelines.
4. are plants listed as rare under the California Native Plant Protection Act (NPPA) (California Fish and Game Code, § 1900 et seq.).
5. are considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California", "plants about which more information is needed", or "plants of limited distribution – a watch list" (i.e., species with a California Rare Plant Rank [CRPR] of 1B, 2, 3, or 4).
6. are fully protected in California in accordance with the California Fish and Game Code, §§ 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).
7. are identified as a species of special concern (SSC) by the California Department of Fish and Wildlife (CDFW).
8. are birds identified as birds of conservation concern (BCC) by the U.S. Fish and Wildlife Service (USFWS).

3.1.2 *Sensitive Natural Communities*

CEQA requires that impacts to sensitive natural communities be considered and evaluated under CEQA. Sensitive natural communities are plant communities that CDFW designates as sensitive, which are either considered rare in the region, rank as threatened or very threatened, support special status species, or otherwise receive some form of regulatory protection. Sensitive plant communities also include those plant communities identified in local or regional plans, policies, ordinances, regulations, or by CDFW as those communities that provide special functions or values. CDFW identifies sensitive plant communities on their *List of California Natural Communities* and records their mapped presence as part of the information documented within the CNDDDB. The mapped information in the CNDDDB provides a general location of sensitive plant communities and sensitive natural community types.

3.2 Desktop Review

The following information sources were reviewed to develop relevant environmental and biological information for determining special status species, critical habitat, and sensitive natural communities that had been previously documented on or within a 10-mile vicinity of the Review Area:

- Aerial imagery available online from Google Earth Pro
- Watershed mapping National Hydrography Dataset (NHD) HUC 8 and HUC 12 available online from the US Geological Survey (USGS)
- National Wetlands Inventory mapping available online from the US Fish and Wildlife Service (USFWS)
- Custom Soil Resources Report available online from Natural Resources Conservation Service (NRCS)
- Flood Insurance Rate Map available online from the Federal Emergency Management Agency (FEMA)
- 1:24,000-scale topographic mapping available online from the USGS
- LIDAR data-based topographic mapping for the Review Area available online from Sonoma County
- Vegetation Mapping available online from Sonoma County
- California Wildlife Habitat Relationship System (CHWR)
- Precipitation and temperature data from NRCS *Climate Analysis for Wetlands Tables* based on the nearest NRCS WETS Station
- California Natural Diversity Database (CNDDB) search for special status species and sensitive natural communities for the Review Area 7.5-minute quadrangle and the eight surrounding USGS quadrangles available online from the California Department of Fish and Wildlife (CDFW)
- Information for Planning and Consultation (IPaC) database available online from the USFWS
- National Marine Fisheries Service (NMFS) list of species and other resources under NMFS jurisdiction that are known or expected to be on or near the Review Area
- Electronic Inventory of Rare and Endangered Plants of California for the Review Area 7.5-minute quadrangle and the eight surrounding USGS quadrangles available online from the CNPS

3.3 Field Surveys

The Review Area, including the BLD, was visited on April 25, 2023, December 4, 2024, and July 18, 2025, by professional biologists to develop information regarding general ecological conditions, vegetation stand identification, potential presence/absence of special status plant and animal species, and sensitive natural communities to include aquatic resources. These studies/biological surveys are summarized below.

HBG biologists Greg Huffman and Max Brier conducted a joint biological resources survey within the Review Area including the proposed Project Development Site on April 25, 2023, from 8:00 AM – 11:15 AM as part of the preliminary biotic assessment report dated July 13, 2024. Weather during the survey was appropriate for data collection as summarized below. The survey consisted of walking meandering transects throughout the Review Area to observe and identify biological resources, including vegetation stands; assess habitat potential for special status species; and identify any special status species and Sensitive Natural Communities that may be present. Representative site photographs were

taken with a mobile phone. The spatial locations of observed resources were recorded using ESRI Field Maps.

During the April 25, 2023, survey of the property, Wetland Scientist Greg Huffman conducted a reconnaissance investigation of the Review Area for the presence of wetlands and other “waters of the U.S.” potentially subject to federal jurisdiction under the Clean Water Act or state jurisdiction under the Porter-Cologne Act. The review included an investigation of existing landforms, vegetation, hydrology, and soil conditions, and a preliminary review of the area for aquatic resources to include pond, lake, stream, and wetland, habitats. The review also considered if streams were present that would be subject to the jurisdiction of the CDFW pursuant to Section 1602 of the California Fish and Game Code.

Plant and wildlife species and habitat surveys were conducted in the Review Area by HBG biologist Max Brier and Greg Huffman during the April 25, 2023, survey. These surveys included observations of the composition and distribution of vegetation stands (plant communities), wildlife observations, identification of sensitive natural communities, and a comparison of site characteristics for similarity to sites known to support special status species within the area. To determine if sensitive natural communities occur within the Review Area, a detailed floristic inventory was prepared based on CDFW-CNPS Rapid Assessment methodology. Wildlife observations in the Review Area were based on visual sightings and observations of tracks, dens, and scat. A similar biological survey of the site was conducted by Gary Deghi of HBG on December 4, 2024, as part of the more detailed evaluation requested by Sonoma County. Although plant surveys were outside the blooming period for target sensitive species, remaining non-flowering plants were also identified where feasible to at least to genus to include tarweeds (*Hemizonia* sp.), which, if found, would point to the need for next year late-spring sampling for the California Rare Plant Rank: 1B.2 Hayfield tarweed (*Hemizonia congesta*).

On July 18, 2025, Greg Huffman and Terry Huffman, PhD conducted an additional plant survey within the Review Area following CDFW-CNPS Rapid Assessment methodology. This survey included observations of the composition and distribution of vegetation stands and identification of sensitive natural communities.

3.4 Potential Special Status Species Presence Assessment

Based on species occurrence information provided by the CNDDDB and IPaC databases, special status plant and animal species were summarized in a table format (Appendix B), listing status information together with descriptions of macro- and micro habitat requirements.

Using the criteria listed below, each plant and animal species and community listed was then evaluated as to its potential for being present in the Review Area (Section 4.8). The evaluation was based on an assessment of information obtained relevant to the Review Area which included: (1) general ecological information regarding land use, climate, topographic, soils, hydrology, and vegetation type and animal species typically associated with the existing Review Area; and (2) specific technical information regarding listed plant and animal species distribution range, habitat, and known threats together with onsite general level plant, wildlife, and aquatic resource surveys (Section 4.5, 4.6 and 4.7).

- **No Potential:** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Unlikely:** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential:** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential:** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present:** Species is observed on the site or has been recorded (i.e., CNDDDB, other reports) on the site recently.

If determined potentially present or present, the plant species, animal species, and/or sensitive natural community was evaluated to determine if the project would have a substantial adverse effect, either directly or through habitat modifications and, if necessary, recommend action(s) either before or after proposed project approval, but prior to ground-disturbing activities (also provided in Section 5.0).

4.0 RESULTS

4.1 Land Use

The 10-acre Review Area is within an unincorporated portion of Sonoma County (APN 025-011-038). Diverse agricultural land uses exist to the north and rural residential land uses are present to the east, south, and west of the Review Area. There is an intermittent stream situated along the northwestern boundary of the parcel that flows north under Blucher Valley Road and into Blucher Creek. Streamside riparian canopy is almost entirely willows (*Salix* sp.), but other species are present (see Section 4.5). A significant gully area exists within the southeastern portion of the parcel, leaving a deeply incised channel entering the northeast corner of the Review Area. A developed residential area and parking pads exist within the northern portion of the parcel. Two gravel access roads enter the parcel from the north, starting at an entrance gate/area at Blucher Valley Road and extending southward for approximately 150 feet.

4.2 Climate

Based on WETS Station “GRATON, CA” precipitation and temperature data for the period of record (1971 – 2024), the average annual precipitation amount received approximately 6.5 miles from the site is 39.62 inches received as rainfall and 0.00 inches received as snow. The average minimum and maximum precipitation amount ranges between 0.05 and 7.79 inches. The wettest months, in which average monthly rainfall exceeds 5.00 inches, are January, February, March, November, and December (7.79, 6.87, 5.64, and 7.65 inches), with the lowest average amount occurring in July and August (0.05 and 0.07 inches). Record data also indicates that the annual average daily temperature is 57.4° F. Average high and low temperatures range between 72.6° F and 42.2° F with the coldest months typically including January and December where temperatures are in the mid-40s and the hottest months being July and August where temperatures are in the mid-60s. The annual growing season with a 50% probability of having days above 32° F is 217 days (April 1 to November 4), and, with a 70% probability of having days above 32° F, is 232 days (March 25 to November 12).

4.3 Topography and Soils

The Review Area slopes downward to the north in the direction of Blucher Valley Road and Blucher Creek. The topography, which varies at elevations between approximately as little as 190 feet msl near an unnamed stream in the northwest corner of the Review Area to approximately 340 feet msl at the southeast corner of the property near a deep crevice originating from past landsliding in the area. Site topography is shown in the Two Rock USGS 7.5-minute quadrangle topographic map in Appendix A, Figure 2.

Soil survey information for the Review Area was obtained from the National Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2023). Four (4) different soil types are mapped by NRCS within the Review Area as described as shown in Appendix A, Figure 5. Soil types are Blucher fine sandy loam, overwash, 0 to 2 percent slopes in the portion of the site nearest to Blucher Valley Road; Steinbeck loam, 15 to 30 percent slopes, eroded, through much of the middle of the site; Steinbeck loam, 30 to 40 percent slopes, eroded, within the southern portion of the site; and Steinbeck loam, 30 to 50 percent slopes, within the southwestern corner of the site.

4.4 Hydrology

Watersheds. A review of the US Geological Survey (USGS) National Hydrography Dataset (NHD) Hydrologic Unit Code (HUC) data shows that the Review Area lies within the 8-digit HUC (18010110) “Russian” subbasin and the 12-digit HUC (180101100701) “180101100701” subwatershed.

Direction of Surface Water Flow. Surface water that flows within the Review Area is the direct result of precipitation and associated stormwater runoff. No spring or other groundwater discharge flow was observed. The majority of runoff enters the Review Area at the upper elevation south end of the Review Area, as sheet flow which flows to the north in the direction of Blucher Valley Road, Blucher Creek, and an intermittent tributary stream that traverses the northwestern corner of the site. Streamflow and drainage from the Review Area generally flow to Blucher Creek, which eventually leads to Mark West Creek, then to the Laguna de Santa Rosa, and finally to the Russian River until reaching the Pacific Ocean.

Runoff also enters a gully which has formed in the Steinbeck loam soils near the eastern boundary of the review Area. Steinbeck soils within Sonoma County are cut by gullies formed by soil blowing and subsequent water erosion (USDA 1972). Runoff entering the gully remains in the gully until it either infiltrates into the soil or evaporates.

FEMA. FEMA Flood Insurance Rate Map for “Sonoma County” 06097C0981E (Effective Date: 12-2-2008) indicates that the Review Area is outside of FEMA Insurance Zoning (Appendix A, Figure 6).

4.5 Plant Communities

General Classification. Vegetation communities are assemblages of plant species growing in an area of similar biological and environmental factors. Vegetation communities and habitats at the Review Area were identified by HBG based on the currently accepted List of Natural Communities (CDFW 2010). The list is based on A Manual of California Vegetation, Second Edition (Sawyer et al 2009), which is the National Vegetation Classification applied to California. Vegetation communities and habitats at the Review Area were also identified by HBG using the California Wildlife Habitat Relationships (CWHR) classification (Mayer and Laudenslayer 1988), which defines aquatic as well as terrestrial habitats including urban areas. The CWHR habitat classification scheme was developed to provide a systematic method for describing how habitats and structures support California's regularly occurring birds, mammals, reptiles and amphibians.

Based on Sonoma County vegetation mapping (Appendix A, Figure 4) and results of field surveys conducted by HBG, the Review Area contains five distinctive stands of vegetation or plant communities: (1) California Annual and Perennial Grassland (Valley and Foothill Grassland in CWHR), (2) North Coast Riparian Scrub (Valley and Foothill Riparian in CWHR), (3) Eucalyptus, (4) Black Oak Woodland, and (5) Urban. Summary descriptions of these plant communities/habitat types in the Review Area follow. A collective list of plant species observed on the site during field reviews by HBG in April 2023, December 2024, and July 18, 2025, is included as Appendix B, Table 1.

Annual and Perennial Grassland

Structure. Annual and Perennial Grassland is referred to as Valley and Foothill Grassland in the CWHR and as California Annual and Perennial Grasses and Forbs in the Vegetation and Land Cover mapping provided by Sonoma County (Figure 4). Annual grassland habitat occurs mostly on flat plains to gently rolling foothills. Annual Grassland habitats are open grasslands composed primarily of annual plant species. Many of these species also occur as understory plants in woodlands and other habitats. Structure in Annual Grassland depends largely on weather patterns and livestock grazing. Dramatic differences in physiognomy, both between seasons and between years, are characteristic of this habitat. Fall rains cause germination of annual plant seeds. Plants grow slowly during the cool winter months, remaining low in stature until spring, when temperatures increase and stimulate more rapid growth. Large amounts of standing dead plant material can be found during summer in years of abundant rainfall and light to moderate grazing pressure. Heavy spring grazing favors the growth of summer-annual forbs and reduces the amount of standing dead material. Grasslands, in general, are of conservation concern nationwide due to the loss of these habitats with conversion to agriculture and urban development.

Perennial Grassland habitats, as defined here, occur in two forms in California: coastal prairie, found in areas of northern California under maritime influence, and relics in habitats now dominated by annual grasses and forbs. Perennial Grassland habitat structure depends on the mix of plant species at a particular site. Grazing by domestic livestock or wild herbivores can substantially alter habitat structure through reduction in plant height and removal of biomass.

Grasslands in this portion of California consist of both native and non-native grass species that typically include vegetation such as wild oat (*Avena fatua*), black mustard (*Brassica nigra*), soft brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), purple star thistle (*Centaurea calcitrapa*), dogtail grass (*Cynosurus echinatus*), blue wildrye (*Elymus glaucus*), California poppy (*Eschscholzia californica*), California goldfields (*Lasthenia californica*), Italian rye grass (*Festuca perennis*), *Nassella* sp., *Melic* sp., California plantain (*Plantago erecta*), western brackenfern (*Pteridium aquilinum*), and others.

Review Area Composition. Much of the area beyond (south of) the urban, developed portion of the Review Area is non-native Annual Grassland. Non-native Annual Grassland is the predominant community type within the subject Review Area with co-dominant grass species including wild oat, soft brome, ripgut brome, blue wildrye, and Italian rye grass.

North Coast Riparian Scrub

Structure. North Coast Riparian Scrub is referred to as Valley and Foothill Riparian in the CWHR and as Riparian Mixed Hardwood in the Vegetation and Land Cover mapping provided by Sonoma County (Figure 4). Mature riparian ecosystems include canopy trees with a canopy cover of 20 to 80 percent, a subcanopy tree layer, and an understory shrub layer. Vegetation in streamside systems often consists of species commonly found in permanently moist or riparian settings, where subsurface water is available all year. Generally, the understory is impenetrable and includes fallen limbs and other debris.

Review Area Composition. Riparian vegetation is found along the intermittent stream that traverses the northwestern corner of the Review Area. This stream flows north, passing under Blucher Valley Road and emptying into Blucher Creek which eventually flows into Laguna de Santa Rosa. The tree

canopy of the intermittent stream is dominated by arroyo willow (*Salix lasiolepis*), but small numbers of other trees such as California black walnut (*Juglans hindsii*), California bay (*Umbellularia californica*), and maple (*Acer* sp.) are also present. Understory vegetation along the stream is almost exclusively California blackberry (*Rubus ursinus*), but other species such as Himalaya berry (*Rubus armeniacus*) and poison hemlock (*Conium maculatum*) are also present.

A small area of riparian habitat also occurs in the southeastern corner of the parcel within a deeply incised, eroded gully channel that enters the site near the southeast corner of the property and quickly dissipates to become a shallow depression towards the center of the south end of the parcel. Vegetation within the incised channel includes arroyo willow, small numbers of California bay and maple, and other species such as western brackenfern and Scotch broom (*Cytisus scoparius*). Vegetation in the shallow areas include species such as cut leaf burnwood (*Senecio glomeratus*) and non-native grasses like velvet grass (*Holcus lanatus*).

Eucalyptus

Structure. Forests of blue gum eucalyptus (*Eucalyptus globulus*) are common within the Northern California landscape. The eucalyptus trees, native to Australia, are fast-growing and quickly reach heights of more than 100 feet. The trees were mostly planted in the mid- to late-19th century to serve as windbreaks, visual screens, and to provide firewood. Eucalyptus in California is moderately invasive as it lacks the pests and pathogens of its native Australia and stands of eucalyptus can displace native habitats. Because they are fire-prone, eucalyptus is often targeted for removal; however, eucalyptus forest often serves as nesting sites for raptors such as red-tailed hawk (*Buteo jamaicensis*) and great horned owl (*Bubo virginianus*), and, where present, are often preferred areas as wintering sites for colonies of monarch butterflies.

Review Area Composition. Eucalyptus is also referred to as simply Eucalyptus in the CWHR classification and the Vegetation and Land Cover mapping provided by Sonoma County in Figure 4. Eucalyptus is found along the western boundary of the site, where eucalyptus trees were likely at one time planted as a windbreak. Trees along the western boundary are blue gum eucalyptus, but other tree species, such as Monterey cypress (*Hesperocyparis macrocarpa*) and California bay, are also common. A dense understory consists of California blackberry, poison hemlock, and other species.

California Black Oak Woodland

Structure. In the CWHR California Black Oak Woodland is generally considered a component of Montane Hardwood Forest in the CWHR and as California Black Oak in the Vegetation and Land Cover mapping provided by Sonoma County (Figure 4). In Black Oak Woodland, black oak (*Quercus kelloggii*) dominates the broadleaf canopy or co-dominates with Douglas fir (*Pseudotsuga menziesii*), Coast Live Oak (*Quercus agrifolia*), or California bay. Pacific madrone (*Arbutus menziesii*) is often present. Stands in Sonoma County are found inland on northern exposures.

Review Area Composition. A small patch of black oak is found in the southwestern corner of the parcel. Understory vegetation is primarily California blackberry and other, mostly non-native grass and herbaceous species found in the grasslands or riparian understory.

Urban

Structure. Tree groves, common in city parks, green belts, and cemeteries, vary in height, tree spacing, crown shape, and understory conditions, depending upon the species planted and the planting design. The juxtaposition of urban vegetation types within cities produces a rich mosaic with considerable edge areas. The overall mosaic may be more valuable as wildlife habitat than the individual units in that mosaic. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover.

Review Area Composition. A row of planted Coast redwoods (*Sequoia sempervirens*) occurs along the Blucher Road frontage. Access to the site is from a gravel entrance road off Blucher Valley Road that extends into an area consisting of paving, previously graded areas, and structures (including residences and various ancillary structures, including a barn). This area would be considered an Urban habitat. The Urban habitat is shown in Figure 4 as Urban or Developed according to the Vegetation and Land Cover mapping provided by Sonoma County, and the area of this habitat shown in Figure 4 should be expanded to incorporate the land surrounding all of the structures within the northern portion of the parcel.

Vegetation within this Urban habitat consists primarily of small trees and shrubs planted around buildings for landscaping in addition to non-native grasses and herbaceous plants (forbs). Plant species in this Urban habitat include trees such as apple (*Malus* sp.), pear (*Pyrus* sp.), Japanese maple (*Acer palmatum*), Japanese cedar (*Cryptomeria japonica*), and a pine (*Pinus* sp.), and shrubs such as rosemary (*Rosmarinus officinalis*), butterfly bush (*Buddleja davidii*), coyote brush (*Baccharis pilularis*), lavender (*Lavandula* sp.), and a variety of non-native grasses and forbs.

4.6 Animal Populations

General Characteristics of Onsite Habitats. The habitats on site and in the surrounding area support many wildlife species, mostly those typically found in disturbed grassland and riparian and woodland habitats in this part of Sonoma County.

Trees like those found in the Review Area generally provide shelter and cover for a variety of amphibians, reptiles, birds, and mammals and provide foraging and breeding habitat for a variety of aquatic and terrestrial wildlife species. Riparian habitats provide food and water sources, migration and dispersal corridors, and escape, nesting, and thermal cover for an abundance of wildlife. They also provide breeding sites for amphibians and feeding areas for larger mammals such as deer. Canopy riparian trees and other vegetation provide nesting substrates for many bird species and foraging areas for both migratory and resident species. Well-developed riparian canopies also provide significant habitat in support of neotropical migrant land birds during spring and fall migration. The canopy vegetation provides shading and inputs of leaves and woody material to stream channels that provide suitable conditions for many aquatic organisms, including fish, that in Sonoma County can include species of anadromous salmonids.

Grasslands are suitable to support amphibians, reptiles, and mammals adapted to this habitat. Grasslands provide nesting habitat for many passerine species (songbirds); foraging habitat for passerines, owls, and other raptors (birds of prey); habitat for ground-nesting birds; and habitat for

small mammals with burrows that provide essential refugia for reptiles and amphibians that may disperse to uplands during terrestrial portions of their life cycle. Many species of reptiles, birds, and mammals are restricted to grasslands for specific life stages, including breeding. Special features within grasslands and woodlands such as shrubs and downed wood are also of value to wildlife. Many wildlife species use Annual Grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and escape cover. Many species of reptiles, birds and mammals are restricted to grasslands for their breeding habitat.

Animal Populations at the Review Area. The riparian habitat in the northwest and southeast portions of the Review Area provides wildlife habitat that includes a water source and that serves as a movement/migration corridor and foraging and breeding habitat for a variety of aquatic and terrestrial wildlife species. In addition, many of the trees in the riparian habitat and especially along the western boundary of the property are old enough to have significant cavities that could support cavity nesting birds or could serve as either winter or maternity roosts for various species of bat.

The aquatic environments within the riparian area are particularly suitable as breeding habitat for various species of amphibian that would be expected to include Pacific chorus frog (*Pseudacris regilla*), California slender salamander (*Batrachoseps attenuatus*), arboreal salamander (*Aneides lugubris*), and western toad (*Anaxyrus boreas*), among others. Reptiles were not observed during the field survey, but likely species, especially in the grasslands, would include western fence lizard (*Scoloperus occidentalis*), southern alligator lizard (*Elgaria multicarinatus*), Pacific gopher snake (*Pituophis catenifer*), and common garter snake (*Thamnophis sirtalis elegans*).

Mammals were not observed at the site during the April 25 and December 4, 2024, field reviews, but evidence of mammal use of the site included many dens of Botta's pocket gopher (*Thomomys bottae*) and California vole (*Microtus californicus*), and several dens of California ground squirrel (*Otospermophilus beecheyi*). Nest houses of dusky-footed woodrat (*Neotoma fuscipes*) were observed beneath the eucalyptus and Monterey cypress trees along the western border of the site. There were also shallow excavations (18 inches deep or less) consistent with canine predation behavior that could have been either domestic dogs or perhaps coyote. Other mammals expected at the site, especially around human habitation, would include Virginia opossum (*Didelphis virginiana*), Norway rat (*Rattus norvegicus*), house mouse (*Mus musculus*), deer mouse (*Peromyscus maniculatus*), striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*). Mule deer (*Odocoileus hemionus*) also likely use the site.

HBG's wildlife biologists observed a total of 45 avian species at the site during field visits to the site on April 25, 2023, and December 4, 2024. Many of the bird species observed by wildlife biologist Max Brier in the Review Area over several hours during the April 25, 2023, survey included species known to be resident in the area such as Canada goose (*Branta canadensis*), California quail (*Callipepla californica*), wild turkey (*Meleagris gallopavo*), Eurasian collared-cove (*Streptopelia decaocto*), turkey vulture (*Cathartes aura*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), acorn woodpecker (*Melanerpes formicivorus*), downy woodpecker (*Dryobates pubescens*), Nuttall's woodpecker (*Dryobates nuttallii*), Western flycatcher (*Empidonax difficilis*), black phoebe (*Sayornis nigricans*), Steller's jay (*Cyanocitta stelleri*), California scrub-jay (*Aphelocoma californica*), brown

creeper (*Certhia americana*), red-breasted nuthatch (*Sitta canadensis*), chestnut-backed chickadee (*Parus rufescens*), oak titmouse (*Parus rufescens*), Bewick's wren (*Thryomanes bewickii*), Western bluebird (*Sialia mexicana*), American robin (*Turdus migratorius*), European starling (*Sturnus vulgaris*), cedar waxwing (*Bombicilla cedrorum*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), pine siskin (*Spinus pinus*), dark-eyed junco (*Junco hyemalis*), song sparrow (*Melospiza melodia*), California towhee (*Melospiza crissalis*), spotted towhee (*Pipilo maculatus*), brown-headed cowbird (*Molothrus ater*), red-winged blackbird (*Agelaius phoeniceus*), and orange-crowned warbler (*Leiothlypis celata*). Migrant breeding birds were also observed in the April survey including ash-throated flycatcher (*Myiarchus cinerascens*), warbling vireo (*Vireo gilvus*), cliff swallow (*Petrochelidon pyrrhonota*), barn swallow (*Hirundo rustica*), Bullock's oriole (*Icterus bullockii*), yellow warbler (*Setophaga petechia*), Wilson's warbler (*Cardellina pusilla*), and black-headed grosbeak (*Pheucticus melanocephalus*). Wildlife biologist Gary Deghi observed many of the resident species during the December 4, 2024, survey along with wintering species such as ruby-crowned kinglet (*Regulus calendula*), Townsend's warbler (*Setophaga townsendi*), and yellow-rumped warbler (*Setophaga coronata*).

Many of the bird species observed during the spring (April) site survey are species that are likely nesting either within the Review Area or on neighboring properties. Agitated behavior exhibited by a pair of California towhees in the area along the stream corridor suggests they may have been nesting; however, no other signs of breeding by birds were observed on the site. The oaks, riparian corridor, large trees, and edges between multiple habitat types are all elements of excellent avian habitat for foraging and reproduction.

4.7 Wetlands

On April 25, 2023, Greg Huffman of HBG conducted an initial reconnaissance investigation of the Review Area for the presence of wetlands and other "waters of the U.S." potentially subject to federal jurisdiction under the Clean Water Act or state or local jurisdiction under the Porter-Cologne Act, the Section 1602 Fish and Game Code jurisdiction of CDFW, and the stream protection provisions of the Sonoma County Code. The review included an investigation of existing landforms, vegetation, hydrology, and soil conditions, but consisted of a preliminary review of the area for wetland habitats.

There is an intermittent stream situated along the northwestern boundary of the Review Area that flows north, passing under Blucher Valley Road and emptying into Blucher Creek, which eventually leads to Mark West Creek, then to the Laguna de Santa Rosa, and finally to the Russian River until reaching the Pacific Ocean. The wetted portion of this intermittent stream (area below Ordinary High Water) would be regulated by the Corps of Engineers as a water of the U.S. under Section 404 of the Clean Water Act. The creek, including the bank of the creek, would be regulated by the North Coast RWQCB as a water of the state of California under the Porter-Cologne Act. The creek would also be considered a stream course subject to the jurisdiction of the CDFW pursuant to Section 1602 of the California Fish and Game Code and would be subject to the stream setback requirements of Sonoma County Code Section 26.65.030.

A significant slide area exists within the southeastern portion of the Review Area, leaving a deeply incised channel entering the northeast corner of the parcel. This incised channel enters the site near

the southeast corner of the property and quickly dissipates to become a shallow depression towards the center of the south end of the parcel. A detailed wetland delineation has not been conducted within the deeply incised channel or the depressional areas at the west end of the channel, however, it is entirely possible that this area could also be subject to the Corps of Engineers as a water of the U.S. under Section 404 of the Clean Water Act, the North Coast RWQCB as a water of the state of California under the Porter-Cologne Act, CDFW under Fish and Game Code Section 1602, and Sonoma County Code Section 26.65.030.

For purposes of planning a potential single-family residence within a new 5-acre parcel, the project applicant has assumed that the creek at the northwest corner of the property and the incised channel at the southeast portion of the property are subject to the regulatory authority of the various federal, state and local agencies, and therefore to be preserved under any development plan for the site. The southeast portion of the property would not be developable in any event due to the presence of unstable soils due to the history of landsliding. The biological constraints map of Figure 7 shows both the creek in the northwest and the channel in the southeast protected by setbacks of 50 feet as determined from the top of the bank as required by the Sonoma County Code.

4.8 Special Status Species

Based on species occurrence information from the literature review and field observations, and USFWS IPaC database review (see result in Appendix C), a list of special-status and CNDDDB-tracked plant and animal species considered to have the potential of occurring within the Review Area was generated and is summarized in Tables 2 and 3¹ of Appendix B. Each species considered potentially occurring in the Review Area or in the vicinity was then evaluated based on the occurrence criteria provided in Section 3.4, above.

Based on a CNDDDB search, there are no special status species documented within the Review Area boundaries, however 65 special status species of plants, 38 special status animals, and 4 sensitive natural communities are known to occur within a 10-mile radius from Review Area. Appendix B, Tables 2 and 3 provide lists of the special status plant and animal species identified. Tables 2 and 3 also provide listing status, general and micro habitat descriptions, an evaluation of the species potential for occurring within the Review Area based on the criteria listed in Section 3.4, above, and recommended further actions, if necessary. An evaluation of the four sensitive natural communities noted to have occurred near the Review Area is included in Section 4.8.3.

4.8.1 Special Status Plants

Based on the database search, literature review and habitat types found on the Review Area, none of the 65 special-status plant species listed in Appendix B, Table 2 were identified as having a potential to occur within the Review Area. Although some of these species have been known to occur within a mile of two of the Review Area, suitable habitat for these species was not found on the property within the grasslands which dominate the Proposed Development Area or in the adjacent stream or small wetland / swampy area. None of the species listed in Appendix B, Table 2 were observed in the Review

¹ It should be noted that the USFWS IPaC also included the federally listed threatened Green Sea Turtle (*Chelonia mydas*), Northern Spotted Owl (*Strix occidentalis caurina*) and Marbled Murrelet (*Brachyramphus marmoratus*). It was determined the Project Site lacks suitable habitat for these species and there is no potential for occurrence.

Area during surveys conducted during the flowering period of most of the species by HBG by Greg Huffman and Max Brier on April 25, 2023 or by Greg and Terry Huffman on July 18, 2025.

As can be discerned from Appendix B, Table 2, special status plant species found in this part of Sonoma County require habitat conditions not found in the Review Area. The non-native landscaping vegetation within the Urban habitat and the non-native grasslands that cover most of the remainder of the parcel does not provide suitable habitat for any of the special status plant species noted in Table 2. Special status plant species known from the area listed in Appendix B, Table 2 require specialized habitats such as salt, brackish, or freshwater marsh, cismontane woodland, valley and foothill grassland, coastal scrub or coastal prairie, chaparral, coniferous or broadleaf evergreen forest, or are species that are found in serpentine or other specialized soils or rock outcrops. In addition, the extensive densely growing non-native vegetation, disturbance (mowing and grazing), the lack of soil conditions found in the BDL needed for the plant species listed in Appendix B, Table 2, and dense riparian growth along the northwest border of the Review Area result in the Review Area and BDL not providing suitable habitats for any of the sensitive native plant species listed in Appendix B, Table 2.

4.8.2 Special Status Animals

Animal species noted in the CNDDDB as occurring within a 10-mile radius of the site are discussed in Table 2. Special status animal species with at least a Moderate Potential for occurrence on the Review Area are discussed below: western bumble bee (*Bombus occidentalis*), California red-legged frog (*Rana draytonii*), burrowing owl (*Athene cunicularia*), and American badger (*Taxidea taxus*). None of the other animal species discussed in the table have the potential to occur on the site. This finding is made based on the habitat requirements of species listed in the table and is based on field review of habitats present within the Review Area, and an evaluation of the suitability of on-site habitats to support these species.

Several bird species identified as USFWS Bird Species of Conservation Concern (see USFWS iPac list in Appendix C) were observed on the property: oak titmouse, Bullock's oriole, and Nuttall's woodpecker. Preconstruction bird nesting surveys as required in Section 5.4 would ensure that any nests of any of the species that may be present in or near the BDL, though unlikely, would be protected from construction operations.

INSECTS

One special status insect was identified as potentially occurring in the Review Area.

Western bumble bee (*Bombus occidentalis*):

Range. This species has undergone severe declines in area of occupancy, number of occurrences, and relative abundance since the mid-20th century. Previously, it was one of the most abundant bumble bees in the western United States and Canada.

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.916920/Bombus_occidentalis

Listing Status. CESA Candidate Endangered.

Habitat. Found in a range of habitats, including mixed woodlands, farmlands, urban areas, montane meadows, and into the western edge of the prairie grasslands (COSEWIC 2014). Food plants include:

Ceanothus, Centaurea, Chrysothamnus, Cirsium, Geranium, Grindellia, Lupinus, Melilotus, Monardella, Rubus, Solidago, and Trifolium (Williams et al. 2014).

Threats. Ongoing threats to the species, particularly within the southern portions of its range, include pathogen spillover from commercially managed bumble bee colonies, increasingly intensive agricultural and livestock grazing and other land use practices, pesticide use, including neonicotinoid compounds, and habitat change.

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.916920/Bombus_occidentalis

Review Area Occurrence. Moderate Potential. Not observed to be present. The CNDDDB reports this species occurring within about 3.7 miles of the Review Area. The Review Area has Moderate Potential to be used for episodic foraging as several nectar producing plant species are present which are known to be used by the western bumble bee. These include Geranium (*Geranium spp.*), thistles (*Cirsium spp.*), and blackberries (*Rubus spp.*).

CRUSTACEANS

One special status crustacean was identified as potentially occurring in the Review Area.

California freshwater shrimp (*Syncaris pacifica*):

Range. California freshwater shrimp (CFWS) occur only in a limited range within the northern San Francisco Bay Area. Specifically, this species occurs only in 17 stream segments within Sonoma, Napa and Marin Counties. CFS are found in certain lower tributaries of the Russian River including the Laguna de Santa Rosa and certain of its tributaries such as Blucher Creek.²

Special-Status Listing. Federally listed Endangered, California state listed Endangered.

Habitat. CFWS prefer streams that have water flowing year round with predominately low gradient flows.³ & ⁴ In the summer months with little precipitation and surface runoff, the flow rates can be very low with larger pools but they characteristically transport heavy runoff during the rainy winter season. Within a given stream, CFWS prefers slow-to medium-flowing pools and glide areas with overhanging banks (Barber, et. al.2009). Found in low elevation, low gradient streams where riparian cover is moderate to heavy. The species prefers shallow pools removed from the main flow. Occurrence is restricted to perennial streams below 100 meters msl and with a gradient of less than one percent.

Threats. Habitat loss, especially as a result of overgrazing by cattle, along with chemical water pollution.

Review Area Occurrence. The nearest population of California Freshwater Shrimp is within Blucher Creek which is just on the north side of Blucher Road from the Review Area. The CNDDDB reports a population of the species within Blucher Creek with densities higher than any other known population

² Blucher Creek Watershed Council. *Our Endangered California Freshwater Shrimp*.
<https://bluchercreek.wordpress.com/the-blucher-creek-watershed/>

³ California Department of Fish and Game. California Freshwater Shrimp, *Syncaris pacifica*.

⁴ [US EPA, Endangered Species Facts - California Freshwater Shrimp](#)

about one mile upstream and downstream from Knowles Corner, an area that encompasses the portion of Blucher Creek just north of the Review Area. As many as 231 individuals were captured during surveys in 1991. Although this population is near to the Review Area, the tributary ephemeral stream⁵ that passes through the northwest corner of the Review Area lacks many of the elements that constitute suitable habitat for the species (e.g., shallow pools removed from the main flow of perennial streams). There is No Potential for the species to occur within the Review Area.

FISH

No special-status fish species was identified as potentially occurring in the Review Area.

AMPHIBIANS

One special-status amphibian species was identified as potentially occurring in the Review Area.

California red-legged frog (*Rana draytonii*):

Range. Native historical range extended from southern Mendocino County in northwestern California south (primarily west of the Cascade-Sierra crest) to northwestern Baja California (Shaffer et al. 2004). https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.105364/Rana_draytonii

Special-Status Listing. Federally listed as threatened, CDFW Species of Special Concern (CDFW 2024).

Habitat. California red-legged frogs (CRLF) have been observed in aquatic and terrestrial habitats, including marshes, streams, lakes, reservoirs, ponds and other permanent, or near permanent, sources of water. Although they occur in ephemeral streams or ponds, CRLF are expected to thrive in permanent deep-water pools with dense stands of overhanging willows and emergent vegetation, and suitable sites for basking. However, they have been observed in various aquatic environments, including stock ponds and artificial pools with little to no vegetation. California red-legged frogs are usually observed near water but can move long distances over land between water sources during the rainy season.

The life cycle and patterns of movement of the CRLF have evolved along with the local California climate of wet, cool winters and dry, warm summers. With the onset of the winter rains, CRLF move from dry season refuges to ponds and streams that can support breeding and successful tadpole development. Tadpoles generally take until late summer or early fall to complete metamorphosis, and then the maturing young frogs (metamorphs) move to aquatic areas to take cover from predators. Adult frogs often remain year-round at perennial ponds with deep water, but some depart for dry season refuges once breeding is over. Juveniles (frogs that are older than metamorphs but not yet sexually mature) disperse widely over the landscape during the first winter and will take residence in almost any water source. During the dry months of summer and fall, CRLF seek suitable dry season refuge sites that may include deep water holes in drying streams, springs and spring boxes, seeps, and small mammal burrows (especially in or near vegetation). However, CRLF must hydrate at least every couple of days to survive. Thus, such small mammal refuge sites must be close to a permanent water

⁵ USGS TNM – National Hydrography Dataset Plus High Resolution (NHDPlus HR). Data refreshed October, 2022. https://hydro.nationalmap.gov/arcgis/rest/services/NHDPlus_HR/MapServer

source for frogs to rehydrate. To find these refuges, frogs will travel several hundred yards where suitable refuges are abundant and up to three miles in moist coastal areas. Often, long distance movements are in a relatively straight line over hills and drainages between the beginning and end points.

Threats. Factors contributing to local declines include wetland destruction and degradation or fragmentation, urbanization, residential development, reservoir construction, stream channelization, livestock grazing of riparian vegetation, off-road vehicle activity, drought, overharvesting, and exotic fishes (bass, mosquitofish) and possibly bullfrogs. Conversion of habitat to more permanent ponds is an important threat (as this allows breeding waters to be invaded by non-native predators). Habitat characteristics and good leaping ability may render these frogs less vulnerable to bullfrog predation, although in many areas red-legged frogs coexist with bullfrogs.

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.105364/Rana_draytonii

Review Area Occurrence. Moderate Potential. CRLF is known to occur in the general vicinity of the Review Area, with a specific 2009 occurrence noted in the CNDDDB of an individual from an intermittent stream in Bloomfield, a location that is approximately 1.7 miles from the Review Area. The intermittent stream passing through the northwest corner of the Review Area provides marginally suitable habitat for CRLF. Although vegetation consists of growth of non-native species throughout the onsite grasslands, many dens of Botta's pocket gopher were found throughout the Review Area and dens of California ground squirrel were found in the eastern portion of the site, and these could provide suitable refugial sites by CRLF during their seasonal movements. Habitat for CRLF within the Review Area is not optimal, but use of the site by CRLF cannot be ruled out.

REPTILES

One special-status reptile species was identified as potentially occurring in the Review Area.

Northwestern pond turtle (*Emys marmorata*):

Range. Range extends from Washington or British Columbia to central California.

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.103571/Actinemys_marmorata

Special-Status Listing. CDFW Species of Special Concern and Proposed for federal listing as threatened.(CDFW 2025). Note. that CNDDDB uses the species scientific name *Emys marmorata* is synonymous with *Actinemys marmorata*.

Habitat. Northwestern pond turtles occupy ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. The turtles prefer aquatic habitats with calm waters, vegetated banks and emergent logs or rocks to use as basking sites. The turtles also rely on suitable upland areas of scrub and woodlands for aestival refugia and may use upland habitats up to 0.5 km from water for activities such as egg-laying. Pond turtles living in streams may vacate flood-prone areas during the rainy season. Northwestern pond turtles occur broadly in suitable habitats throughout the state of California.

Threats. Distribution and abundance have declined as a result commercial exploitation for the pet trade, habitat loss and degradation, introduced species, and (locally) disease.

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.103571/Actinemys_marmorata

Review Area Occurrence. Moderate Potential. The nearest occurrence of northwestern pond turtle noted in the CNDDDB is a record from 2009 of as many as 14 individuals present at a pond along Tremari Road just east of Bloomfield Road, a location that is approximately 1.6 miles from the Review Area. The intermittent stream passing through the northwest corner of the Review Area contains marginally suitable habitat for northwestern pond turtle. Upland habitat for northwestern pond turtles within the Review Area is not optimal, but use of the site by the turtle as refugial habitat or even nesting cannot be ruled out. If northwestern pond turtles were present in the onsite stream, a turtle could wander into the onsite uplands within the Review Area.

BIRDS

One special-status avian species was identified as potentially occurring in the Review Area and is discussed below.

Burrowing Owl (*Athene cunicularia*):

Range. Widespread distribution in North America.

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.106553/Athene_cunicularia

Special-Status Listing. CDFW Species of Special Concern (CDFW 2024). CDFW adopted survey protocol and mitigation guidelines for burrowing owls as described in a March 7, 2012, Staff Report (CDFW 2012).

Habitat. Burrowing owls are small terrestrial owls commonly found in open grassland ranging from western Canada to portions of South America. Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Burrowing owls are a subterranean nester, and in California, burrowing owls most commonly use burrows of California ground squirrel, but they also may use man-made structures, such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers during migration. While foraging, owls will perch on raised burrow mounds or other topographic relief such as rocks, tall plants, fence posts, and debris piles to attain better visibility. Occupancy of suitable burrowing owl habitat can be verified at a site by an observation of at least one burrowing owl, or, alternatively, presence of "decoration" at or near a burrow entrance which can include molted feathers, cast pellets, prey remains, eggshell fragments, or excrement.

Threats. Habitat alteration is causing population declines. The loss of grassland habitat and suitable burrows has been compounded by a reduction in prey populations, and concurrent increases in predation, vehicle collisions, expansion of renewable energy, and severe weather events.

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.106553/Athene_cunicularia

Review Area Occurrence. Moderate Potential. No burrowing owls were observed during field reviews conducted by HBG wildlife biologists during the nesting season in April of 2023 or during the winter season in December of 2024. The nearest records of burrowing owl in the CNDDDB are of individuals noted about 3 miles west of the Review Area near Carroll Road in the 1980s. Although the grasslands in Review Area are highly disturbed, there is some evidence of ground squirrel burrows within the

grasslands in the eastern portion of the site. With the apparent presence of ground squirrels on the property, the presence of burrowing owls in the future cannot be ruled out. There is a Moderate Potential for the site to be used for episodic foraging or even nesting by burrowing owls.

MAMMALS

One special-status mammal species was identified as potentially occurring in the Review Area.

American Badger (*Taxidea taxus*):

Range. Large range in the western and central U.S., southern Canada, and northern and central Mexico; relatively common over much of range.

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.101705/Taxidea_taxus

Special-Status Listing. CDFW Species of Special Concern (CDFW 2024).

Habitat. The CNDDDB indicates that suitable habitat for American badger includes the drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. American badgers need sufficient food, friable soils, and open uncultivated ground. American badgers dig their own burrows and prey on burrowing rodents. American badger can create a burrow over the course of a day and can, therefore, inhabit a site quickly.

Threats. American badger has declined substantially in areas converted from grassland to intensive agriculture and where colonial rodents such as ground squirrels have been reduced or eliminated. The species is also threatened by collisions with vehicles and by direct persecution.

https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.101705/Taxidea_taxus

Review Area Occurrence. Moderate Potential. The nearest record of American badger in the CNDDDB is from reports of multiple sightings over a 30-year period by a landowner along Blank Road in Sebastopol which is approximately 2.5 miles from the Review Area. American badger was not observed to be present in the Review Area, however, suitable habitat for American badger occurs within the onsite grassland habitat. The presence of ground squirrel dens and larger excavations in the eastern portion of the site that may indicate foraging efforts by canids illustrate the onsite soils are suitable for denning, however none of the observed excavations were compressed in the manner of a badger's excavations nor deep enough to support this species. The potential future presence of American badger on the site cannot be ruled out.

4.8.3 Sensitive Natural Communities

Four sensitive natural communities occur within the 10-mile CNDDDB database search radius. These include Coastal and Valley Freshwater Marsh, Coastal Brackish Marsh, Northern Hardpan Vernal Pool and Northern Vernal Pool communities. None of these communities occur within the Review Area. The unnamed stream channel that traverses the northwest corner of the Review Area is potentially subject to regulation by the U.S. Army Corps of Engineers under Section 404 of the federal Clean Water Act and by the North Bay Regional Water Quality Control Board under the Porter-Cologne Water Pollution Control Act. The stream corridor would also likely be subject to CDFW jurisdiction under Section 1602 of the California Fish and Game Code. Additionally, a deeply incised channel associated with prior landsliding that enters the site near the southeast corner of property and quickly dissipates to become

a shallow depression towards the center of the south end of the parcel is assumed to contain habitats subject to the regulatory authority of the same federal and state agencies. It is assumed that the creek in the northwest corner of the site and the incised channel in the southeast portion of the site would be preserved under any development plan for the site and protected by setbacks as required by Section 26.65.030 of the Sonoma County Code. The southeast portion of the property would not be developable in any event due to the presence of unstable soils due to the history of landsliding. The biological constraints map of Figure 7 shows both the creek in northwest and the channel in the southeast protected by setbacks of 50-feet as determined from the top of bank as required by the Sonoma County Code. Figure 7 also shows “No Build Areas” in many areas extending beyond the outer boundary of the stream setbacks to provide additional assurance that there is no encroachment into biologically important areas.

4.9 Wildlife Movement/Corridors

The stream corridor that traverses the northwest corner of the Review Area provides a valuable movement corridor for local wildlife (insect, amphibian, reptile, bird, and mammal species).

4.10 Critical Habitat

No Critical Habitat for species listed as threatened or endangered under the federal Endangered Species Act has been designated within the Review Area.

5.0 PROJECT IMPACTS AND MITIGATION MEASURES

5.1 Standards of Significance

Appendix G to the CEQA Guidelines is a sample Initial Study Checklist that includes questions for determining whether impacts to biological resources are significant. These questions reflect the input of planning and environmental professionals at the Governor's Office of Planning and Research and the California Natural Resources Agency, based on input from stakeholder groups and experts in various other governmental agencies, nonprofits, and leading environmental consulting firms. They also reflect the requirements of laws other than CEQA that protect biological resources (e.g., the federal Clean Water Act, the Porter-Cologne Water Quality Control Act, the federal and state endangered species acts, and the Natural Community Conservation Planning Act). As a result, many lead agencies derive their CEQA significance criteria from the questions posed in Appendix G.

Considering the foregoing, the proposed project would have a significant effect related to biological resources if the project would:

- 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.
- 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 US Fish and Wildlife Service.
- 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.
- 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.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- 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.

Additional guidance on the significance of biological resource impacts is found in CEQA Guidelines section 15065, subdivision (a)(1), which provides that a lead agency shall find that a project may have a significant effect on the environment if "[t]he project has the potential to: ... substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; [or] substantially reduce the number or

restrict the range of an endangered, rare or threatened species[.]” The “mandatory findings of significance” are also found in the Appendix G sample Initial Study checklist, though near the end.

Therefore, the proposed project would have a significant effect related to biological resources if the project would:

- Substantially reduce the habitat of a fish or wildlife species;
- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a plant or animal community; or
- Substantially reduce the number or restrict the range of an endangered, rare or threatened species.

5.2 Special Status Species

CEQA Significant Effects Question “a”. Would the project 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?

5.2.1 Special Status Plant Species

Based on the database search, literature review and habitat types found on the Review Area, none of the 65 special-status plant species listed in Appendix B, Table 2 were identified as having a potential to occur within the Review Area. As can be discerned from Table 2, special status plant species found in this part of Sonoma County require habitat conditions not found in the Review Area. The non-native landscaping vegetation within the Urban habitat and the non-native grasslands which comprises the Proposed Development Area and that covers most of the remainder of the parcel does not provide suitable habitat for any of the special status plant species noted in Table 2. The grasslands consist of planted dense non-native grasses that have been historically grazed and mowed for hay for decades (based on review of Google Earth Pro historical aerial imagery). This together with the steep relief (15% to 50% slopes) and soil conditions (texture, drainage, moisture, and pH) eliminated the potential for suitable habitat conditions for sensitive species found within foothill and grassland plant communities. The valley and foothill grassland is growing on Steinbeck loam soils with 15% to 50% slopes that are moderately well drained (Ksat): Moderately high (0.20 to 0.57 in/hr)) that result in dry-mesic soil conditions due to slope and soil drainage characteristics. Soils are not vernal moist, but dry quickly.

Plant species known from the area listed in Table 2 require specialized habitats such as salt, brackish, or freshwater marsh, cismontane woodland, valley and foothill grassland, coastal scrub or coastal prairie, chaparral, coniferous or broadleaf evergreen forest, or are species that are found in serpentine or other specialized soils or rock outcrops. In addition, the extensive densely growing non-native vegetation, disturbance (mowing and grazing), the lack of soil conditions found in the BDL needed for the plant species listed in Appendix B, Table 2, and dense riparian growth along the northwest border of the Review Area result in the Review Area and BDL within not providing suitable habitats for any of the sensitive native plant species listed in Appendix B, Table 2.

The Review Area does not contain habitat suitable for native plant species and is not expected to support special status species of plant.

No impact to special status plant species would result from the proposed land division and potential development of a single-family residence within the southwestern portion of the new parcel as planned.

5.2.2 Special Status Animal Species

Western Bumble Bee. Several nectar producing plant species known to be used for foraging by bumble bees, including western bumble bee occur on the property, such as Geranium (*Geranium spp.*), thistles (*Cirsium spp.*), and blackberries (*Rubus spp.*). Therefore, presence of western bumble bee cannot be ruled out, and impacts to the species are possible if the species is present during construction.

Impact #1. Western Bumble Bee. Removal of plant species used by western bumble bee could impact the species, if found to be present, by eliminating nectar sites or harming bees.

Mitigation Measure 1-1, Western Bumble Bee. A qualified biologist shall conduct a clearance survey for all species of bumble bees, including the Western bumble bee within 48 hours of the start of any ground disturbing activities related to initiation of construction. The qualified biologist shall also be present during vegetation mowing and/or removal activities associated with commencement of construction. If bumble bees, including western bumble bee is observed, the bee or bees shall be allowed to disperse out of the construction area before continuing construction.

Mitigation Measure 1-2. Western Bumble Bee. Equipment used to conduct the initial grubbing will be restricted to moving no more than 10 miles an hour to allow bumble bees to safely disperse out of the construction area to adjacent foraging habitat. In addition, the biological monitor will assess the habitat ahead of the equipment and alert the equipment operator if it is approaching an area with many bumble bees to allow the operator to slow down to 5 miles an hour to allow bumble bees to safely disperse out of the construction area to adjacent foraging habitat.

Impact #2. Western Bumble Bee. Removal of plant species used by Western bumble bee could impact the species, if found to be present, by eliminating nectar sites or harming bees.

Mitigation Measure 2-1, Western Bumble Bee. Incorporate nectar-producing plants favored by Western bumble bee into the landscaping plan for the new residential structure such as Geranium (*Geranium spp.*), thistles (*Cirsium spp.*), and blackberries (*Rubus spp.*). Such vegetation should be planted around the yard next to the house and within immediately adjacent grasslands.

California Freshwater Shrimp. Although a large population of California Freshwater Shrimp has been known to occur within Blucher Creek just downstream from the Review Area, the intermittent stream that passes through the northwest corner of the Review Area does not possess the elements that constitute suitable habitat for the species (shallow pools adjacent to perennial streams). No California

Freshwater Shrimp would occur on the site, therefore, no impacts to California Freshwater Shrimp would result from the land subdivision and the subsequent construction of a single-family residence on the property. See Section 5.3 below regarding buffers and water quality protections.

California Red-legged Frog. Marginally suitable aquatic habitat for CRLF can be found within the intermittent stream that traverses the northwest corner of the property, and potentially suitable upland habitat for the species occurs within the onsite grasslands. As CRLFs are known to occur within an intermittent stream in Bloomfield, approximately 1.7 miles from the Review Area, CRLF presence on the site is possible. Implementation of a development project within the Review Area could impact CRLF if they were present on the property at the time. Therefore, prior to any future construction, a survey of upland portions of the Review Area for CRLF is warranted.

Impact #3. California Red-legged Frog. Grading/ground disturbance at the site could harm an individual CRLF if present during the construction period.

Mitigation Measure 3-1: Within 48 hours of initiation of construction and/or other ground disturbance that may occur in advance of building construction, a qualified biologist shall conduct a preconstruction survey of all areas proposed for residential development to search for any CRLF that may be using upland areas of the site. The qualified biologist will remain onsite at the commencement of construction to monitor any ground disturbing work associated with initial grading activities to ensure that CRLF are not harmed. If a CRLF is found within a construction area, the work will be halted until the frog has left the area of its own volition.

Northwestern Pond Turtle. Northwestern pond turtle (a special status species of reptile) is not known or expected to occur in the Review Area as the seasonal wetlands on the property are not of sufficient depth or duration of inundation to support this species. Northwestern pond turtle occurs in the Laguna de Santa Rosa at locations that are near the Project Site and the non-native grasslands within the Project Site provide marginally suitable upland and potentially nesting habitat for the species. If northwestern pond turtle were to occupy the area proposed for construction, potential impacts to this species could occur. Preconstruction surveys for northwestern pond turtle conducted by a qualified biologist are warranted given the proximity of the Laguna de Santa Rosa to ensure that construction activities do not result in impacts to individuals of this species.

Impact #4. Northwestern Pond Turtle. Grading/ground disturbance at the site could disrupt nesting sites and could harm an individual pond turtle if present during the construction period.

Mitigation Measure 4-1, Preconstruction Northwestern Pond Turtle Survey: Within 48 hours of initiation of construction and/or other ground disturbance that may occur in advance of building construction, a Qualified Biologist shall conduct a preconstruction survey for the northwestern pond turtle and their nests. If northwestern pond turtle or their nests are detected at any time, CDFW shall be notified immediately, and the Qualified Biologist shall relocate the turtle to appropriate habitat within or near the BLD. Turtle nests shall be avoided.

Burrowing Owl. Grassland habitat is present at the site that could support burrowing owl, but burrowing owl is currently not present in the Review Area. Future occupation by the species on the property cannot be ruled out, especially if the property were to be occupied by a greater number of California ground squirrels in the future. If the species was present at the time of construction, disturbances to either nesting or wintering burrowing owl are possible during grading or vegetation removal during construction. Preconstruction surveys for this species are warranted.

Impact #5. Burrowing Owl. Project construction could impact burrowing owl if California ground squirrels were to occupy the site, providing occupiable sites for wintering or nesting by burrowing owl.

Mitigation Measure 5-1, Preconstruction Burrowing Owl Survey. Within 48 hours of initiation of construction and/or other ground disturbance that may occur in advance of building construction, a pre-construction survey for burrowing owl shall be conducted within the Review Area and a minimum of 150 meters from the BLD to the extent properties are accessible. Surveys shall be conducted by a qualified Biologist following the CDFW staff report (CDFW 2012), including survey methods and Biologist qualifications, to establish the status of burrowing owl in the Review Area. If no burrowing owls are detected during the pre-construction survey, no further action is necessary. If construction is delayed or suspended for more than 30 days after the survey, the area shall be resurveyed in accordance with previously described methods.

- If burrowing owl is found to occupy the Review Area during the nonbreeding season (September 1 to January 31), occupied burrows shall be avoided by establishing a no-disturbance buffer zone marked by orange construction fencing a minimum of 100 feet around the burrow. Buffers may be increased to address site-specific conditions using the impact assessment approach described in the CDFW 2012 staff report. If a qualified Biologist determines that the location of an occupied burrow(s) may be impacted even with a 100-foot buffer, or the burrow(s) are in a location(s) in the Review Area where a buffer cannot be established without preventing the proposed project within the Review Area and BLD from moving forward, then a passive relocation effort may be instituted to relocate the individual(s) out of harm's way pursuant to a Burrowing Owl Exclusion Plan prepared in accordance with the CDFW 2012 staff report. The applicant will coordinate the Burrowing Owl Exclusion Plan with CDFW and provide habitat mitigation consistent with the 2012 CDFW Staff Report.
- If burrowing owl is found to be present during the breeding season (February 1 to August 31), the proposed project ground-disturbing activities within the Review Area and BLD shall follow the CDFW 2012 staff report recommended avoidance protocol whereby occupied burrows shall be avoided with a no-disturbance buffer of between 50 meters and 500 meters depending on time of year and disturbance level, as described in the 2012 CDFW staff report. This breeding season buffer zone shall remain until the young have fledged or an unsuccessful nesting attempt is documented.

American Badger. Although American badger has not been observed on the property during field reviews conducted by HBG, the grassland habitat found on the property may be suitable to support American badger, a California Species of Special Concern. If American badger were to occupy the area proposed for construction, potential impacts to this species could occur. Preconstruction surveys for American badger are warranted to ensure that construction activities do not result in impacts to individuals of this species.

Impact #6. American Badger. If American badger were to occupy the area proposed for construction, potential impacts to this species could occur.

Mitigation Measure 6-1, Preconstruction American Badger Survey: Within 48 hours of initiation of construction and/or other ground disturbance that may occur in advance of building construction, a qualified biologist shall conduct a survey to determine the locations of any active winter or natal American badger dens within the Review Area. Potential badger dens located during the survey shall be evaluated (typically with remote cameras) to determine activity status. Any natal dens determined to be used by American badger shall be avoided and a 100-foot buffer marked with orange construction fencing shall be established around the dens until it is determined by the qualified biologist that the den is no longer active, and the young are no longer dependent upon the den for survival. If an individual badger is determined to be using a non-natal den (from June through February), the den shall be protected with construction fencing until the badger has left the den on its own accord, as determined by the biologist through monitoring of the den and/or the use of motion-detection cameras. Once it is determined that the den is vacant, the den can be excavated and upon confirmation that the den is not occupied, the den can be collapsed and construction can commence.

5.3 Sensitive Natural Communities and Wetlands

CEQA Significant Effects Question “b”. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

CEQA Significant Effects Question “c”. Would the project 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?

Of the four sensitive natural communities documented in the CNDDDB within 10 miles of the Review Area (Coastal and Valley Freshwater Marsh, Coastal Brackish Marsh, Northern Hardpan Vernal Pool and Northern Vernal Pool communities), none occur within the Review Area.

The unnamed stream channel that traverses the northwest corner of the Review Area is potentially subject to regulation by the U.S. Army Corps of Engineers under Section 404 of the federal Clean Water Act, the North Coast Regional Water Quality Control Board under the Porter-Cologne Water Pollution

Control Act and the CDFW under Section 1602 of the California Fish and Game Code. Additionally, a deeply incised channel associated with prior landsliding that enters the site near the southeast corner of the property and quickly dissipates to become a shallow depression towards the center of the south end of the Review Area is assumed to contain habitats subject to the regulatory authority of the same federal and state agencies. It is assumed that the creek in the northwest corner of the site and the incised channel in the southeast portion of the site would be preserved under any development plan for the site and protected by setbacks as required by Section 26.65.030 of the Sonoma County Code. The southeast portion of the property would not be developable in any event due to the presence of unstable soils due to the history of landsliding. The biological constraints map of Figure 7 shows both the riparian creek corridor in northwest and the channel in the southeast protected by setbacks of 50 feet as determined from the top of bank as required by the Sonoma County Code. Figure 7 also shows “No Build Areas” in many areas extending beyond the outer boundary of the stream setbacks to provide additional assurance that there is no encroachment into biologically important areas.

No impact on sensitive natural communities, wetlands, or impacts to resident animal populations, including the endangered California Freshwater Shrimp, in downstream areas such as Blucher Creek would result from the proposed lot split and subsequent potential development of a single-family residence in the proposed BLD within the southwestern portion of the Review Area.

Water Quality and Fish and Wildlife. Grading, excavation, placement of fill material, and other ground-disturbing activities associated with construction activities within the Project Site have the potential to cause erosion that would allow elevated levels of sediment to wash into aquatic areas downstream. In the absence of erosion control measures and other measures to protect water quality, elevated turbidity levels from increased sedimentation or increases in other contaminants in stormwater runoff could result in potential impacts to downstream fish and wildlife resources. Such indirect impacts to resident animal populations in downstream areas such as Blucher Creek would not occur for this project because the project proposed in the BLD will include implementation of Best Management Practices (BMPs) consistent with construction and BMP requirements in the most recent version of the California Stormwater Quality Association Stormwater Best Management Handbook. In addition, vegetation will only be cleared from the permitted construction footprint. Areas cleared of vegetation, pavement, or other substrates shall be stabilized as quickly as possible to prevent erosion and runoff. Indirect water quality impacts to resident animal populations and their habitat in downstream areas, including endangered California Freshwater Shrimp, would not result from the proposed project due to the implementation of BMPs within the proposed BLD. No grading, excavation, placement of fill material, and other ground-disturbing activities will occur outside the BLD during construction or post-construction outside of current landuses.

5.4 Animal Populations

CEQA Significant Effects Question “d”. Would the project 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?

With implementation of bird nesting surveys if construction of a new single-family residence is to be undertaken during the nesting season and the planned implementation of Best Management Practices to control erosion during initial grading, within the proposed BLD will not substantially reduce the habitat of a fish or wildlife species; will not cause a fish or wildlife population to drop below self-sustaining levels; and will not threaten to eliminate any animal community. The project also will not 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.

No impacts will occur to sensitive habitats as the creek in the northwest corner of the property and the incised channel in the southeast will be preserved and protected with 50-foot setbacks and self-imposed “No Build Areas” extending beyond the setbacks in many locations. (Appendix A, Figure 7). Potential impacts to special status and other avian species will be mitigated as the applicant is required herein to conduct a preconstruction survey for nesting bird species and for special status species including western bumble bee, California red-legged frog, northwestern pond turtle, burrowing owl and American badger. Any species of fauna that may be displaced during preparation of the site for development should find nearby available habitats.

Wildlife Movement Corridors. The unnamed creek traversing the northwest corner of the Review Area serves as a wildlife corridor. This wildlife corridor will be preserved under the proposed lot split and protected by 50-foot setbacks as required by County Code and other self-imposed “No Build Areas”, therefore no impact to wildlife corridors will result from the proposed land division or subsequent development of a single-family residence in the southwest portion of the site. The proposed project will not affect regional habitat connectivity.

Birds Protected by the MBTA and California Fish and Game Code. Habitats within the Review Area were shown to support a number of bird species during field surveys conducted by HBG. Many of the species noted may use the vegetation within the BLD as a substrate for nesting during the breeding season. If active nests were present in vegetation or other areas within the BLD or adjacent areas within the Review Area during construction operations, direct or indirect impacts could occur to nesting bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code.

CDFW generally considers the nesting season to be from February 1 to August 31 for most bird species. Work related to construction, especially involving the removal of vegetation during the February 1 to August 31 breeding season of birds, could result in the mortality of nesting avian species if they are present. Many species of raptors (birds of prey) are sensitive to human incursion and construction activities, and it is necessary to ensure that nesting raptor species are not present near construction sites. To ensure compliance with the MBTA and the California Fish and Game Code, bird nesting surveys are generally required if construction work requires vegetation removal during the bird nesting season. Required setbacks to protect active nests from construction activity are usually about 500 feet for large raptors such as buteos, 250 feet for small raptors such as accipiters, and 100 feet for passerines (songbirds) and other bird species.

Impact #7: Nesting Birds. If active nests were present in vegetation or other areas within the development portion of the site during construction operations, direct or indirect impacts could occur to nesting bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code.

Mitigation Measure 7-1: Preconstruction Nesting Bird Survey. A preconstruction nesting bird survey shall be conducted by a qualified biologist if grading or vegetation removal occurs during the bird nesting season (February 1-August 31). The survey should be conducted within 48 hours prior to the start of work. The survey should include the entire BLD footprint and areas immediately adjacent to the project work area. If the survey indicates the presence of nesting birds, a buffer should be placed around the nest and marked with orange construction fencing within which no work will be allowed until the young have successfully fledged or the nest has otherwise become inactive. The size of the nest buffer will be determined by the qualified biologist and will be based on the nesting species, its sensitivity to disturbance, and the context of the nest location. In general, typical buffer widths range from 500 feet for large raptors such as buteos, 250 feet for small raptors such as accipiters, and 100 feet for passerines (songbirds) and other bird species. Buffers may be increased or decreased, as appropriate by a qualified biologist. No construction or earth-moving activity shall occur within the established buffer zone until it is determined by the biologist that the young have fledged or that the nesting cycle is otherwise determined to be complete based on monitoring of the active nest.

Bats Protected by the California Fish and Game Code. Bats have the potential to roost in existing vacant or underutilized buildings, other man-made structures, and could be present within structures. Mature trees may show evidence of cavities and/or exfoliating bark that could serve as roost sites for populations of bats or could harbor solitary bats. In general, significant impacts to bats prohibited under the Fish and Game Code could result from disruption of an occupied non-breeding bat roost or the loss of a maternity colony of bats. This may occur through direct disturbance from destruction of a roost site during removal or pruning of trees or an indirect disturbance causing behavioral alterations due to construction noise or vibration, or by increased human activity in the area.

A future development project in the Review Area could affect trees that could harbor bat populations within the riparian zone if an access or outfall needed to be constructed there. In addition, a future project could require removal of the existing house, barn, or other ancillary structures, which could provide suitable habitat for bats. A bat habitat assessment conducted by a bat biologist prior to construction could determine if suitable habitat for bats occurs at the site and allow development of mitigation strategies to achieve humane removal of bat populations if present.

Impact #8. Bats. Future development project in the Review Area could affect trees that could harbor bat populations or could require removal of the existing house, barn, or other ancillary structures, which could provide suitable habitat for bats.

Mitigation Measure 8-1: Preconstruction Bat Measures. To reduce the impacts to bat populations, the following mitigation measures are recommended:

Structures. A qualified bat biologist shall conduct a habitat assessment and surveys for special status species of bats prior to any structure removal. The survey methodology shall include an initial habitat assessment and survey several months before project construction, to facilitate sufficient time to implement the exclusion plan described below, and the types of equipment used for detection.

A bat exclusion plan shall be submitted to CDFW for approval if bats are detected within structures during the above survey. The plan shall be implemented prior to project construction and allow bats to leave the structures unharmed. The plan shall: (1) recognize that both the maternity and winter roosting seasons are vulnerable times for bats and require exclusion outside of these times, generally between March 1 and April 15 or September 1 and October 15 when temperatures are sufficiently warm, and (2) identify suitable areas for excluded bats to disperse or require installation of appropriate dispersal habitat, such as artificial bat houses, prior to project construction, and include an associated management and monitoring plan with implementation funding.

Tree Removal. Prior to any tree removal, a qualified bat biologist shall conduct a habitat assessment for bats. The habitat assessment shall be conducted a minimum of 30 days prior to tree removal and shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, or exfoliating bark for colonial species, and suitable canopy for foliage-roosting species). Trees without suitable habitat for bats can be removed. If suitable habitat trees are found, they shall be flagged or otherwise clearly marked, CDFW shall be notified immediately, and tree trimming or removal shall not proceed without approval in writing from CDFW. Trees with suitable bat habitat may be removed only if: a) presence of bats is presumed, or documented during the surveys described below and removal using the two-step removal process detailed below occurs during seasonal periods of bat activity from approximately March 1 through April 15 and September 1 through October 15, or b) after a qualified bat biologist, under prior written approval of the proposed survey methods by CDFW, conducts night emergence surveys or complete visual examination of roost features that establish absence of roosting bats.

If a two-step removal is used, two-step tree removal shall be conducted over two consecutive days, as follows: 1) the first day (in the afternoon), under direct supervision and instruction by a qualified bat biologist with experience conducting a two-step methodology, tree removal limbs and branches shall be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices or deep bark fissures shall be avoided, and 2) the second day the entire tree shall be removed. If construction occurs during the non-breeding period (typically from June through February).

5.5 Compliance with Local Policies

CEQA Significant Effects Question “e”. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Sonoma County Code. A project within the BLD would not conflict with any local policies related to the protection of natural resources. The Project would be in compliance with all Sonoma County General Plan policies and ordinances listed in Section 3.3, including the stream setback requirements of Sonoma County Code Section 26.65.030. Trees occur within the 10-acre Review Area at 2514 Blucher Valley Road that are protected by Sonoma County Tree Protection Ordinance Sec. 26-88-015. No protected tree would be removed within the building envelope. Mitigation for species of special concern as well as potential nesting birds has been recommended herein and will be implemented, as necessary, depending on the results of required preconstruction surveys.

5.6 Compliance with Conservation Plans

CEQA Significant Effects Question “f”. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Neither the BLD or Review Area is not within an area where the provisions of a Habitat Conservation Plan or Natural Community Conservation Plan would apply.

6.0 REFERENCES

- 16 USC 703-712 Migratory Bird Treaty Act. <https://www.fws.gov/law/migratory-bird-treaty-act-1918>
- 33 U.S.C. 403. *Rivers and Harbors Appropriation Act of 1899*.
- 33 U.S.C. 1344. *Permits for Dredged or Fill Material*.
- 33 CFR, Title 33, Part 328. *Definition of Waters of the United States*.
<https://www.ecfr.gov/current/title-33/chapter-II/part-328>
- 33 CFR Part 329. *Definition of Navigable Waters of the United States*.
<https://www.ecfr.gov/current/title-33/chapter-II/part-329>
- 40 CFR Part 230. *Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material*. http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr230_main_02.tpl
- Barbara, Martin A.; Michael K. Saiki, and Darren Fong. 2009. *Habitat Requirements of the Endangered California Freshwater Shrimp (Syncaris pacifica) in Lagunitas and Olema Creeks, Marin County, California, USA*. Journal of Crustacean Biology. 29 (4): 595–604. doi:10.1651/08-3134.1. October 1, 2009.
- Calflora. 2021. Calflora, the on-line gateway to information about native and introduced wild plants in California. Internet database available at <http://calflora.org/>.
- California Department of Fish and Game. 1994. *A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607 California Fish and Game Code*. Environmental Services Division.
- California Department of Fish and Wildlife, Biogeographic Data Branch, 2021. California Wildlife Habitat Relationship System, Version 10.1.29. Sacramento, CA.
- California Department of Fish and Wildlife. 2010. *List of Vegetation Alliances and Associations*. Vegetation Classification and Mapping Program. September. <https://wildlife.ca.gov/Data/VegCAMP>
- California Department of Fish and Wildlife. 2012. Staff Report on Burrowing Owl Mitigation. Dated March 7, 2012.
- California Department of Fish and Wildlife. 2018. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*. March 20.
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline>
- California Department of Fish and Wildlife, Biogeographic Data Branch, 2021. California Wildlife Habitat Relationship System, Version 10.1.29. Sacramento, CA.
- California Department of Fish and Wildlife. 2024. *List of California terrestrial natural communities recognized by the Natural Diversity Data Base*. <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities>

- California Department of Fish and Wildlife. 2024. *California Natural Diversity Database (CNDDB). State and Federally Listed Endangered, Threatened, and Rare Plants of California*. California Department of Fish and Wildlife. Sacramento, CA. Accessed November 2024.
- California Department of Fish and Wildlife. 2025. *Special Animals List for State of California*. Produced by Biogeographic Data Branch, California Natural Diversity Database, California Department of Fish and Wildlife. Sacramento, CA. List dated July 2025.
- California Native Plant Society, Rare Plant Program. 2024. *Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39)*. Website <http://www.rareplants.cnps.org>
- California State Water Resources Control Board. 2019. *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. Adopted April 2, 2019.
- COSEWIC. 2014. *COSEWIC assessment and status report on the Western Bumble Bee *Bombus occidentalis*, *occidentalis* subspecies (*Bombus occidentalis occidentalis*) and the *mckayi* subspecies (*Bombus occidentalis mckayi*) in Canada*. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 52 pp. (<https://species-registry.canada.ca/index-en.html#/documents/969>).
- Jepson Flora Project (eds.) 2023. Jepson eFlora, <https://ucjeps.berkeley.edu/eflora/> [accessed on Dec 30, 2023].
- Lichvar, Robert and Shawn M. McColley. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual*. (2008).
- Mayer, E. Kenneth and William F. Laudenslayer, Jr., (Eds.) 1988. *A Guide to Wildlife Habitats of California*.
- National Geographic Society. 2017. *Field Guide to the Birds of North America*. Seventh edition. National Geographic Society. Washington, D.C.
- Sawyer, J. O., T. Keeler-Wolf and J.M. Evens. 2009. *A Manual of California Vegetation. Second Edition*. In cooperation with The Nature Conservancy and the California Department of Fish and Game. California Native Plant Society. Sacramento, California.
- Sibley, David A. 2014. *The Sibley Guide to Birds. Second Edition*. National Audubon Society. Chanticleer Press, Inc. New York, N.Y. 624 pp.
- State Water Resources Control Board. 2019. *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. April 2, 2019. https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf
- Stebbins, R.C. 2003. *Western Reptiles and Amphibians*. Peterson Field Guides. Houghton Mifflin Co., Boston. Third edition.

- U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetland Delineation Manual*, Technical Report Y-87-1. Prepared by the Environmental Laboratory, Department of the Army, Waterways Experiment Station, Vicksburg, Miss.
- U.S. Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- US Department of Agriculture, Natural Resources Conservation Service. 1972. *Soil Survey of Sonoma County, California*. <https://archive.org/details/usda-soil-survey-of-sonoma-county-california-1972/page/6/mode/2up>
- US Department of Agriculture, Natural Resources Conservation Service. 2024. *Custom Soil Resource Report*. Web Soil Survey Staff, Natural Resources Conservation Service, <http://websoilsurvey.nrcs.usda.gov>.
- U.S. Fish and Wildlife Service. 2015. *Listings and occurrences for California. Federally listed threatened and endangered plant and animal species in California*. <https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=CA&stateName=California&statusCategory=Listed>
- Williams, P.H., R.W. Thorp, L.L. Richardson, and S.R. Colla. 2014. *Bumble bees of North America: an Identification Guide*. Princeton University Press. 208 pp.
- Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990. *California's Wildlife, Volume II: Birds*. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California

Appendix A

Figures



Figure 1. Review Area Location

2514 Blucher Valley Road
Sonoma County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

Spatial Reference:
Name: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US
Scale: 1:100,000
Date Map Created: 12/4/2024
HBG GIS Analyst: Agie Gilmore & Deland Wing
HBG PM: Terry Huffman, PhD & Greg Huffman & Robert Perrera

Project Data: Huffman, Broadway Group; Basemap: Historical Topographic Map Collection courtesy of the U.S. Geological Survey, Esri

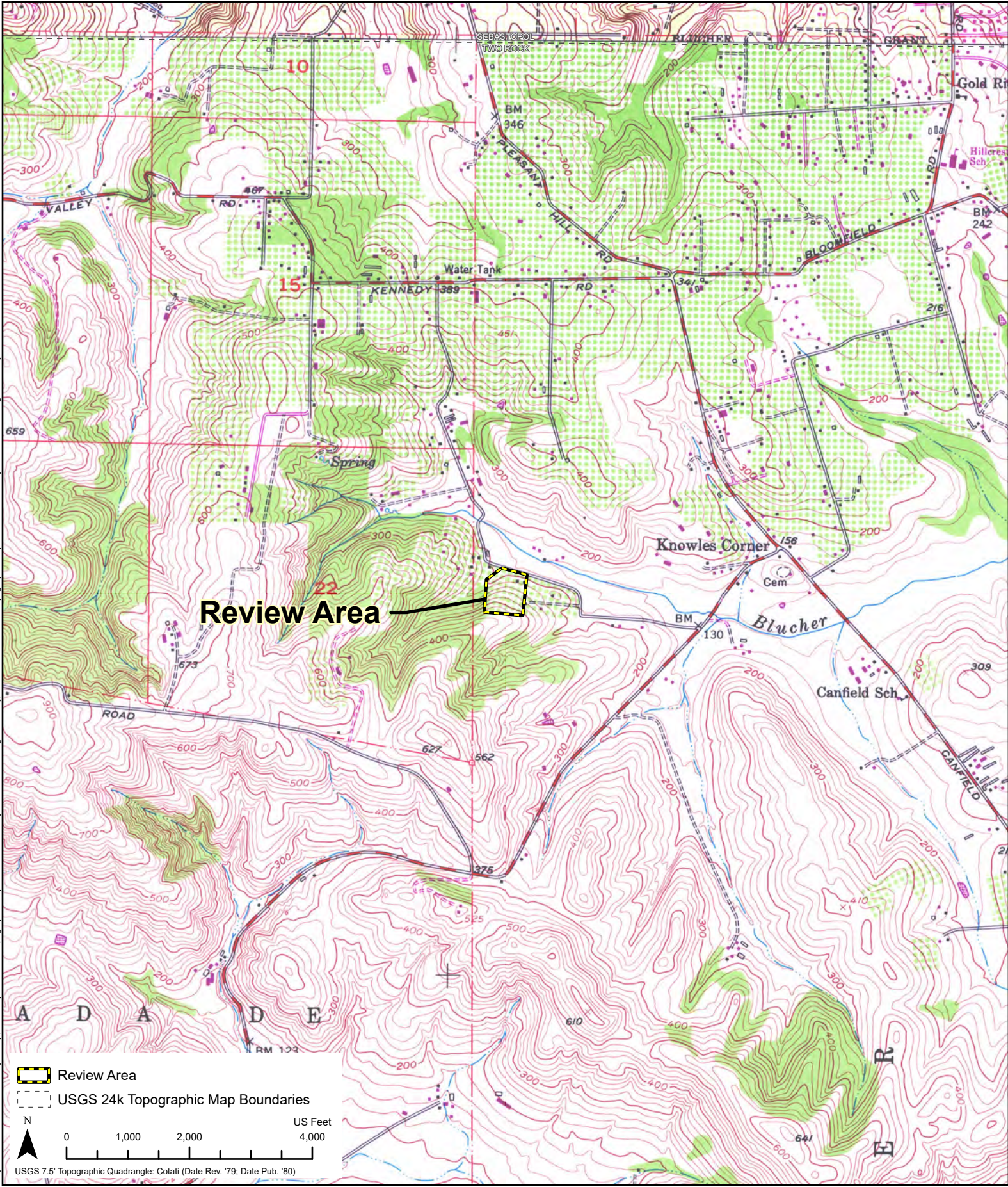


Figure 2. USGS Topographic Map of the Review Area Huffman-Broadway Group, Inc.
2514 Blucher Valley Road
Sonoma County, California

ENVIRONMENTAL REGULATORY CONSULTANTS

Spatial Reference:
Name: NAD 1983 StatePlane California II FIPS 4042 Feet
Scale: 1:24,000
Date Map Created: 12/4/2024
HBG GIS Analyst: Agie Gilmore & Deland Wing
HBG PM: Terry Huffman, PhD & Greg Huffman & Robert Perrera



Project Data: Huffman Broadway Group: Basemap: OpenStreetMap (and) contributors, CC-BY-SA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Pictometry (Google Maps) image captured on 04/22/2023.

Figure 3. Aerial Image of the Review Area
2514 Blucher Valley Road
Sonoma County, California



Figure 4. Vegetation Map

2514 Blucher Valley Road
Sonoma County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

Spatial Reference:
Name: NAD 1983 StatePlane California II FIPS 0402 Feet
Scale: 1:2,000
Date Map Created: 12/4/2024
HBG GIS Analyst: Agie Gilmore & Deland Wing
HBG PM: Terry Huffman, PhD & Greg Huffman & Robert Perra



Figure 5. NRCS Soils Map
2514 Blucher Valley Road
Sonoma County, California



Figure 6. FEMA Flood Zone Mapping

2514 Blucher Valley Road
Sonoma County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

Spatial Reference:
Name: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US
Scale: 1:10,000
Date Map Created: 12/4/2024
HBG GIS Analyst: Agie Gilmore & Deland Wing
HBG PM: Terry Huffman, PhD & Greg Huffman & Robert Perrera



Figure 7. Preliminary Biotic Assessment Mapping

2514 Blucher Valley Road Project
Sonoma County, California

Appendix B
Biological Species Tables

TABLE 1. VASCULAR PLANT SPECIES OBSERVED IN THE REVIEW AREA DURING 2023, 2024, and 2025 PLANT SURVEYS			
Scientific Name Organized by Families ¹	Common Name	Native/Not Native	California Invasive Plant Council Invasive Plant Rating ²
Anacardiaceae			
<i>Toxicodendron diversilobum</i>	Poison oak	Native	
Apiaceae			
<i>Conium maculatum</i>	Poison hemlock	Not Native	Moderate
Araliaceae			
<i>Hedera canariensis</i>	Canary Island ivy	Not Native	High
Asteraceae			
<i>Baccharis pilularis</i>	Coyote brush	Native	
<i>Carduus pycnocephalus</i>	Italian thistle	Not Native	Moderate
<i>Cirsium vulgare</i>	Bull thistle	Not Native	Moderate
<i>Erigeron sumatrensis</i>	Tropical horseweed	Not Native	Not Classified
<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	Not Native	Not Classified
<i>Senecio glomeratus</i>	Cutleaf burnwood	Not Native	Moderate
<i>Sonchus oleraceus</i>	Common sowthistle	Not Native	Not Classified
<i>Taraxacum officinale</i>	Dandelion	Not Native	Not Classified
Brassicaceae			
<i>Brassica nigra</i>	Black mustard	Not Native	Moderate
<i>Raphanus sativus</i>	Wild radish	Not Native	Limited
Convolvulaceae			
<i>Convolvulus arvensis</i>	Field bindweed	Not Native	Not Classified
Cupressaceae			
<i>Cryptomeria japonica</i>	Japanese cedar	Not Native	Not Classified
<i>Hesperocypariss macrocarpa</i>	Monterey cypress	Not Native	Not Classified
<i>Sequoia sempervirens</i>	Coast redwood	Native	
Dennstaedtiaceae			
<i>Pteridium aquilinum</i>	Western bracken fern	Native	
Fabaceae			
<i>Cytisus scoparius</i>	Scotch broom	Not Native	High
<i>Medicago polymorpha</i>	Bur clover	Not Native	Limited
<i>Vicia sativa</i>	Common vetch	Not Native	Not Classified
Fagaceae			
<i>Quercus kelloggii</i>	California black oak	Native	
Geraniaceae			
<i>Erodium botrys</i>	Broad leaf filaree	Not Native	Not Classified
<i>Geranium dissectum</i>	Cutleaf geranium	Not Native	Limited
Juglandaceae			
<i>Juglans hindsii</i>	Northern California black walnut	Native	
Lamiaceae			
<i>Lavendula stoechas</i>	French lavender	Not Native	Not Classified
<i>Rosmarinus officinalis</i>	Rosemary	Not Native	Not Classified
<i>Umbellularia californica</i>	California bay	Native	
Malvaceae			
<i>Malva nicaeensis</i>	Bull mallow	Not Native	Not Classified
Myrsinaceae			
<i>Lysimachia arvensis</i>	Scarlet pimpernel	Not Native	Not Classified
<i>Eucalyptus globulus</i>	Blue gum	Not Native	Limited
Pinacea			
<i>Pinus sp.</i>	Pine	Not Native	Not Classified
Plantaginaceae			
<i>Plantago lanceolata</i>	English plantain	Not Native	Limited
Poaceae			
<i>Avena fatua</i>	Wild oat	Not Native	Moderate
<i>Bromus diandrus</i>	Ripgut brome	Not Native	Moderate
<i>Bromus hordeaceus</i>	Soft brome	Not Native	Limited
<i>Elymus glaucus</i>	Blue wildrye	Native	

TABLE 1. VASCULAR PLANT SPECIES OBSERVED AT THE REVIEW AREA DURING 2023, 2024, and 2025 PLANT SURVEYS			
Scientific Name Organized by Families ¹	Common Name	Native/Not Native	California Invasive Plant Council Invasive Plant Rating ²
<i>Festuca perennis</i>	Italian ryegrass	Not Native	Moderate
<i>Holcus lanatus</i>	Velvet grass	Not Native	Moderate
<i>Hordeum murinum</i>	Wall barley	Not Native	Moderate
<i>Poa pratensis</i>	Kentucky blue grass	Not Native	Limited
Rosaceae			
<i>Malus sp.</i>	Apple	Not Native	Not Classified
<i>Pyrus sp.</i>	Pear	Not Native	Not Classified
<i>Rosa sp.</i>	Rose bush	Not Native	Not Classified
<i>Rubus armeniacus</i>	Himalaya berry	Not Native	High
<i>Rubus ursinus</i>	California Blackberry	Native	
Salicaceae			
<i>Salix lasiolepis</i>	Arroyo willow	Native	
Scrophulariaceae			
<i>Buddleja davidii</i>	Butterfly bush	Not Native	Watch
Sapindaceae			
<i>Acer sp.</i>	Maple	Not Native	Not Classified
<i>Acer palmatum</i>	Japanese maple	Not Native	Not Classified
Ulmaceae			
<i>Ulmus sp.</i>	Elm	Not Native	Not Classified
¹ Taxonomic Source: https://ucjeps.berkeley.edu/eflora/eflora ; ² Cal-IPC Profile ratings: Invasive Plants – California Invasive Plant Council (cal-ipc.org) ; Cal-IPC rating categories: • High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically. • Moderate – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread. • Limited – These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.			

TABLE 2. SPECIAL STATUS PLANTS KNOWN TO OCCUR WITHIN A 10-MILE RADIUS OF THE PROJECT SITE

SPECIES Common Name Scientific Name	STATUS Federal / State Rare Plant Rank² Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Blasdale's bent grass (<i>Agrostis blasdalei</i>)	-- / -- / 1B.2 1B.2 G2G3 / S2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	Coastal dunes, coastal bluff scrub, coastal prairie. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 5-365 m.	No Potential. No suitable habitat is found in the Review Area.	None
Sonoma alopecurus (<i>Alopecurus aequalis</i> var. <i>sonomensis</i>)	Endangered / -- / 1B.1 1B.1 G5T1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Freshwater marshes and swamps, riparian scrub. Wet areas, marshes, and riparian banks, with other wetland species. 3-360 m.	No Potential. No suitable habitat is found in the Review Area.	None
bent-flowered fiddleneck (<i>Amsinckia lunaris</i>)	-- / -- / 1B.2 1B.2 G3 / S3 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley SB_UCSC-UC Santa Cruz	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 3-795 m.	No Potential. No suitable habitat is found in the Review Area.	None
Baker's manzanita (<i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>)	-- / Rare / 1B.1 1B.1 G2T1 / S1 SB_UCSC-UC Santa Cruz	Broadleafed upland forest, chaparral. Often on serpentine. 75-245 m.	No Potential. No suitable habitat is found in the Review Area.	None
Vine Hill manzanita (<i>Arctostaphylos densiflora</i>)	-- / Endangered / 1B.1 1B.1 G1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	Chaparral. Acid marine sand. 60-75 m.	No Potential. No suitable habitat is found in the Review Area.	None
Rincon Ridge manzanita (<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>)	-- / -- / 1B.1 1B.1 G3T1 / S1 SB_UCSC-UC Santa Cruz	Chaparral, cismontane woodland. Highly restricted endemic to red rhyolites in Sonoma County. 90-375 m.	No Potential. No suitable habitat is found in the Review Area.	None
big-scale balsamroot (<i>Balsamorhiza macrolepis</i>)	-- / -- / 1B.2 1B.2 G2 / S2 BLM_S-Sensitive USFS_S-Sensitive	Chaparral, valley and foothill grassland, cismontane woodland. Sometimes on serpentine. 35-1465 m.	No Potential. No suitable habitat is found in the Review Area.	None

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SPECIES Common Name Scientific Name	STATUS Federal / State Rare Plant Rank² Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Sonoma sunshine (<i>Blennosperma bakeri</i>)	Endangered / Endangered / 1B.1 G1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Vernal pools, valley and foothill grassland. Vernal pools and swales. 10-290 m.	No Potential. No suitable habitat is found in the Review Area.	None
Thurber's reed grass (<i>Calamagrostis crassiglumis</i>)	-- / -- / 2B.1 2B.1 G5Q / S2	Coastal scrub, marshes and swamps. Usually in marshy swales surrounded by grassland or coastal scrub. 5-50 m.	No Potential. No suitable habitat is found in the Review Area.	None
coastal bluff morning-glory (<i>Calystegia purpurata ssp. saxicola</i>)	-- / -- / 1B.2 1B.2 G4T2T3 / S2S3 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	Coastal dunes, coastal scrub, coastal bluff scrub, north coast coniferous forest. 4-165m.	No Potential. No suitable habitat is found in the Review Area.	None
Pitkin Marsh paintbrush (<i>Castilleja uliginosa</i>)	-- / Endangered / 1A 1A GX / SX	Freshwater marsh. Last known remaining plant died in 1987; was known from overgrown freshwater marsh. 60 m.	No Potential. No suitable habitat is found in the Review Area.	None
Rincon Ridge ceanothus (<i>Ceanothus confusus</i>)	-- / -- / 1B.1 1B.1 G1 / S1 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	Closed-cone coniferous forest, chaparral, cismontane woodland. Known from volcanic or serpentine soils, dry shrubby slopes. 150-1280 m.	No Potential. No suitable habitat is found in the Review Area.	None
Vine Hill ceanothus (<i>Ceanothus foliosus var. vineatus</i>)	-- / -- / 1B.1 1B.1 G3T1 / S1	Chaparral. Sandy, acidic soil in chaparral. 45-305 m.	No Potential. No suitable habitat is found in the Review Area.	None
holly-leaved ceanothus (<i>Ceanothus purpureus</i>)	-- / -- / 1B.2 1B.2 G2 / S2 SB_SBBG-Santa Barbara Botanic Garden	Chaparral, cismontane woodland. Rocky, volcanic slopes. 140-720 m.	No Potential. No suitable habitat is found in the Review Area.	None

TABLE 2. SPECIAL STATUS PLANTS KNOWN TO OCCUR WITHIN A 10-MILE RADIUS OF THE PROJECT SITE

SPECIES Common Name Scientific Name	STATUS Federal / State Rare Plant Rank² Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
pappose tarplant (<i>Centromadia parryi</i> ssp. <i>parryi</i>)	-- / -- / 1B.2 1B.2 G3T2 / S2 BLM_S-Sensitive	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland. Vernal mesic, often alkaline sites. 1-500 m.	No Potential. No suitable habitat is found in the Review Area.	None
woolly-headed spineflower (<i>Chorizanthe cuspidata</i> var. <i>villosa</i>)	-- / -- / 1B.2 1B.2 G2T2 / S2	Coastal scrub, coastal dunes, coastal prairie. Sandy places near the beach. 5-60 m.	No Potential. No suitable habitat is found in the Review Area.	None
Sonoma spineflower (<i>Chorizanthe valida</i>)	Endangered / Endangered / 1B.1 1B.1 G1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal prairie. Sandy soil. 5-50 m.	No Potential. No suitable habitat is found in the Review Area.	None
Franciscan thistle (<i>Cirsium andrewsii</i>)	-- / -- / 1B.2 1B.2 G3 / S3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub, broadleafed upland forest, coastal scrub, coastal prairie. Sometimes serpentine seeps. 0-295 m.	No Potential. No suitable habitat is found in the Review Area.	None
Raiche's red ribbons (<i>Clarkia concinna</i> ssp. <i>raichei</i>)	-- / -- / 1B.1 1B.1 G5?T1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	Coastal bluff scrub. Highly exposed rocky bluffs with a near-vertical slope. 0-100 m.	No Potential. No suitable habitat is found in the Review Area.	None
Vine Hill clarkia (<i>Clarkia imbricata</i>)	Endangered / Endangered / 1B.1 1B.1 G1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	Chaparral, valley and foothill grassland. Acidic, sandy soil. 60-80 m.	No Potential. No suitable habitat is found in the Review Area.	None
Pennell's bird's-beak (<i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>)	Endangered / Rare / 1B.2 1B.2 G4G5T1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Closed-cone coniferous forest, chaparral. In open or disturbed areas on serpentine within forest or chaparral. 90-215 m.	No Potential. No suitable habitat is found in the Review Area.	None

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Peruvian dodder (<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>)	-- / -- / 2B.2 2B.2 G5T4? / SH	Marshes and swamps (freshwater). Freshwater marsh. 15-280 m.	No Potential. No suitable habitat is found in the Review Area.	None
Baker's larkspur (<i>Delphinium bakeri</i>)	Endangered / Endangered / 1B.1 1B.1 G1 / S1 SB_UCBG-UC Botanical Garden at Berkeley	Broadleafed upland forest, coastal scrub, valley and foothill grassland. Only site occurs on NW-facing slope, on decomposed shale. Historically known from grassy areas along fencelines too. 105-205 m.	No Potential. No suitable habitat is found in the Review Area.	None
golden larkspur (<i>Delphinium luteum</i>)	Endangered / Rare / 1B.1 1B.1 G1 / S1 SB_UCBG-UC Botanical Garden at Berkeley	Chaparral, coastal prairie, coastal scrub. North-facing rocky slopes. 5-100 m.	No Potential. No suitable habitat is found in the Review Area.	None
western leatherwood (<i>Dirca occidentalis</i>)	-- / -- / 1B.2 1B.2 G2 / S2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 20-640 m.	No Potential. No suitable habitat is found in the Review Area.	None
dwarf downingia (<i>Downingia pusilla</i>)	-- / -- / 2B.2 2B.2 GU / S2	Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 1-490 m.	No Potential. No suitable habitat is found in the Review Area.	None
swamp harebell (<i>Eastwoodiella californica</i>)	-- / -- / 1B.2 1B.2 G3 / S3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, freshwater marsh, north coast coniferous forest. Bogs and marshes in a variety of habitats; uncommon where it occurs. 1-520 m.	No Potential. No suitable habitat is found in the Review Area.	None
Greene's narrow-leaved daisy (<i>Erigeron greenei</i>)	-- / -- / 1B.2 1B.2 G2? / S2? BLM_S-Sensitive	Chaparral. Serpentine and volcanic substrates, generally in shrubby vegetation. 90-835 m.	No Potential. No suitable habitat is found in the Review Area.	None

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SPECIES Common Name Scientific Name	STATUS Federal / State Rare Plant Rank² Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
fragrant fritillary (<i>Fritillaria liliacea</i>)	-- / -- / 1B.2 1B.2 G2 / S2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 3-385 m.	No Potential. No suitable habitat is found in the Review Area.	None
blue coast gilia (<i>Gilia capitata ssp. chamissonis</i>)	-- / -- / 1B.1 1B.1 G5T2 / S2 SB_UCBG-UC Botanical Garden at Berkeley	Coastal dunes, coastal scrub. 3-200 m.	No Potential. No suitable habitat is found in the Review Area.	None
woolly-headed gilia (<i>Gilia capitata ssp. tomentosa</i>)	-- / -- / 1B.1 1B.1 G5T2 / S2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub, valley and foothill grassland, riparian woodland. Rocky outcrops, sometimes serpentine. 6-290 m.	No Potential. No suitable habitat is found in the Review Area.	None
dark-eyed gilia (<i>Gilia millefoliata</i>)	-- / -- / 1B.2 1B.2 G2 / S2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal dunes. 1-60 m.	No Potential. No suitable habitat is found in the Review Area.	None
congested-headed hayfield tarplant (<i>Hemizonia congesta ssp. congesta</i>)	-- / -- / 1B.2 1B.2 G5T2 / S2 SB_UCBG-UC Botanical Garden at Berkeley	Valley and foothill grassland. Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 5-520 m.	No Potential. No suitable habitat is found in the Review Area.	None
short-leaved evax (<i>Hesperevax sparsiflora var. brevifolia</i>)	-- / -- / 1B.2 1B.2 G4T3 / S3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats. 0-640 m.	No Potential. No suitable habitat is found in the Review Area.	None
Point Reyes horkelia (<i>Horkelia marinensis</i>)	-- / -- / 1B.2 1B.2 G2 / S2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 2-775 m.	No Potential. No suitable habitat is found in the Review Area.	None

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thin-lobed horkelia (<i>Horkelia tenuiloba</i>)	-- / -- / 1B.2 1B.2 G2 / S2 BLM_S-Sensitive SB_CalBG/RSABG-California/ Rancho Santa Ana Botanic Garden	Broadleafed upland forest, chaparral, valley and foothill grassland. Sandy soils; mesic openings. 45-640 m.	No Potential. No suitable habitat is found in the Review Area.	None
Burke's goldfields (<i>Lasthenia burkei</i>)	Endangered / Endangered / 1B.1 1B.1 G1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	Vernal pools, meadows and seeps. Most often in vernal pools and swales. 15-580 m.	No Potential. No suitable habitat is found in the Review Area.	None
Baker's goldfields (<i>Lasthenia californica ssp. bakeri</i>)	-- / -- / 1B.2 1B.2 G3T1 / S1	Closed-cone coniferous forest, coastal scrub, meadows and seeps, marshes and swamps. Openings. 60-520 m.	No Potential. No suitable habitat is found in the Review Area.	None
perennial goldfields (<i>Lasthenia californica ssp. macrantha</i>)	-- / -- / 1B.2 1B.2 G3T2 / S2 BLM_S-Sensitive SB_CalBG/RSABG-California/ Rancho Santa Ana Botanic Garden	Coastal bluff scrub, coastal dunes, coastal scrub. 5-185 m.	No Potential. No suitable habitat is found in the Review Area.	None
Contra Costa goldfields (<i>Lasthenia conjugens</i>)	Endangered / -- / 1B.1 1B.1 G1 / S1 SB_UCBG-UC Botanical Garden at Berkeley	Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 1-450 m.	No Potential. No suitable habitat is found in the Review Area.	None
legenere (<i>Legenere limosa</i>)	-- / -- / 1B.1 1B.1 G2 / S2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley	Vernal pools. In beds of vernal pools. 1-1005 m.	No Potential. No suitable habitat is found in the Review Area.	None
rose leptosiphon (<i>Leptosiphon rosaceus</i>)	-- / -- / 1B.1 1B.1 G1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub. 10-140 m.	No Potential. No suitable habitat is found in the Review Area.	None

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SPECIES Common Name Scientific Name	STATUS Federal / State Rare Plant Rank² Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Pitkin Marsh lily (<i>Lilium pardalinum ssp. pitkinense</i>)	Endangered / Endangered / 1B.1 1B.1 G5T1 / S1 SB_BerrySB-Berry Seed Bank SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	Cismontane woodland, meadows and seeps, marshes and swamps. Saturated, sandy soils with grasses and shrubs. 45-65 m.	No Potential. No suitable habitat is found in the Review Area.	None
Sebastopol meadowfoam (<i>Limnanthes vinculans</i>)	Endangered / Endangered / 1B.1 1B.1 G1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	Meadows and seeps, vernal pools, valley and foothill grassland. Swales, wet meadows and marshy areas in valley oak savanna; on poorly drained soils of clays and sandy loam. 15-115 m.	No Potential. No suitable habitat is found in the Review Area.	None
marsh microseris (<i>Microseris paludosa</i>)	-- / -- / 1B.2 1B.2 G2 / S2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 3-610 m.	No Potential. No suitable habitat is found in the Review Area.	None
Baker's navarretia (<i>Navarretia leucocephala ssp. bakeri</i>)	-- / -- / 1B.1 1B.1 G4T2 / S2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils. 3-1680 m.	No Potential. No suitable habitat is found in the Review Area.	None
North Coast semaphore grass (<i>Pleuropogon Hooverianus</i>)	-- / Threatened / 1B.1 1B.1 G2 / S2 BLM_S-Sensitive SB_BerrySB-Berry Seed Bank SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Broadleafed upland forest, meadows and seeps, north coast coniferous forest. Wet grassy, usually shady areas, sometimes freshwater marsh; associated with forest environments. 45-1160 m.	No Potential. No suitable habitat is found in the Review Area.	None
Oregon polemonium (<i>Polemonium carneum</i>)	-- / -- / 2B.2 2B.2 G3G4 / S2	Coastal prairie, coastal scrub, lower montane coniferous forest. 15-1525 m.	No Potential. No suitable habitat is found in the Review Area.	None
Cunningham Marsh cinquefoil (<i>Potentilla uliginosa</i>)	-- / -- / 1A 1A GX / SX	Freshwater marshes and swamps. Found in permanent, oligotrophic wetland. 30-40 m.	No Potential. No suitable habitat is found in the Review Area.	None

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white beaked-rush (<i>Rhynchospora alba</i>)	-- / -- / 2B.2 2B.2 G5 / S2 IUCN_LC-Least Concern	Bogs and fens, meadows and seeps, marshes and swamps. Freshwater marshes and sphagnum bogs. 60-1875 m.	No Potential. No suitable habitat is found in the Review Area.	None
California beaked-rush (<i>Rhynchospora californica</i>)	-- / -- / 1B.1 1B.1 G1 / S1 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	Bogs and fens, marshes and swamps, lower montane coniferous forest, meadows and seeps. Freshwater seeps and open marshy areas. 45-270 m.	No Potential. No suitable habitat is found in the Review Area.	None
brownish beaked-rush (<i>Rhynchospora capitellata</i>)	-- / -- / 2B.2 2B.2 G5 / S2 IUCN_LC-Least Concern	Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest. Mesic sites. 45-1710 m.	No Potential. No suitable habitat is found in the Review Area.	None
round-headed beaked-rush (<i>Rhynchospora globularis</i>)	-- / -- / 2B.1 2B.1 G5 / S1	Marshes and swamps. Freshwater marsh. 45-60 m.	No Potential. No suitable habitat is found in the Review Area.	None
Point Reyes checkerbloom (<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>)	-- / -- / 1B.2 1B.2 G5T2 / S2	Marshes and swamps. Freshwater marshes near the coast. 5-95 m.	No Potential. No suitable habitat is found in the Review Area.	None
purple-stemmed checkerbloom (<i>Sidalcea malviflora</i> ssp. <i>purpurea</i>)	-- / -- / 1B.2 1B.2 G4G5T1 / S1 BLM_S-Sensitive	Broadleafed upland forest, coastal prairie. 15-85 m.	No Potential. No suitable habitat is found in the Review Area.	None
Scouler's catchfly (<i>Silene scouleri</i> ssp. <i>scouleri</i>)	-- / -- / 2B.2 2B.2 G5T4T5 / S2S3	Coastal bluff scrub, coastal prairie, valley and foothill grassland. 5-315 m.	No Potential. No suitable habitat is found in the Review Area.	None

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Santa Cruz microseris (<i>Stebbinsoseris decipiens</i>)	-- / -- / 1B.2 1B.2 G2 / S2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Open areas in loose or disturbed soil, usually derived from sandstone, shale or serpentine, on seaward slopes. 90-750 m.	No Potential. No suitable habitat is found in the Review Area.	None
whiteworm lichen (<i>Thamnolia vermicularis</i>)	-- / -- / 2B.1 2B.1 G5 / S1	Chaparral, valley and foothill grassland. On rocks derived from Wilson Ranch formation sandstone.	No Potential. No suitable habitat is found in the Review Area.	None
two-fork clover (<i>Trifolium amoenum</i>)	Endangered / -- / 1B.1 1B.1 G1 / S1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley SB_USDA-US Dept of Agriculture	Valley and foothill grassland, coastal bluff scrub. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 5-310 m.	No Potential. No suitable habitat is found in the Review Area.	None
Santa Cruz clover (<i>Trifolium buckwestiorum</i>)	-- / -- / 1B.1 1B.1 G2 / S2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz SB_USDA-US Dept of Agriculture	Coastal prairie, broadleafed upland forest, cismontane woodland. Moist grassland. Gravelly margins. 30-805 m.	No Potential. No suitable habitat is found in the Review Area.	None
saline clover (<i>Trifolium hydrophilum</i>)	-- / -- / 1B.2 1B.2 G2 / S2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 1-335 m.	No Potential. No suitable habitat is found in the Review Area.	None
San Francisco owl's-clover (<i>Triphysaria floribunda</i>)	-- / -- / 1B.2 1B.2 G2? / S2?	Coastal prairie, coastal scrub, valley and foothill grassland. On serpentine and non-serpentine substrate (such as at Pt. Reyes). 1-150 m.	No Potential. No suitable habitat is found in the Review Area.	None
coastal triquetrella (<i>Triquetrella californica</i>)	-- / -- / 1B.2 1B.2 G2 / S2 USFS_S-Sensitive	Coastal bluff scrub, coastal scrub. Grows within 30m from the coast in coastal scrub, grasslands and in open gravels on roadsides, hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. 20-1175 m.	No Potential. No suitable habitat is found in the Review Area.	None

TABLE 2. SPECIAL STATUS PLANTS KNOWN TO OCCUR WITHIN A 10-MILE RADIUS OF THE PROJECT SITE

SPECIES Common Name Scientific Name	STATUS Federal / State Rare Plant Rank² Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Methuselah's beard lichen (<i>Usnea longissima</i>)	-- / -- / 4.2 4.2 G5 / S4	North coast coniferous forest, broadleaved upland forest. Grows in the "redwood zone" on tree branches of a variety of trees, including big leaf maple, oaks, ash, Douglas-fir, and bay. 45-1465 m in California.	No Potential. No suitable habitat is found in the Review Area.	None
oval-leaved viburnum (<i>Viburnum ellipticum</i>)	-- / -- / 2B.3 2B.3 G4G5 / S3	Chaparral, cismontane woodland, lower montane coniferous forest. 215-1400 m.	No Potential. No suitable habitat is found in the Review Area.	None

Determination of Occurrence Potential. Following the desktop review and field surveys, HBG assessed the potential for the occurrence of special status species on the Project site. Biological conditions (vegetation communities, wildlife habitats, disturbances, etc.) and the habitat and life cycle requirements of special status species identified for analysis in the desktop review were considered. "Recent" occurrences are defined as observed within the past 30 years. Based on these considerations, species were assigned to the following categories:

No Potential: Habitat on and adjacent to the site is clearly nonpotential for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Unlikely: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is nonpotential or of very poor quality. The species is not likely to be found on the site.

Moderate Potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is nonpotential. The species has a moderate probability of being found on the site.

High Potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly potential. The species has a high probability of being found on the site.

Present: Species is observed on the site or has been recorded (i.e., CNDDDB, other reports) on the site recently.

NOTE: The potential for bird species were further distinguished into those that may: 1) nest within or near the Project site; 2) forage within or near the Project site; and/or 3) occur on or near the Project site only as transients during migratory flights or other dispersal events.

1. Source: California Natural Diversity Data Base, Natural Heritage Division, California Department of Fish and Wildlife for the Two Rock 7.5 Minute Quadrangle Map and surrounding areas, information dated December 2024.

2. California Rare Plant Ranks

1A - Presumed extirpated in California and either rare or extinct elsewhere

1B - Rare or Endangered in California and elsewhere

2A - Presumed extirpated in California, but more common elsewhere

2B - Rare or Endangered in California, but more common elsewhere

3 - Plants for which we need more information – Review list

4 - Plants of limited distribution – Watch list

3. Threat Code Extensions:

.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 – Moderately threatened in California (20-80% of occurrences threatened / moderate degree and immediacy of threat)

.3 – Not very threatened in California (under 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

TABLE 3. SPECIAL STATUS ANIMALS KNOWN TO OCCUR WITHIN A 10-MILE RADIUS OF THE PROJECT SITE

SPECIES Taxonomic Class Common Name Scientific Name	STATUS Federal / State Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Insects Blennosperma vernal pool andrenid bee (<i>Andrena blennospermatis</i>)	-- / -- G2 / S1	This bee is oligolectic on vernal pool Blennosperma. Bees nest in the uplands around vernal pools.	No Potential. No suitable habitat is found on the Review Area.	None
Mollusks California floater (<i>Anodonta californiensis</i>)	-- / -- G3 / S2? USFS_S-Sensitive	Freshwater lakes and slow-moving streams and rivers. Taxonomy under review by specialists. Generally in shallow water.	No Potential. No suitable habitat is found on the Review Area.	None
Mollusks Oregon floater (<i>Anodonta oregonensis</i>)	-- / -- G5 / S2? IUCN_LC-Least Concern		No Potential. No suitable habitat is found on the Review Area.	None
Insects obscure bumble bee (<i>Bombus caliginosus</i>)	-- / -- G2G3 / S1S2 IUCN_VU-Vulnerable	Coastal areas from Santa Barbara County north to Washington state. Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.	No Potential. No suitable habitat is found on the Review Area.	None
Insects western bumble bee (<i>Bombus occidentalis</i>)	-- / Candidate Endangered G3 / S1 IUCN_VU-Vulnerable USFS_S-Sensitive	Once common and widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Moderate Potential. Suitable habitat may be present in the Review Area and the species has been documented as occurring in the vicinity of the site.	A preconstruction survey shall be conducted for this species in all areas of potential development within 48 hours of initiation of construction of a residential project.
Insects American bumble bee (<i>Bombus pensylvanicus</i>)	-- / -- G3G4 / S2 IUCN_VU-Vulnerable	Long-tongued; forages on a wide variety of flowers including vetches (Vicia), clovers (Trifolium), thistles (Cirsium), sunflowers (Helianthus), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.	No Potential. No suitable habitat is found on the Review Area.	None
Insects Marin elfin butterfly (<i>Callophrys mossii marinensis</i>)	-- / -- G4T1 / S2	Found only in the redwood forest areas of Marin County. Larvae collected and reared on Sedum spathulifolium.	No Potential. No suitable habitat is found on the Review Area.	None

TABLE 3. SPECIAL STATUS ANIMALS KNOWN TO OCCUR WITHIN A 10-MILE RADIUS OF THE PROJECT SITE

SPECIES Taxonomic Class Common Name Scientific Name	STATUS Federal / State Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Insects globose dune beetle (<i>Coelus globosus</i>)	-- / -- G1G2 / S1S2 IUCN_VU-Vulnerable	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	No Potential. No suitable habitat is found on the Review Area.	None
Insects monarch - California overwintering population (<i>Danaus plexippus plexippus pop. 1</i>)	Candidate / -- G4T1T2Q / S2 IUCN_EN-Endangered USFS_S-Sensitive	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	No Potential. No suitable habitat is found on the Review Area.	None
Insects bumblebee scarab beetle (<i>Lichnanthe ursina</i>)	-- / -- G2 / S2	Inhabits coastal sand dunes from Sonoma County south to San Mateo County. Usually flies close to sand surface near the crest of the dunes.	No Potential. No suitable habitat is found on the Review Area.	None
Crustaceans California linderiella (<i>Linderiella occidentalis</i>)	-- / -- G2G3 / S2S3 IUCN_NT-Near Threatened	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.	No Potential. No suitable habitat is found on the Review Area.	None
Insects Myrtle's silverspot butterfly (<i>Speyeria zerene myrtleae</i>)	Endangered / -- G5T1 / S1	Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County. Larval foodplant thought to be <i>Viola adunca</i> .	No Potential. No suitable habitat is found on the Review Area.	None
Crustaceans California freshwater shrimp (<i>Syncaris pacifica</i>)	Endangered / Endangered G2 / S2 IUCN_EN-Endangered	Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main streamflow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	No Potential. No suitable habitat is found on the Review Area.	None
Mollusks Marin hesperian (<i>Vespericola marinensis</i>)	-- / -- G2 / S2	Found in moist spots in coastal brushfield and chaparral vegetation in Marin County. Under leaves of cow-parsnip, around spring seeps, in leafmold along streams, in alder woods and mixed evergreen forest.	No Potential. No suitable habitat is found on the Review Area.	None

TABLE 3. SPECIAL STATUS ANIMALS KNOWN TO OCCUR WITHIN A 10-MILE RADIUS OF THE PROJECT SITE

SPECIES Taxonomic Class Common Name Scientific Name	STATUS Federal / State Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Fish tidewater goby (<i>Eucyclogobius newberryi</i>)	Endangered / -- G3 / S3 AFS_EN-Endangered CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	No Potential. No suitable habitat is found on the Review Area.	None
Fish coho salmon - central California coast ESU (<i>Oncorhynchus kisutch</i> pop. 4)	Endangered / Endangered G5T2Q / S2 AFS_EN-Endangered	Federal listing = pops between Punta Gorda and San Lorenzo River. State listing = pops south of Punta Gorda. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	No Potential. No suitable habitat is found on the Review Area.	None
Fish steelhead - central California coast DPS (<i>Oncorhynchus mykiss irideus</i> pop. 8)	Threatened / -- G5T3Q / S3 AFS_TH-Threatened CDFW_SSC-Species of Special Concern	DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays.	No Potential. No suitable habitat is found on the Review Area.	None
Fish longfin smelt - San Francisco Bay-Delta DPS (<i>Spirinchus thaleichthys</i> pop. 2)	Endangered / Threatened G5TNRQ / S1 IUCN_LC-Least Concern	Pelagic and anadromous within the Sacramento-San Joaquin River Delta, San Francisco Bay, and Gulf of the Farallones. Spawns in lower freshwater reaches of Sacramento and San Joaquin Rivers. First year in Suisun Bay; later SF Bay or Gulf of the Farallones. Occurs in salinities ranging from pure freshwater to pure saltwater; typically salinities ranging from 14-28 parts per thousand (ppt). Generally occupies water temperatures from 61-68F, with spawning occurring in water temperatures from 41-58F.	No Potential. No suitable habitat is found on the Review Area.	None
Amphibians California tiger salamander - Sonoma County DPS (<i>Ambystoma californiense</i> pop. 3)	Endangered / Threatened G2G3T2 / S2 CDFW_WL-Watch List IUCN_VU-Vulnerable	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	No Potential. No suitable habitat is found on the Review Area.	None
Amphibians California giant salamander (<i>Dicamptodon ensatus</i>)	-- / -- G2G3 / S2S3 CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	No Potential. No suitable habitat is found on the Review Area.	None
Amphibians foothill yellow-legged frog - north coast DPS (<i>Rana boylei</i> pop. 1)	-- / -- G3T4 / S4 BLM_S-Sensitive CDFW_SSC-Species of Special Concern USFS_S-Sensitive	Northern Coast Ranges north of San Francisco Bay Estuary, Klamath Mountains, and Cascade Range including watershed subbasins (HU 8) Lower Pit, Battle Creek, Thomes Creek, and Big Chico Creek in Lassen, Shasta, Tehama, and Butte Counties. Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	No Potential. No suitable habitat is found on the Review Area.	None

TABLE 3. SPECIAL STATUS ANIMALS KNOWN TO OCCUR WITHIN A 10-MILE RADIUS OF THE PROJECT SITE

SPECIES Taxonomic Class Common Name Scientific Name	STATUS Federal / State Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Amphibians California red-legged frog (<i>Rana draytonii</i>)	Threatened / -- G2G3 / S2S3 CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Moderate Potential. Suitable habitat may be present in the Review Area and the species has been documented as occurring in the vicinity of the site.	A preconstruction survey shall be conducted for this species in all areas of potential development within 48 hours of initiation of construction of a residential project.
Reptiles northwestern pond turtle (<i>Actinemys marmorata</i>)	Proposed Threatened / -- G2 / SNR BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive		Moderate Potential. Suitable habitat may be present in the Review Area and the species has been documented as occurring in the vicinity of the site.	A preconstruction survey shall be conducted for this species in all areas of potential development within 48 hours of initiation of construction of a residential project.
Birds Cooper's hawk (<i>Accipiter cooperii</i>)	-- / -- G5 / S4 CDFW_WL-Watch List IUCN_LC-Least Concern	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	No Potential. No suitable habitat is found on the Review Area.	None
Birds tricolored blackbird (<i>Agelaius tricolor</i>)	-- / Threatened G1G2 / S2 BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered USFWS_BCC-Birds of Conservation Concern	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	No Potential. No suitable habitat is found on the Review Area.	None
Birds great egret (<i>Ardea alba</i>)	-- / -- G5 / S4 CDF_S-Sensitive IUCN_LC-Least Concern	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	No Potential. No suitable habitat is found on the Review Area.	None
Birds burrowing owl (<i>Athene cunicularia</i>)	-- / Candidate Endangered G4 / S2 BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Moderate Potential. Suitable habitat may be present in the Review Area and the species has been documented as occurring in the vicinity of the site.	A preconstruction survey shall be conducted for this species in all areas of potential development within 48 hours of initiation of construction of a residential project.
Birds western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	Threatened / Endangered G5T2T3 / S1 BLM_S-Sensitive USFS_S-Sensitive	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	No Potential. No suitable habitat is found on the Review Area.	None

TABLE 3. SPECIAL STATUS ANIMALS KNOWN TO OCCUR WITHIN A 10-MILE RADIUS OF THE PROJECT SITE

SPECIES Taxonomic Class Common Name Scientific Name	STATUS Federal / State Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Birds black swift (<i>Cypseloides niger</i>)	-- / -- G4 / S3 CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFWS_BCC-Birds of Conservation Concern	Coastal belt of Santa Cruz and Monterey counties; central and southern Sierra Nevada; San Bernardino and San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	No Potential. No suitable habitat is found on the Review Area.	None
Birds white-tailed kite (<i>Elanus leucurus</i>)	-- / -- G5 / S3S4 BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	No Potential. No suitable habitat is found on the Review Area.	None
Birds American peregrine falcon (<i>Falco peregrinus anatum</i>)	Delisted / Delisted G4T4 / S3S4 CDF_S-Sensitive	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	No Potential. No suitable habitat is found on the Review Area.	None
Birds California brown pelican (<i>Pelecanus occidentalis californicus</i>)	Delisted / Delisted G4T3T4 / S3 BLM_S-Sensitive USFS_S-Sensitive	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	No Potential. No suitable habitat is found on the Review Area.	None
Mammals pallid bat (<i>Antrozous pallidus</i>)	-- / -- G4 / S3 BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	No Potential. No suitable habitat is found on the Review Area.	None
Mammals Sonoma tree vole (<i>Arborimus pomo</i>)	-- / -- G3 / S3 CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	North coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood and montane hardwood-conifer forests. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	No Potential. No suitable habitat is found on the Review Area.	None
Mammals North American porcupine (<i>Erethizon dorsatum</i>)	-- / -- G5 / S3 IUCN_LC-Least Concern	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges. Wide variety of coniferous and mixed woodland habitat.	No Potential. No suitable habitat is found on the Review Area.	None

TABLE 3. SPECIAL STATUS ANIMALS KNOWN TO OCCUR WITHIN A 10-MILE RADIUS OF THE PROJECT SITE

SPECIES Taxonomic Class Common Name Scientific Name	STATUS Federal / State Global / State Rank Other State / Federal Status	Habitat/Range	Potential Site Occurrence	Recommended Action
Mammals hoary bat (<i>Lasiurus cinereus</i>)	-- / -- G3G4 / S4 IUCN_LC-Least Concern	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	No Potential. No suitable habitat is found on the Review Area.	None
Mammals western red bat (<i>Lasiurus frantzii</i>)	-- / -- G4 / S3 CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	No Potential. No suitable habitat is found on the Review Area.	None
Mammals American badger (<i>Taxidea taxus</i>)	-- / -- G5 / S3 CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Moderate Potential. Suitable habitat may be present in the Review Area and the species has been documented as occurring in the vicinity of the site.	A preconstruction survey shall be conducted for this species in all areas of potential development within 48 hours of initiation of construction of a residential project.

Determination of Occurrence Potential. Following the desktop review and field surveys, HBG assessed the potential for the occurrence of special status species on the Project site. Biological conditions (vegetation communities, wildlife habitats, disturbances, etc.) and the habitat and life cycle requirements of special status species identified for analysis in the desktop review were considered. "Recent" occurrences are defined as observed within the past 30 years. Based on these considerations, species were assigned to the following categories:

No Potential: Habitat on and adjacent to the site is clearly nonpotential for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Unlikely: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is nonpotential or of very poor quality. The species is not likely to be found on the site.

Moderate Potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is nonpotential. The species has a moderate probability of being found on the site.

High Potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly potential. The species has a high probability of being found on the site.

Present: Species is observed on the site or has been recorded (i.e., CNDDB, other reports) on the site recently.

NOTE: The potential for bird species were further distinguished into those that may: 1) nest within or near the Project site; 2) forage within or near the Project site; and/or 3) occur on or near the Project site only as transients during migratory flights or other dispersal events.

1. Source: California Natural Diversity Data Base, Natural Heritage Division, California Department of Fish and Wildlife for the Two Rock 7.5 Minute Quadrangle Map and surrounding areas, information dated December 2024.

2. Status Codes:

Federal

FE = Federally listed Endangered
FT = Federally listed Threatened
FPE = Federally Proposed Endangered
FPT = Federally Proposed Threatened
FC = Federal Candidate Species
BCC = USFWS Bird Species of Conservation Concern

State

SE = California State-listed Endangered
ST = California State-listed Threatened
SR = California State Rare
SCE = California State Candidate Endangered
SCT = California State Candidate Threatened
CFP = California Fully Protected
SSC = CDFW Species of Special Concern
WL = CDFW Watch List Species

Appendix C

IPaC Information

IPaC resource list

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

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

Location

Sonoma County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building

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

NOT FOR CONSULTATION

Endangered species

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

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

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

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

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

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

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

-
1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Birds

NAME	STATUS
Marbled Murrelet <i>Brachyramphus marmoratus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl <i>Strix occidentalis caurina</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle <i>Chelonia mydas</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6199	Threatened
Northwestern Pond Turtle <i>Actinemys marmorata</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS
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California Red-legged Frog *Rana draytonii***Threatened**

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/2891>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus***Candidate**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Crustaceans

NAME

STATUS

California Freshwater Shrimp *Syncaris pacifica***Endangered**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/7903>

Flowering Plants

NAME

STATUS

Burke's Goldfields *Lasthenia burkei***Endangered**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4338>

Pitkin Marsh Lily *Lilium pardalinum* ssp. *pitkinense***Endangered**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/570>

Sebastopol Meadowfoam *Limnanthes vinculans***Endangered**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/404>

Showy Indian Clover *Trifolium amoenum***Endangered**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6459>**Sonoma Alopecurus** *Alopecurus aequalis* var. *sonomensis***Endangered**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/557>**Sonoma Sunshine** *Blennosperma bakeri***Endangered**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1260>

Critical habitats

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

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>

- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

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

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

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

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

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

Breeding Season (■)

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

Survey Effort (|)

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

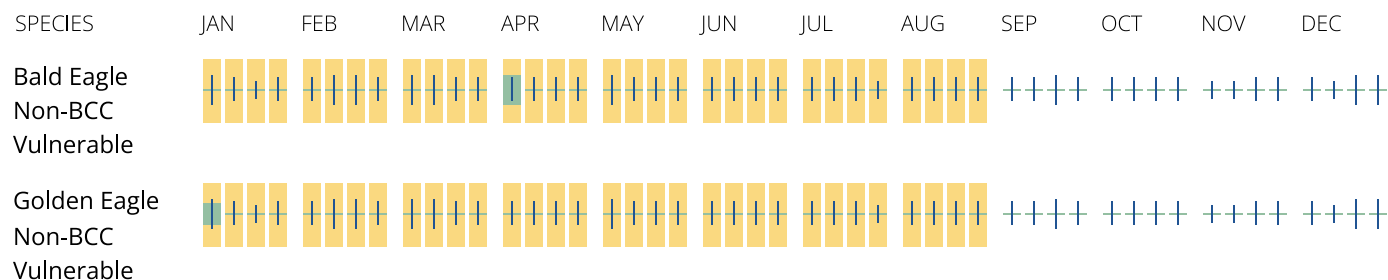
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

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

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

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

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

NAME	BREEDING SEASON
Allen's Hummingbird <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15

Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow <i>Passerculus sandwichensis beldingi</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole <i>Icterus bullockii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
California Thrasher <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Heermann's Gull <i>Larus heermanni</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 31
Northern Harrier <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Nuttall's Woodpecker <i>Dryobates nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Santa Barbara Song Sparrow <i>Melospiza melodia graminea</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5
Tricolored Blackbird <i>Agelaius tricolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Western Grebe <i>Aechmophorus occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Western Gull <i>Larus occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 21 to Aug 25

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

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

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

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

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

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

Breeding Season (■)

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

Survey Effort (I)

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

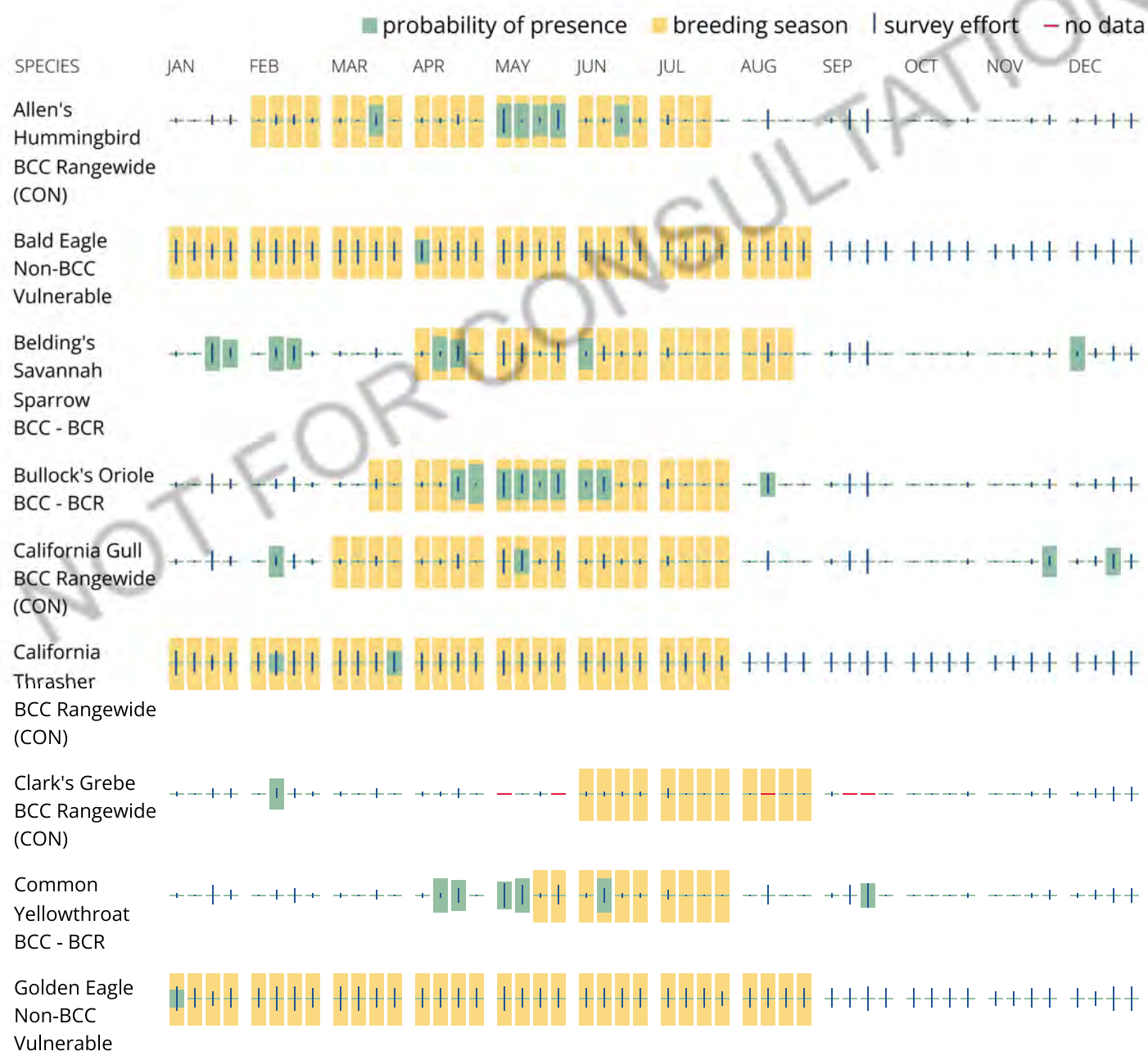
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

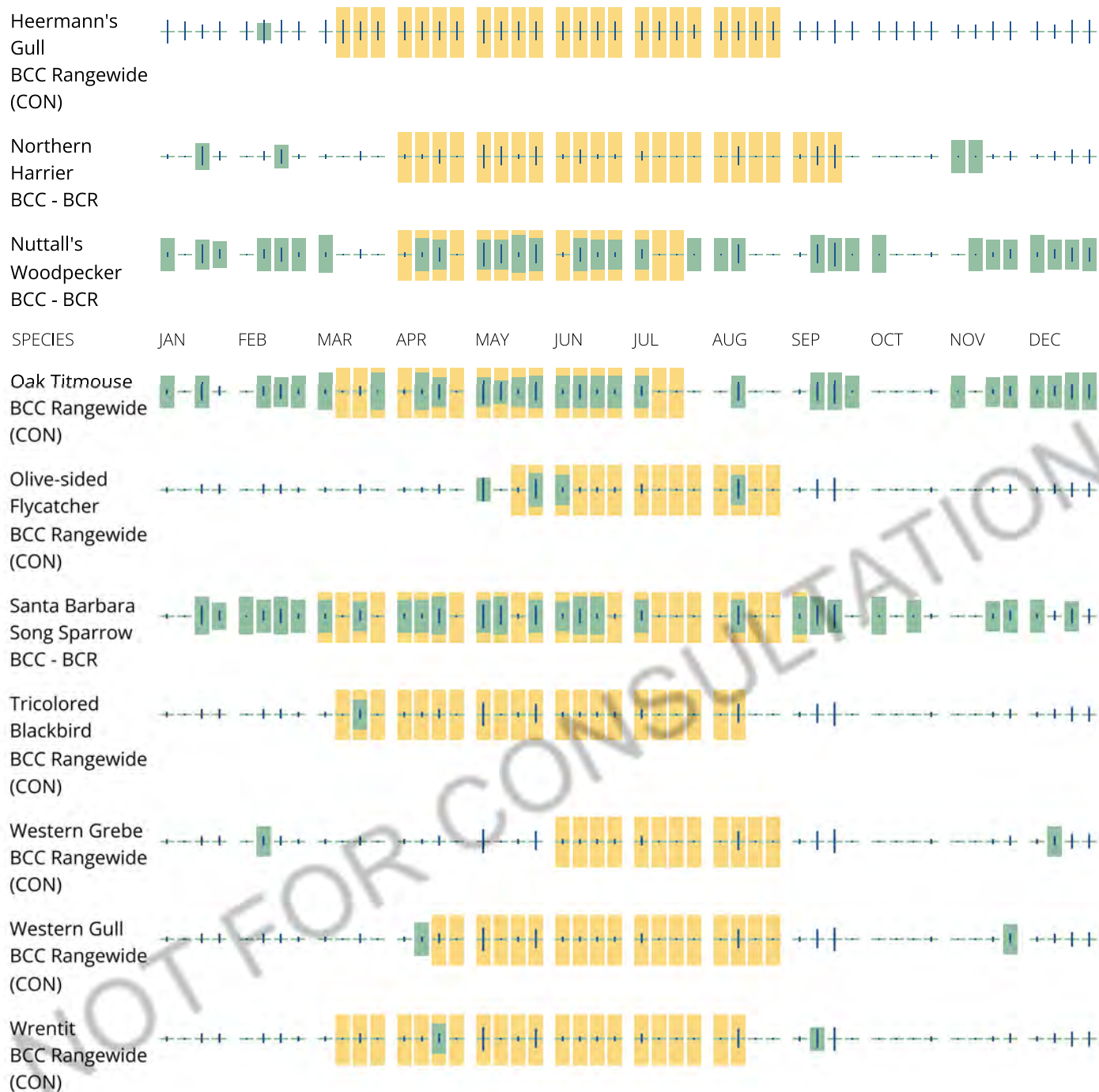
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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





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

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

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

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

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

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

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

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

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

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

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

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

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or

submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

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

NOT FOR CONSULTATION