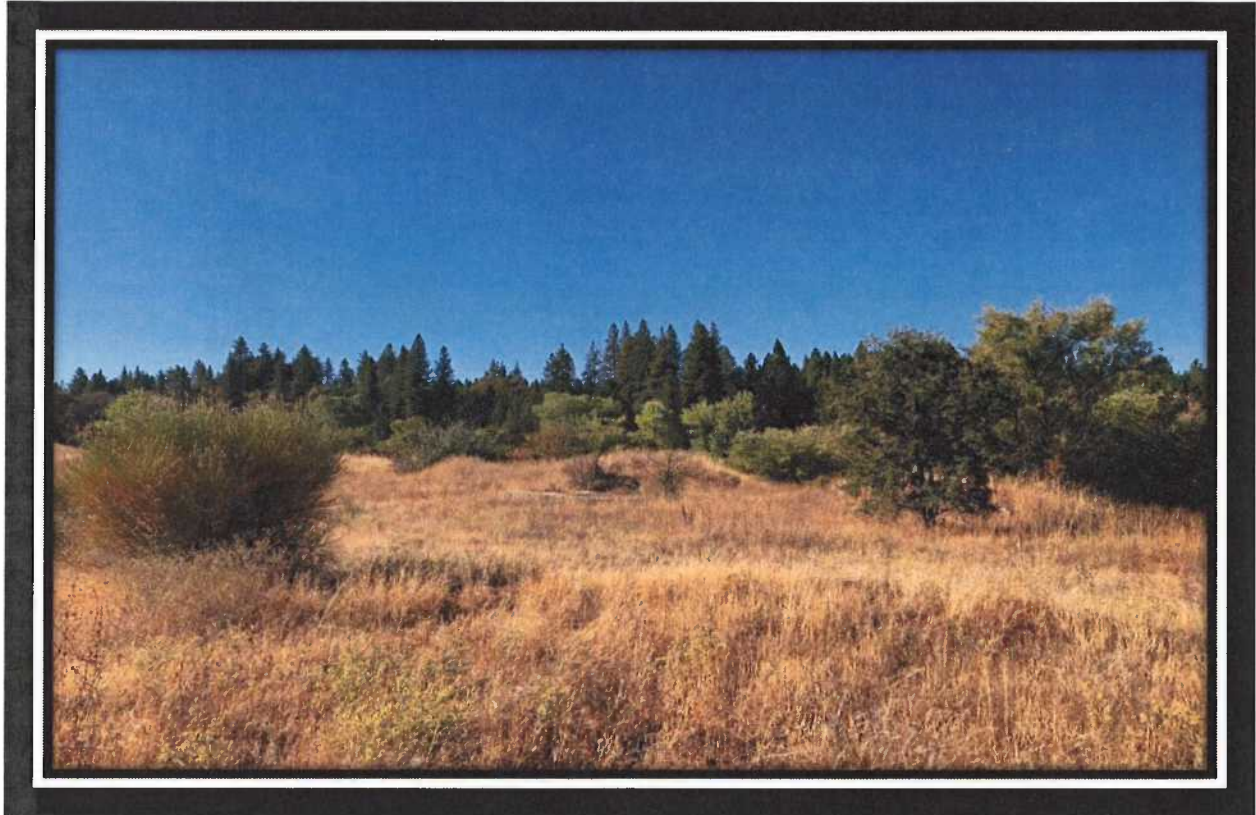


Rare Earth Development Project

11750 La Bar Meadows Road, City of Grass Valley, CA

(APN: 22-160-06 and 22-160-33)

Biological Resources Inventory and Jurisdictional Determination



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1.0 INTRODUCTION

Greg Matuzak, a Wildlife Biologist, and Carolyn Chainey-Davis, a Botanist and Wetlands Ecologist, conducted a reconnaissance-level biological resources survey and required background research related to biological resources to develop this Biological Resources Inventory. In addition, potential California Department of Fish and Wildlife (CDFW) and United States Army Corps of Engineers (Corps) jurisdiction was assessed within the Rare Earth Development Project (Project) area located at 11750 La Barr Meadows Road within the City of Grass Valley in Nevada County, California (APN: 22-160-06, 25.49 acres and APN: 22-160-33, 8.3 acres). The proposed Project is located within the two parcels and is approximately 33.79 acres in total size. As part of the delineation of potential "waters of the U.S.," including wetlands, within the Project area, Corps protocols for mapping the jurisdictional boundaries of such features subject to regulation under the Clean Water Act (CWA) were implemented. Therefore, this report includes a Biological Resources Inventory and Jurisdictional Determination for the Project area.

The Project area covered under this Biological Resources Inventory and Jurisdictional Determination is located along La Barr Meadows Road approximately 2.25 miles to the south of downtown Grass Valley in Nevada County. It is located on the western side of La Barr Meadows Road (see Appendix A for Project Vicinity and Project Location Figures). The surrounding area includes residential, industrial, and commercial developments and land uses and State Hwy 49 (SR 49) borders the Project area to the west. The Project area does not contain any previously permitted residences; however, the Project area does contain a Nevada Irrigation District (NID) water pipeline dedicated easement for an existing NID water pipeline that crosses the Project area.

There are currently two entrances into the Project area along La Barr Meadows Road, one of which is paved for access to existing parking and storage areas maintained within a fenced area within the eastern section of the Project area. The other entrance is located in the southeastern area of the Project area and also partially paved and connects to the western section of the Project area located adjacent to SR 49. The proposed development within the Project area will include several industrial lots along with related infrastructure for the development. See the attached photo log (Appendix B) for photos documenting existing conditions within the Project area. The proposed Project per the Project Conceptual Plan (dated April 2018) includes up to 14 industrial lots ranging between 1.00 and 5.19 acres as well as an approximate 2.47-acre encapsulation pad (Lot A on Project Conceptual Plan). Common Open Space within the Project area will be approximately 9.51 acres and there is a proposed trail system through the Project area. A proposed sewer easement and a proposed sewer maintenance access road are also included within the Project Conceptual Plan.

The Project area is located at approximately 2,4000 feet above Mean Sea Level (MSL). The Project area is relatively flat in the central and eastern sections with gentle to medium slopes towards the western portions of the Project area. The highest point within the Project area is located within the southeastern corner of the Project area is approximately 2,455 feet above MSL and the lowest point within the Project area is approximately 2,355 feet above MSL and is located within the northwestern section of the Project area where one of two seasonal ponds is located (see attached Project Location Figure in Appendix A as well as the Project Vicinity Figure). In general, the Project area slopes gently towards the western area towards the lowest areas where the two seasonal ponds are located and then goes up in elevation from the ponds west towards SR 49. Little Wolf Creek runs along the western side of SR 49 and no other streams were identified within the Project area.

In addition, a small, intermittent drainage enters the Project area through a culvert under La Barr Meadows Road. Once the drainage enters the Project area it feeds a large, mapped seasonal forested and shrub-scrub wetland that is dominated by riparian associated trees and vegetation. The mapped seasonal forested and shrub-scrub wetland is dominated by thick Himalayan blackberry bushes and large willow trees and also contains other wetland associated vegetation within and along the fringes of the mapped seasonal forested and shrub-scrub wetland. Only the two seasonal ponds are identified within the National Wetland Inventory (NWI) and National Hydrography Data (NHD) covering the Project area. mapping covering the Project area either. The seasonal pond within the northwestern corner is mapped as a freshwater pond within the NWI and a water body (none) within the NHD. The second seasonal pond located to the south of the larger pond in the northwest corner of the Project area is only mapped under the NHD and is identified as a water body (none).

The Project area is covered mostly by the following habitat types: Ponderosa Pine, Annual Grassland, and Foothill Riparian wetland habitats. Foothill Riparian wetland habitats are associated with the intermittent drainage along the southern edge of La Bar Meadows Road as well as with the leaking NID water pipeline along the southern edge of La Bar Meadows Road. The Foothill Riparian wetland habitats have been documented as seasonal forested and shrub-scrub wetland, dominated by riparian wetland associated species as stated above.

Previous assessments of sensitive biological resources within the Project area have been developed. A Biological Resources Assessment for the Nevada County Corporation Yard Project was developed by Galloway Enterprises (July 2014) and the reporting covers the southern sections of the Project area included in this Biological Resources Inventory and Jurisdictional Determination. Additionally, surveys for the California Red-Legged Frog (CRLF) were conducted for the South Hill Project in Nevada County, CA and those surveys along with a letter report detailing the results was

implemented and developed by Foothill Associates (December 9, 2003). The Foothill Associates reporting included all of the Project area within their assessment area and concluded that it is very unlikely CRLF would occur within the Project area. Galloway Enterprises also concludes that it is very unlikely that CRFL would occur within the southern section of the Project area covered in their reporting. Galloway Enterprises also concludes that there is a very low likelihood of California black rail occurring within the southern section of the Project area covered in their reporting and that no federally or State of California listed plant or other species have the potential to occur within the southern section of the Project area covered in their reporting.

The purpose of this Biological Resources Inventory and Jurisdictional Determination is to identify the location and extent of sensitive biological resources within the Project area, including special-status plant and wildlife species, and the presence of drainage/stream/wetland features that could potentially meet the Corps criteria as a "waters of the United States," including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). In addition, this Biological Resources Inventory and Jurisdictional includes an assessment streams within the Project area that could be under the jurisdiction of CDFW Code Section 1600 *et. seq.*

For the purposes of this Biological Resources Inventory and Jurisdictional Determination, potential impacts to sensitive species and wetlands subject to local land use and other regulatory permit requirements are evaluated based on the presence of such sensitive resources within the Project area and the potential to impact such sensitive resources based on the Project layout and design. If avoidance of such sensitive biological resources is infeasible as part of Project design, then minimization of impacts to sensitive biological resources such as wetlands and special-status species would require mitigation measures to be implemented (see Section 5.0 of this Biological Resources Inventory and Jurisdictional Determination).

This Biological Resources Inventory and Jurisdictional Determination also evaluates the City of Grass Valley General Plan and Development Code requirements for any parcel(s) subject to land use changes. Grass Valley Development Code requires a Resource Management Plan for encroachment into a 30-foot stream setback to identify potential impacts to a stream due to any development within the setback. The Resource Management Plan identifies minimization and mitigation measures to implement to limit the potential impact to the stream in the case that development is approved within the 30-foot stream setback. This includes Best Management Practices (BMPs), including erosion control and sedimentation measures to avoid water quality impacts. The proposed Project will not be located within 30-feet from any stream resources given the lack of such resources within the Project area. In addition, the large mapped wetland areas and the two seasonal ponds will be avoided by any Project area development and they will be placed in a parcel set aside as Open Space.

2.0 REGULATORY OVERVIEW AND DEFINITIONS

Federal Regulations

Section 404 of the Clean Water Act

The United States Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA) regulate the discharge of dredge or fill material into waters of the U.S. under Section 404 of the Clean Water Act (CWA). Waters of the United States include wetlands and lakes, rivers, streams, and their tributaries. Wetlands are defined for regulatory purposes as areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated solid conditions (33 CFR 328.3, 40 CFR 230.3). Project proponents must obtain a permit from the Corps for all discharges of fill material into waters of the U.S., including wetlands, before proceeding with a proposed action. The Project area contains a large riparian wetland that would be subject to regulation under the CWA if dredge or fill material are placed within any jurisdictional wetlands.

Section 401 of the Clean Water Act

CWA Section 401 compliance is required for any project requiring a federal action (i.e. Corps permit or federal funding) with construction that could have an impact to surface water quality. The Project area contains a large riparian wetland that would be subject to regulation under the CWA if dredge or fill material are placed within any jurisdictional wetlands.

Endangered Species Act of 1973

For the proposed Project area, consultation with the USFWS would be necessary if a proposed action may affect suitable habitat for a federally listed species. This consultation would proceed under Section 7 of the Endangered Species Act (ESA) if a federal action is part of the proposed action or through Section 10 of the ESA if no such nexus were available (USFWS, 1973). There are two federally protected plant species under the ESA that have been previously documented within 3 miles of the Project area (CDFW 2019). Stebbins' morning glory (*Calystegia stebbinsii*) and Pine Hill Flannelbush (*Fremontodendron decumbens*) are each ESA listed species as Endangered (USFWS 2019, CDFW 2019); however, the Project area does not contain suitable habitat for either federally protected species.

Migratory Bird Treaty Act of 1918 and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (MBTA) (16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (BAGEPA) (16 USC Section 668) protect certain species of

birds from direct "take" (i.e. harm or harassment as described above). The MBTA protects migrant bird species from take through setting hunting limits and seasons and protecting occupied nests and eggs (USFWS, 1918). BAGEPA prohibits the take or commerce of any part of the bald or golden eagles (USFWS, 1940). The USFWS administers both Acts and reviews actions that may affect species protected under each Act.

State Regulations

California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) has jurisdiction over plant and wildlife species listed as threatened or endangered under section 2080 of the CDFW Code. The California Endangered Species Act (CESA) prohibits take of state-listed threatened and endangered species. The state Act differs from the federal Act in that it does not include habitat destruction in its definition of *take*. The CDFW defines *take* as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CDFW may authorize *take* under the CESA through Sections 2081 agreements. If the results of a biological survey indicate that a state-listed species would be affected by the project, the CDFW would issue an Agreement under Section 2081 of the CDFW Code and would establish a Memorandum of Understanding for the protection of state-listed species. CDFW maintains lists for Candidate-Endangered Species and Candidate-Threatened Species.

California black rail (*Laterallus jamaicensis coturniculis*) is listed as threatened under CESA and the Scadden Flat checkerbloom (*Sidalcea stipularis*) and Stebbins' morning glory (*Calystegia stebbinsii*) are both CESA listed species as Endangered and each of these species has been previously documented within 3 miles of the Project area. Pine Hill Flannelbush (*Fremontodendron decumbens*) is listed as a Rare species by CDFW and has been previously documented within 3 miles of the Project area. No other candidate species or CESA protected species has been documented within 3 miles of the Project area (CDFW 2019); however, none of these species has been documented within the Project area. The Project area does contain marginal suitable habitat for Scadden Flat checkbloom within the mapped riparian wetlands, but the species is considered absent from the Project area given it has not been identified during previous surveys conducted by Gallaway Enterprises (dated July 2014) and for the development of this Biological Resources Inventory and Jurisdictional Determination.

California Special Species of Concern, Fully Protected, and Special Status Species

California designates Species of Special Concern (SSC) as species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational

or educational values. These species do not have the same legal protection as listed species but may be added to official lists in the future (CDFW 2014). For example, the coast horned lizard (*Phrynosoma blainvillii*) and western pond turtle (*Actinemys marmorata*) are designated as SSC and the coast horned lizard is evaluated as part of this Biological Resources Inventory and Jurisdictional Determination.

In the 1960's California created a designation to provide additional protection to rare species. This designation remains today and is referred to as "Fully Protected" species, and those listed "may not be taken or possessed at any time" (CDFW 2014c). The California black rail (*Laterallus jamaicensis coturniculus*) has been known to occur in Nevada County and has been identified within 3 miles of the Project area and is designated as Fully Protected by the state of California.

California special status species are identified by the California Natural Diversity Database (CNDDDB) and includes those species considered to be of greatest conservation need by the CDFW (CDFG 2011).

Streambed Alteration Agreements: CDFG Code Section 1600 et seq.

CDFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes under Sections 1600–1616. CDFW has the authority to regulate all work under the jurisdiction of the State of California that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

In practice, CDFW marks its jurisdictional limit at the top of the stream or lake bank, or the outer edge of the riparian vegetation (where present) and extends its jurisdiction to the edge of the 100-year floodplain.

Porter-Cologne Water Quality Control Act & Section 1601 – Section 1607 of CDFG Code

These acts and codes pertain to projects with potential impacts to water quality or waterways. The proposed Project site contains waters of the State as defined by the State Water Resources Board (State Board 2014), including the large riparian wetlands and the two seasonal ponds within the Project area.

California Department of Fish and Game Code Sections 3503, 3503.5, and 3800: Nesting Migratory Bird and Raptors

Sections 3503, 3503.5, and 3800 of the CDFG Code prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance within active nesting territories be reduced or eliminated during critical phases of the nesting cycle (approximately March 1 – August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g. killing or abandonment of eggs or young), or the loss of habitat upon which birds are

dependent, is considered "taking", and is potentially punishable by fines and/or imprisonment (LCC 2013). Such *taking* would also violate federal law protecting migratory birds (e.g. MBTA above).

California Environmental Quality Act Guidelines Section 15380

California Environmental Quality Act (CEQA) Guidelines section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria. This section was included in the guidelines to deal primarily with situations in which a public agency is reviewing a project that may have a significant effect on, for example a "candidate species" that has not yet been listed by the USFWS or CDFW. CEQA, therefore, enables an agency to protect a species from significant project impacts until the respective government agencies have had an opportunity to list the species as protected, if warranted (CNRA 2012).

Plants appearing on the California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) are considered to meet CEQA's Section 15380 criteria. Ranks include: 1A) plants presumed extirpated in California and either rare or extinct elsewhere, 1B) plant rare, threatened, or endangered in California and elsewhere, 2A) plants presumed extirpated in California, but more common elsewhere, and 2B) plants rare, threatened, or endangered in California, but more common elsewhere. Impacts to these species would therefore be considered "significant" requiring mitigation.

State Oak Woodland Regulations

State laws that regulate protection of oak woodlands include Professional Forester's Law (PFL) and CEQA according to Public Resources Code Section 21083.4. Oak woodlands are defined as areas having 10% oak canopy cover or greater. "Oaks" are defined in Public Resources Code Section 21083.4 as a native tree species in the genus *Quercus*, that is 5 inches diameter at breast height (DBH) or greater. The Oak Woodlands Conservation Act (SB 1334) provides funding for the conservation and protection of oak woodlands in California. Oak trees and oak woodland habitats are protected under both the State and the City of Grass Valley Tree Preservation and Protection Ordinance as discussed below.

City of Grass Valley Tree Ordinance

The City of Grass Valley acknowledges the importance of trees to the community's health, safety, welfare, and tranquility. Trees increase property values, provide visual continuity, provide shade and cooling, decrease wind velocities, control erosion, conserve energy, reduce stormwater runoff, filter airborne pollutants, reduce noise, provide privacy, provide habitat and food value, and release oxygen. In December 2005, the City Council adopted the Tree Ordinance, Chapter 12.36 of the

Municipal Code, to ensure that the community trees would be prudently protected and managed so as to ensure these multiple civic benefits.

- What Types of Trees Are Protected Under This Ordinance?
- Any woody plant having a trunk ten (10) caliper inches or larger in Diameter at Breast Height (DBH) (54" above ground height) and as further defined within the definitions section of the Tree Preservation and Protection Ordinance, Chapter 12.36.

City of Grass Valley Development Code 17.50 Creek and Riparian Resource Protection

The City of Grass Valley Development Code 17.50 for Creek and Riparian Resource Protection states that a Resource Management Plan must be prepared for encroachment within the 30-foot stream setback, "and shall include measures which will minimize impacts to the watercourse and enhance runoff filtration." The measure should include: enhancement and/or restoration of the riparian vegetation area; removal of non-native vegetation; decompaction of soils and/or incorporation of organic material to improve runoff filtration; incorporation of bioswales in drainage plans to filter parking areas and other impervious surfaces; and, incorporation of other Best Management Practices (BMP's) which provide long-term protection of the water quality.

City of Grass Valley 2020 General Plan

The Conservation and Open Space Elements were combined in the 2020 Grass Valley General Plan Update. Both are mandatory General Plan Elements under State law. The Conservation/Open Space Element addresses those aspects of conservation and open space determined most important to Grass Valley. It supplements, but does not replace, the Mineral Resources Element adopted by the City in 1993.

Conservation/Open Space Goals and Objectives

- | | |
|--------|---|
| 1-COSG | Provide a balance between development and the natural environment, protecting and properly utilizing Grass Valley's sensitive environmental areas/features, natural resources and open space lands. |
| 1-COSO | Inventory of sensitive environmental areas and features. |
| 2-COSO | Multi-purpose open space lands, accommodating the needs and requirements of open space/conservation, habitat, recreation, and aesthetics. |
| 3-COSO | Protection of rare and endangered animals and plants. |
| 4-COSO | Reduction of urban development impacts on native vegetation, wildlife and topography. |
| 5-COSO | Encouragement of wildlife through habitat protection. |

- 6-COSO Assurance of appropriate resource conservation and environmental protection measures as prerequisites to development.
- 2-COSG Protect, enhance and restore hydrologic features, including stream corridors, flood plains, wetlands, and riparian zones.
- 7-COSO Development of an extensive trail network providing recreational and educational opportunities.
- 8-COSO Minimize interference with the natural functions of flood plains and naturally flood-prone areas.
- 3-COSG Ensure the protection of Grass Valley's trees and forested areas.
- 9-COSO Identification of heritage trees for special recognition and protection.
- 10-COSO Identification of significant groves and groupings of trees for permanent open space designation.
- 4-COSG Protect and enhance town entryways, visual corridors and important viewsheds including ridgelines.
- 11-COSO Identification of particular corridors and views requiring protection or enhancement.
- 12-COSO Identification of specific aesthetic considerations important to the protection/enhancement of particular corridors and views.
- 5-COSG Maintain close relationships with public agencies and private organizations regarding conservation, open space and environmental protection.
- 13-COSO Ongoing communication of information, plans, and concepts
- 14-COSO Creation of joint efforts and shared funding responsibilities.
- 6-COSG Assure compliance with and understanding of air and water quality regulations and standards.
- 15-COSO Protection of ground- and surface water quality.
- 16-COSO Inclusion of air and water quality considerations in land use decisions rendered by the Planning Commission and City Council.

Conservation/Open Space Policies

- 1-COSP Continue to identify mineral resources and to develop policies addressing their protection from competing land uses, minimizing impacts on mining activities, in compliance with State law.

- 2-COSP Establish an active program of land/development rights acquisition in order to protect sensitive environmental areas and features.
- 3-COSP Encourage clustering, density averaging, and other techniques in larger-scale new developments, as means of preserving open space and natural systems.
- 4-COSP Establish standards for inclusion and management of permanent open space in new developments.
- 5-COSP Carefully regulate development on steep slopes.
- 6-COSP Prevent excessive alteration of the natural topography.
- 7-COSP Recognize and reinforce Grass Valley's public park system.
- 8-COSP Study the potential for inter-jurisdictional transfer of development rights.
- 9-COSP Carefully regulate development for location in flood hazard areas.
- 10-COSP Establish a city trail network program for friendly acquisition, development and administration of a natural trails system.
- 11-COSP Return to open space, areas within which flooding poses a clear danger to life and property.
- 12-COSP Enhance the City's tree ordinance addressing tree maintenance and protection both within new developments and elsewhere in the City.
- 13-COSP Assist property owners wishing to preserve and protect heritage trees and significant groves.
- 14-COSP Establish a program to identify and administer a viewshed/view corridor protection program.
- 15-COSP Assign responsibility for the viewshed/view corridor program.
- 16-COSP Incorporate viewshed/view corridor standards into the Design Element of the General Plan, City Design Guidelines and other appropriate developmental documents.
- 17-COSP Utilize the services and expertise of organizations involved in resource conservation and open space protection.
- 18-COSP Develop and achieve agreement with the County of Nevada on a strategy for conservation and open space protection within the Grass Valley Planning Area and City's Sphere of Influence.
- 19-COSP Enlist the interest and efforts of appropriate state and federal agencies and private foundations regarding conservation and open space protection.
- 20-COSP Establish, in cooperation with Nevada County, an urban limit line beyond which urban land uses, densities, facilities and services will not extend.
- 21-COSP Continue to implement water quality improvement plans, including storm water separation and sewage treatment plant expansion.
- 22-COSP Implement circulation/transportation measures designed to reduce reliance on the automobile.
- 23-COSP Respond appropriately to state and federal air and water quality policies and policy changes, understanding the implications of regulations and standards, and maintaining a continuing public education program.

3.0 METHODS

In order to evaluate the Project area for the presence of any sensitive biological resources, baseline information from databases and reporting for similar projects in the City of Grass Valley and Nevada County was collected and reviewed prior to conducting reconnaissance-level field biological surveys and a delineation of potential "waters of the U.S.," including wetlands, within the Project area. The database searches, background research, and habitat level field surveys characterized the baseline conditions of the Project area. Based on the baseline conditions of the Project area, an assessment was implemented to determine if any special status plant or wildlife species have the potential to use the Project area at any time during their life cycle. The baseline conditions identified the presence of any sensitive habitat or communities, if they were identified within the Project area. Additionally, a delineation of potential "waters of the U.S.," including wetlands (jurisdictional determination), within the Project area was conducted following the protocols as outlined by the Corps.

Sensitive Biological Resources

The following information was used to identify potential special status plant and wildlife species within the Project region that could be found to use the Project area:

- California Department of Fish and Wildlife's California Natural Diversity Database records search of a 3-mile buffer around the Project area (CDFW, 2019);
- California Native Plant Society's online Inventory of Rare and Endangered Plants of California for the Project area 7.5-minute Grass Valley USGS quadrangle and Nevada County (CNPS, 2019);
- The U.S. Fish and Wildlife Service Information, Planning, and Consultation System (IPaC) for endangered, threatened, and proposed listed species for the Project area (USFWS, 2019);
- National Wetland Inventory (NWI, 2019);
- United States Department of Agriculture (USDA) Soils Mapper (USDA, 2019);
- Natural Resources Conservation Service (NRCS) Hydric Soils List for Nevada County (NRCS, 2019); and
- City of Grass Valley 2020 General Plan (Quad-Knopf, 1999).

In addition, the following reporting was previously developed for the Project area and was reviewed as part of the background research for this Biological Inventory and Jurisdictional Determination:

- Biological Resources Assessment for the Nevada County Corporation Yard Project (Galloway Enterprises, July 2014); and
- Results of Surveys for the California Red-Legged Frog for the South Hill Project in Nevada County, CA (Foothill Associates, December 9, 2003)

Jurisdictional Determination

A delineation of "waters of the U.S.," including wetlands (jurisdictional determination), was implemented for the entirety of the Project area. This Jurisdictional Determination implemented the protocols for identifying aquatic features subject to regulation under the CWA, including the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratories, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Regions (Version 2.0) (Corps, 2010). The extent or boundary of wetland habitats was further defined using routine on-site wetland determination protocol currently in use by the Corps, published Corps regulatory guidance letters, and Sacramento District regulatory policy.

Reconnaissance-level Biological Resources Field Surveys

A reconnaissance-level biological field survey was conducted on foot of the entire Project area by Greg Matuzak, Wildlife Biologist, and Carolyn Chainey-Davis, Botanist and Wetlands Ecologist, on September 20th, 2018. Follow up site visits were conducted on September 25th and 26th, 2018 to finalize the mapping of potential "waters of the U.S.," including wetlands, within the Project area. The purpose of the site surveys were to identify any sensitive habitat and vegetation types (streams, ponds, riparian vegetation, wetlands, etc.) within the Project area and to determine the potential of any special-status plant and wildlife species identified within the desktop analysis and background research to occur within the Project area. Additionally, the surveys were conducted to map the jurisdictional boundaries of the large riparian wetland within the central and eastern sections of the Project area and to conduct an assessment of the two seasonal ponds within the western section of the Project area to identify the potential presence of standing water and habitat for amphibians and other aquatic species within those features.

A photo log of the Project area and a list of plant and wildlife species observed during the field surveys was compiled (see Appendix B and Appendix C). A figure

documenting the CNDDDB database results within 3 miles of the Project area is located in Appendix D. A USDA Soils Map of the Project area is attached in Appendix E and a National Wetland Inventory Map of the Project area is attached in Appendix F. As part of the jurisdictional determination mapping conducted as part of the development of this Biological Resources Inventory and Jurisdictional Determination, mapping of potential "waters of the U.S.," including wetlands and "waters of the State of California," is included as an attachment to Appendix H.

4.0 RESULTS

Environmental Setting

The Project area is located at approximately 2,400 feet above Mean Sea Level (MSL). The Project area is relatively flat in the central and eastern sections with gentle to medium slopes towards the western portions of the Project area. Along the western edge of the Project area, where the dominance of ponderosa pine are located, the topography slopes back up towards SR 49. In addition, a small drainage enters the Project area through a culvert under La Barr Meadows Road, which creates much of the hydrology for the mapped riparian wetlands within the central section of the Project area. Additionally, an NID water pipeline enters the Project area at the southeast corner of the mapped riparian wetlands and given the NID pipeline is leaking and creating additional wetland hydrology, that area has been included within the mapped riparian wetlands within the Project area. Two seasonal ponds are located within the western section of the Project area and at the time of the site survey in 2018, the ponds did not contain any standing water. The ponds did contain some riparian vegetation, including willow trees and dense Himalayan blackberry shrubs along the banks of each of the ponds.

Plant Communities

Plant communities have been classified based on the California Wildlife Habitat Relationships System developed by CDFW. The CDFW also manages the California Natural Diversity Data Base (CNDDDB), which is a database inventory of the locations of rare and endangered plants, wildlife, and natural communities in California. A list of plants and wildlife documented during the field survey are attached in Appendix C to this Biological Inventory and Jurisdictional Determination. A photo log is attached in Appendix B.

The dominant plant communities are discussed below.

Ponderosa Pine

The Ponderosa Pine habitats within the Project area is dominated by ponderosa pine (*Pinus ponderosa*) and includes some scattered incense cedar (*Calocedrus decurrens*) and California black oak (*Quercus kelloggii*). This habitat type is dominant within the western section of the Project area.

The Project area does not contain any heritage trees as designated by the City of Grass Valley. However, the Project area would be subject to the City of Grass Valley Tree Ordinance and a Tree Removal Permit would be required prior to the removal of any tree that is 10 inches or greater DBH. Scattered trees along La Barr Meadows Road,

the larger willow trees within the mapped riparian wetland, and the Ponderosa Pine habitat type contain many trees that would be subject to a Tree Removal Permit by the City of Grass Valley if they are to be removed given they are 10 inches or greater DBH.

Annual Grasslands

Annual grassland species occur as the dominant habitat type in the eastern and central sections of the Project area. This habitat type is dominated by wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), medusa head (*Taeniatherum caput medusae*), and filaree (*Erodium cicutarium*). Orchard grass (*Dactylis glomerata*), wild rye (*Elymus glaucus*), and tall fescue (*Festuca arundinacea*), among other native and non-native grasses, were also identified in these areas of the Project area. Non-native grasslands are known to out-compete native grasses and forbs throughout the valley and foothill regions.

Riparian and Wetland Vegetation

The drainage entering the Project area through a culvert from the east as well as the leaking NID pipeline entering the Project area from La Barr Meadows Road have created the hydrology for associated Foothill Riparian habitats to persist within the Project area. This habitat type within the Project area is dominated by white alders (*Alnus rhombifolia*) and willows (*Salix laevigata* and *S. lasiolepis*) in addition to Himalayan blackberry (*Rubus armeniacus*), Baltic rush (*Juncus balticus*), and iris-leaved rush (*Juncus xiphioides*). This habitat is located along the central portion of the Project area and along the eastern edge of the Project area where the drainage and NID pipeline enter the Project area from under La Barr Meadows Road. The Project area does not contain any streams. Little Wolf Creek is located on the western side of SR 49 and therefore, none of the drainage within the Project area connects with Little Wolf Creek. Given the topography includes higher elevation areas along the western edge of the Project area, it is assumed that the two seasonal ponds within the western section of the Project area are manmade from historical land uses and still collect direct precipitation and runoff from within the Project area.

In addition, wetlands associated with the mapped riparian wetlands within the Project area contain a diverse palette of native herbaceous wetland species, such as clustered field sedge (*Carex praegracilis*), umbrella sedge (*Cyperus eragrostis*), Baltic rush (*Juncus balticus*), and iris-leaved rush (*Juncus xiphioides*). The obligate wetland species, cattail (*Typha* sp.) is also present in the topographic low area where the NID pipeline is leading water along La Barr Meadows Road.

In total, a single, large area was mapped within the Project area as a seasonal forested and shrub-scrub wetland (specific wetland type within the area of Foothill Riparian habitat). The mapped wetland is 1.96 acres in total size. The two seasonal ponds were mapped individually within the western section of the Project area and the

largest seasonal pond located in the northwestern corner of the Project area was mapped as 0.36 acres and the smaller pond located south of the larger pond was mapped as 0.12 acres. In total, 0.48 acres of seasonal ponds were mapped within the Project area and a total of 2.44 acres of potential "waters of the U.S.," including wetlands, was mapped within the Project area and could be subject to regulation under the CWA and by CDFW.

SPECIAL STATUS SPECIES

Special status species were considered for this Biological Inventory is based on a current review of the California Natural Diversity Data Base (CNDDB) and database information provided by the United States Fish and Wildlife Service (USFWS) for the Project area. The Project area does not contain any Designated Critical Habitat (DCH) for any federally listed species projected by the USFWS. The database searches did reveal ten (10) species, which includes the following: Scadden Flat checkerbloom, Stebbins' morning glory, Pine Hill flannelbush, dubious pea, finger rush, chaparral sedge, brownish beaked-rush, coast horned lizard, California black rail, and the Townsend's big-eared bat that have been previously identified within 3 miles of the Project area. None of these species were observed during field surveys. In addition, western pond turtle, foothill yellow-legged frog, and California red-legged frog are also discussed below given the presence of two seasonal ponds within the Project area as well as an extensive area of perennial riparian wetlands within the Project area.

Scadden Flat Checkerbloom (*Sidalcea stipularis*) – CA State Endangered and California Native Plant Society List 1B.1

Scadden Flat checkerbloom inhabits marshes and swamps. It is found in wet montane marshes fed by springs, normally between 700 and 740 meters above MSL. This species has been identified within 3 miles of the Project area with the closest location being approximately 0.8 miles to the west of the Project area. The species was not identified during field surveys though the riparian wetlands within the Project area contain marginal suitable habitat for this species. Given the species was not identified within the Project area, any development within the Project area would not have an impact on this species.

Stebbins' Morning Glory (*Calystegia stebbinsii*) – CA State and Federally Endangered and California Native Plant Society List 1B.1

Stebbins' morning glory inhabits chaparral and cismontane woodland. It is found in red clay soils of the pine hill formation on gabbro or serpentine soils in open areas, normally between 180 and 725 meters above MSL. This species has been identified

approximately 3 miles to the west of the Project area in an area along McCourtney Road. However, the species was not identified during field surveys and suitable habitat for this species does not occur within the Project area given the lack of gabbro or serpentine soils within the Project area.

Pine Hill Flannelbush (*Fremontodendron decumbens*) – Federally Endangered and CA State Rare and California Native Plant Society List 1B.2

Pine Hill flannelbush inhabits rocky ridges on gabbro and serpentine soils within chaparral and cismontane woodlands. This species is endemic to these soil types and is normally documented between 425 and 760 meters above MSL. This species has been identified approximately 2.25 miles to the northeast of the Project area. However, the species was not identified during field surveys and suitable habitat for this species does not occur within the Project area given the lack of gabbro and serpentine soils within the Project area.

Dubious Pea (*Lathyrus sulphureus* var. *argillaceus*) – California Native Plant Society List 3

Dubious pea inhabits lower and upper montane coniferous forest and cismontane woodlands, normally between 150 and 930 meters above MSL. This species has been identified within 3 miles of the Project area within the City of Grass Valley to the north of the Project area. Marginal suitable habitat for this species does occur within the forested western sections of the Project area; however, the species was not identified within the Project area during the surveys conducted in 2018. Therefore, it is assumed that the species is not located within the Project area and would not be impacted by any development within the Project area.

Finger Rush (*Juncus digitatus*) – California Native Plant Society List 1B.1

Finger rush inhabits open chaparral habitat surrounded by mixed oak/conifer woodland on low gradient, north-facing, and vernal moist slopes. This species also associates with sandy clay loam soil within substrates underlain by granitic bedrock. This species has been identified approximately 2.8 miles to the northeast of the Project area. The areas mapped as riparian wetlands contain marginal suitable habitat for this species within the Project area. However, the species was not identified during field surveys conducted in 2018 and it is assumed the species does not occur within the Project area.

Chaparral Sedge (*Carex xerophila*) – California Native Plant Society List 1B.2

Chaparral sedge inhabits openings within chaparral habitat, cismontane woodland, and lower montane coniferous forests. This species is found in areas containing serpentine and gabbroic microhabitats between 250 and 770 meters above MSL. This species has been identified approximately 2.9 miles to the northwest of the

Project area along SR 20. However, the species was not identified during field surveys and suitable habitat for this species, including rocky gabbro soils, does not occur within the Project area.

Brownish Beaked-Rush (*Rhynchospora capitellata*) – California Native Plant Society List 2B.2

Brownish beaked-rush inhabits meadows and seeps, marshes and swamps, and it is found in upper and lower montane coniferous forests, normally between 45 and 2000 meters above MSL. This species is normally identified on mesic sites and has been identified approximately 2.1 miles to the northwest of the Project area in a marshy area along the northwest corner of the Nevada County Fairgrounds along Hwy 20. The species was not identified during field surveys and the riparian wetlands mapped within the Project area contain marginal suitable habitat for this species. Given the species was not documented during surveys conducted in 2018, it is assumed that the species does not occur within the Project area.

Townsend's Big-eared Bat (*Corynorhinus townsendii*) – CA State Species of Concern

This species inhabits lower montane coniferous and mixed conifer forest habitats where abandoned buildings and structures occur for roosting. This species has been identified approximately 1.4 miles of the Project area within an abandoned building within the Empire State Mine to the north of the Project area. However, the species was not identified during field surveys and suitable habitat for this species does not occur within the Project area given there are no abandoned structures that have suitable roosting sites for this species.

California Black Rail (*Laterallus jamaicensis coturiculus*) – CA State Threatened

California black rail inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. The species requires water depths of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat. This species has been identified within 3 miles to the west of the Project area. The species was not identified during field surveys and suitable habitat for this species does not occur within the Project area.

Coast horned lizard (*Phrynosoma blainvillii*) – CA State Species of Concern

The coast horned lizard occurs in open sandy areas, scattered low bushes, chaparral, manzanita, and oak woodland habitats. It is found in the Sierra Nevada foothills from Butte County to Kern County and throughout the central and southern California coast. Coast horned lizards forage on the ground in open areas, usually between shrubs and often near ant nests. The species relies on camouflage for protection. Predators and extreme heat are avoided by burrowing into loose soil.

Periods of inactivity and winter hibernation are spent burrowed in the soil under surface objects such as logs or rocks, in mammal burrows, or in crevices (Zeiner et al. 2000). They inhabit mostly open country, especially sandy areas, washes, flood plains and wind-blown deposits in a wide variety of habitats and can be found at elevations up to 8,000 feet (2,438 meters) (CaliforniaHerps, 2014).

There is minimal potential suitable habitat within the Project area for the coast horned lizard except for the open, gravelly areas located in the eastern section of the Project area. The species has been previously documented within 3 miles of the Project area. No coast horned lizards were observed during the 2018 surveys of the Project area and given the gravelly soils within the eastern portion of the Project area is mostly fill material, it is unlikely that the species would occur within the Project area.

Western Pond Turtle (*Emys marmorata*) – CA State Species of Concern

Western pond turtles associate with permanent ponds, lakes, streams, irrigation ditches, and permanent pools along intermittent streams. They are most commonly associated with permanent or nearly permanent water in a wide variety of habitats. This species requires basking sites such as partial submerged logs, rocks, mats of floating vegetation, or open mud banks. During the spring or early summer, females move overland for up to 100 m (325 ft) to find suitable sites for egg laying. This species has not been identified within 3 miles of the Project area. The species was not identified during field surveys and suitable habitat for this species does not occur within the Project area given the lack of a permanent water source. Therefore, the potential for the species to occur within the Project area is considered very low.

Foothill Yellow-legged Frog (*Rana boylei*) – Candidate for Listing under the CA ESA

Foothill yellow-legged frogs inhabit partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. The species requires at least some cobble-sized substrate for egg laying. The species requires at least 15 weeks to attain metamorphosis. This species has not been identified within 3 miles of the Project area. The species was not identified during field surveys and suitable habitat for this species does not occur within the Project area given the lack of required habitat and low flows of water within the intermittent streams within the Project area.

CA Red-legged Frog (*Rana aurora draytonii*) – Federal Threatened and CA State Species of Concern

CA red-legged frog (CRLF) is known in Nevada County in the North Bloomfield USFS Quadrangle within the Rock Creek watershed. CRLF has not been identified within 3 miles of the Project area. The species was not identified during field surveys and suitable reproductive habitat for this species does not occur within the Project area. If suitable breeding locations are located within 1.25 miles of the Project area and

connected by barrier-free dispersal habitat that is at least 300 feet in width, then suitable dispersal habitat could be located within the Project area; however, since CRLF have not been identified in the Grass Valley USGS Quadrangle or the watershed associated with the Project area, the potential for this species to occur is extremely low and is considered absent from the Project area. Foothill Associates (2003) also concluded that the Project area and its ponds do not contain CRLF, nor is it likely that the Project area would contain suitable habitat for the species, whether aquatic or dispersal habitat.

Nesting raptors and other migratory birds species - Protected under MBTA, Protected under CA State DFG Code Sections 3503, 3503.5, and 3800

There is a low to moderate potential for nesting raptors and other nesting migratory bird species protected under the MBTA and by CDFW to occur within the Project area given the presence of the forested areas within the mapped riparian wetlands and the ponderosa pine dominated western portion of the Project area. The Project area represents potential habitat for bird species protected under the MBTA and by CDFW, such as ground nesting species like the spotted towhee (*Pipilo maculatus*) and dark-eyed junco (*Junco hyemalis*). Active and inactive nests within and adjacent to the proposed areas to be developed within the Project area were not identified during field surveys; however, given the presence of large trees along La Barr Meadows Road, within the mapped riparian wetlands, and within the western portion of the Project area, as well as open grasslands within the central and eastern portions of the Project area, there is a low to moderate potential for these species to nest within the Project area.

Critical Deer Habitat

Known migratory deer ranges outlined in the Nevada County General Plan was reviewed for deer migration corridors, critical range, and critical fawning areas. The Project area is not located in any known major deer corridors, known deer holding areas, or critical deer fawning area. Per the Migratory Deer Ranges Nevada County General Plan map, the Project area is located in an area of potential Resident Deer Herd (includes some areas of migratory deer winter range). The field survey did not record any observations of deer or deer trails while walking the Project area. The Project area does not contain any known major deer migration corridors, known deer holding areas, nor critical deer fawning areas.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The Project area is surrounded by development, mostly industrial and commercial with some residential, and with City of Grass Valley streets and infrastructure, as well as SR 49 along the western edge of the Project area. The Project area is mostly disturbed throughout with greater disturbance within the eastern and southern sections of the Project area where previous development and disturbance has occurred historically as well as more recent. Therefore, the Project area does not contain suitable habitat for many special-status species given the level of disturbance historically and more recently within the Project area. However, given the Project area does contain a large wetland, two seasonal ponds, and marginal habitat for a few sensitive resources, the following recommendations are included for this Biological Resources Inventory and Jurisdictional Determination.

Potential Impacts to Protected Nesting Bird Species

Given the Project area does contain some larger trees (see Photo Log in Appendix C) and those trees contain suitable habitat for nesting raptors and MBTA/CDFW protected nesting bird species, removal of such trees and blackberry bushes should be done outside the breeding season if possible to avoid potential impacts to such nesting species. The breeding season for most protected birds in the vicinity of the Project area is generally from March 1 to August 31. Vegetation clearing or tree removal outside of the breeding season for such bird species would not require the implementation of any avoidance, minimization, or mitigation measures. However, construction or development activities during the breeding season could disturb or remove occupied nests of migratory birds or raptors and could require the implementation of a pre-construction survey within 250 feet of the disturbance area within the Project area for nesting migratory birds and raptors prior to development.

If any nesting raptors or migratory birds are identified during surveys, active nests should be avoided and a no-disturbance buffer should be established around the nesting site to avoid disturbance or destruction of the nest site until after the breeding season or after a wildlife biologist determines that the young have fledged. The extent of these buffers would be determined by a wildlife biologist and would depend on the special-status species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors should be analyzed to make an appropriate decision on buffer distances.

Potential Impacts to Aquatic and Upland Special-Status Species

The Project area does not contain suitable aquatic habitat or upland areas immediately associated with aquatic habitat. Therefore, the Project area does not

provide habitat for sensitive amphibians or other sensitive aquatic species. As a result, no impact would be expected to California red-legged frog, foothill yellow-legged frog, western pond turtle, or CA black rail from developing the Project area.

However, the Project area does provide marginal suitable habitat for the coast horned lizard. There is potential suitable habitat within the sandy and rocky locations within the Project area. In addition, the Project area includes the required open areas of exposed, sandy soils for this species. Therefore, this species has a low potential to occur within the Project area though the species has not been identified within the Project area. Therefore, it is recommended that prior to disturbance within the Project area, a pre-construction survey for the species shall be conducted prior to any disturbance in order to avoid direct impacts to the species. If the species is documented during pre-construction surveys, a qualified wildlife biologist (approved by CDFW) would have the authority to move individual coast horned lizards outside of the proposed disturbance area(s) in order to avoid an impact to this species. Once the coast horned lizard(s) have been removed from the disturbance area(s) and out of harms way, the proposed work would no longer pose a risk to individuals of the species.

Potential Impacts to Special-Status Plant Species

Given the developed and disturbed site conditions of the Project area, including the lack of soil and habitat types for special-status plant species previously recorded within 3 miles of the Project area, potential for any listed or other sensitive plant species to occur within the Project area is considered very low to nil. Marginal suitable habitat for the special-status plant species dubious pea occurs within the forested areas within the western section of the Project area; however, this species was not identified during September 2018 surveys or surveys conducted previously within the southern section of the Project area. Therefore, it is assumed that the Project area does not contain any special-status plant species and it is concluded that the development of the Project area would not have an impact on any special-status plant species.

Potential Impacts to Clean Water Act Regulated "Waters of the U.S.," including Wetlands

The large mapped wetland feature and two seasonal pond features included as part of the mapping associated with this Biological Resources Inventory and Jurisdictional Determination are assumed to fall under Corps jurisdiction pursuant to Section 404 of the CWA. The RWQCB pursuant to Section 401 of the CWA also has jurisdiction over areas subject to regulation by the Corps under Section 404 of the CWA. As detailed in the CWA, any proposed action that would place fill or dredge material within areas identified as Corps jurisdictional wetlands or waters would require a Department of the Army Section 404 permit and a RWQCB Section 401 Water Quality

Certification, or waiver thereof, prior to the placement of fill or dredge material within such features. Fill or dredge impacts to any features regulated under Sections 404 and 401 of the CWA would be required to be mitigated at a minimum of a 1:1 ratio. Compensatory mitigation would be included as a Section 404 and Section 401 permit condition to be implemented prior to the placement of such dredge and fill material within a "waters of the U.S.," including wetlands, and would ensure the no net loss of such features within the Project area. It is assumed that no such fill or dredge impacts will occur within the mapped wetland and seasonal pond features within the Project area given they will remain within a large area designated as Open Space and therefore, development within the Project area should avoid any permitting or other regulatory requirements under the CWA as well as State of California requirements.

However, if any fill and/or dredge material is to be placed within any of the mapped features in Appendix H, under the CWA, any fill within "waters of the U.S.," including wetlands of 0.5 acres or less would meet the general conditions of a previously authorized Nationwide Permit and therefore, authorization under such an existing permit would be justified. If any fill within "waters of the U.S.," including wetlands of 0.5 acres or greater, then most likely an Individual Permit would be required prior to the filling of 0.5 acres or greater of such CWA regulated features. Typically, an Individual Permit has a longer timeline than a Nationwide Permit for approval given it includes a 404(b)(1) alternatives analysis that demonstrates that the proposed project has minimized and reduced impacts to the aquatic environment.

Potential Impacts to Stream and Riparian Zones Under CDFW Jurisdiction

Perennial, intermittent, and ephemeral streams fall under CDFW jurisdiction as these areas each contain a bed and bank. Any substantial alteration of the bed or bank of any stream river or lake would most likely require a Streambed Alteration Agreement from the CDFW pursuant to Section 1600 *et. seq.* of the California Fish and Wildlife Code prior to construction. Therefore, any proposed disturbance within the mapped wetlands and ponds within the Project area would not be subject to CDFW jurisdiction and a Streambed Alteration Agreement from the CDFW pursuant to Section 1600 *et. seq.* of the California Fish and Wildlife Code.

Recommendations to Minimize Potential Indirect Impacts to Mapped Wetlands/Ponds

It is assumed that the wetlands within the central and eastern sections of the Project area as well as the two seasonal ponds within the southern section of the Project area will not be directly impacted by the development of the Project area given those features will remain protected within a designated Open Space area within the Project area. However, it is recommended that the BMPs listed below be implemented for any disturbance within 30 feet of any of the wetland and pond features mapped and attached in Appendix H in order to minimize potential indirect

impacts to those features. These measures are intended for inclusion into the Project within the 30 feet from the edges of the wetland areas and the edges of the two seasonal ponds.

- Limit construction to periods of extended dry weather and the dry summer season, where feasible;
- Establishing the area around the wetlands and seasonal ponds as Environmentally Sensitive Area (ESA) where those areas will not be impacted by construction or thereafter;
- No fill or dredge material will enter or be removed from the wetlands or seasonal ponds during construction and thereafter;
- Placement of soil erosion control devices (such as wattles, etc.) between the disturbances within the Project area and the edges of the wetlands and seasonal ponds to limit potential runoff and sedimentation into those features;
- Use appropriate machinery and equipment to limit disturbance in those areas;
- No dewatering of the drainage will occur during construction or thereafter; and
- Implement Best Management Practices (BMPs) during and following construction.

IMPLEMENTATION OF BEST MANAGEMENT PRACTICES DURING CONSTRUCTION

To protect the wetlands and seasonal ponds, the contractor shall implement standard Best Management Practices (BMPs) during and after construction. These measures should include, but are not limited to:

- Minimize the number and size of work areas for equipment and spoil storage sites in the vicinity of the stream. Place staging areas and other work areas outside of the 30-foot setbacks from the seasonal ponds and wetlands.
- The contractor shall exercise reasonable precaution to protect the areas adjacent to the seasonal ponds and wetlands from pollution with fuels, oils, and other harmful materials. Construction byproducts and pollutants such as oil, cement, and wash water shall be prevented from discharging into or near these resources and shall be collected for removal off the site. All construction debris and associated materials and litter shall be removed from the work site immediately upon completion.
- No equipment for vehicle maintenance or refueling shall occur within the 30-foot setback areas to the wetlands and seasonal ponds where feasible. The contractor shall immediately contain and clean up any petroleum or other chemical spills with absorbent materials such as

sawdust or kitty litter. For other hazardous materials, follow the cleanup instruction on the label.

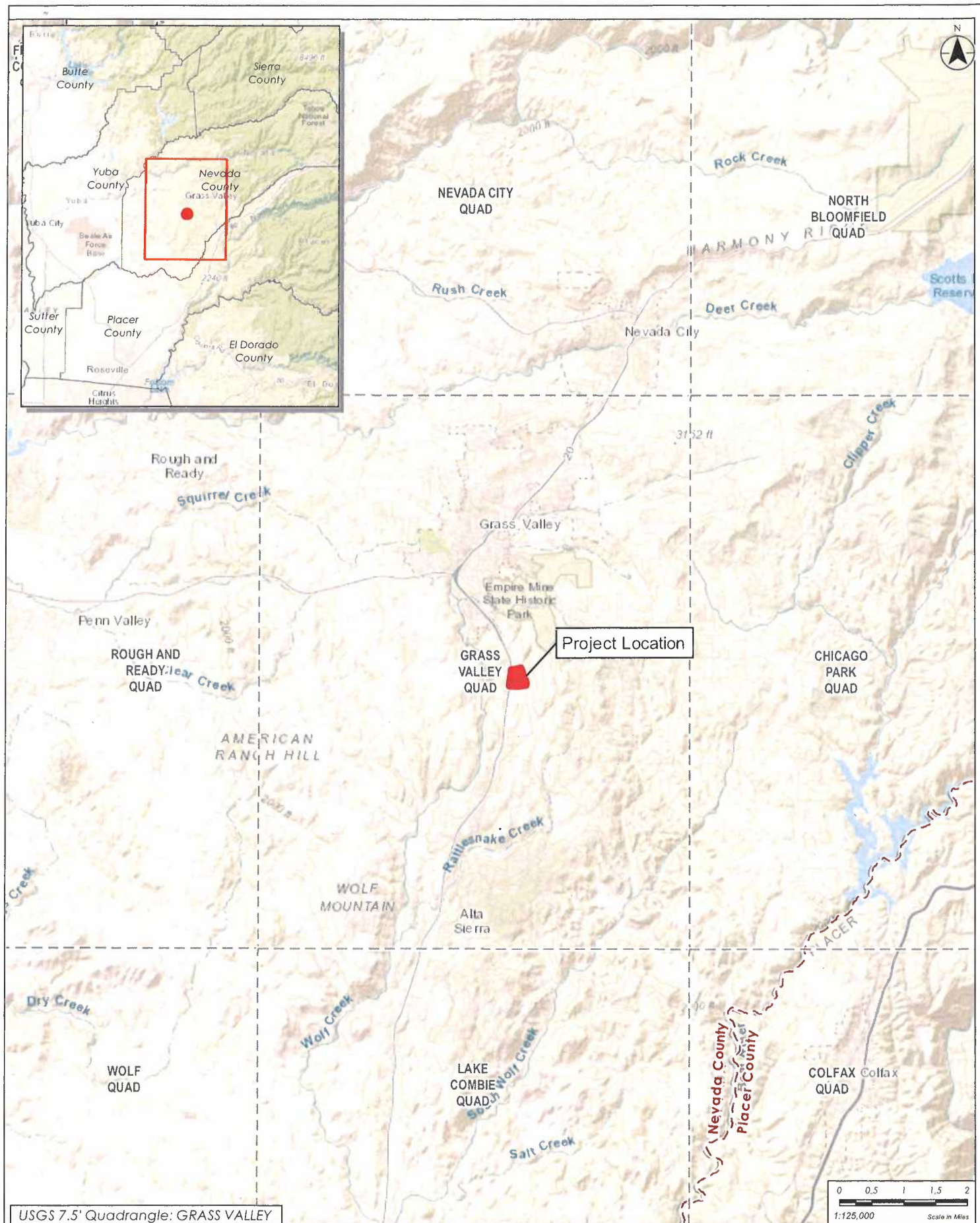
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Appendix A

Project Vicinity and Project Location Figures



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Parcel Nos.: 022-160-006-000
and 022-160-033-000

Figure 1. Vicinity Map



Figure 2. Project Location Map

Appendix B

Photo Log

Photo Log of the Rare Earth Project Area on September 20th, 2018



Photo 1: Project area frontage along La Barr Meadows Road.



Photo 2: NID pipeline along La Barr Meadows Road leaking and creating additional roadside wetlands along the eastern edge of the proposed Project area.



Photo 3: NID pipeline and wetlands along the eastern border of the Project area.



Photo 4: Photo is looking west from La Barr Meadows Road and the leaking NID pipeline. Wetland edge is mapped along the edge of wetland and upland plants in photo.



Photo 5: Photo is looking west along the southern wetland edge as mapped within the Project area.

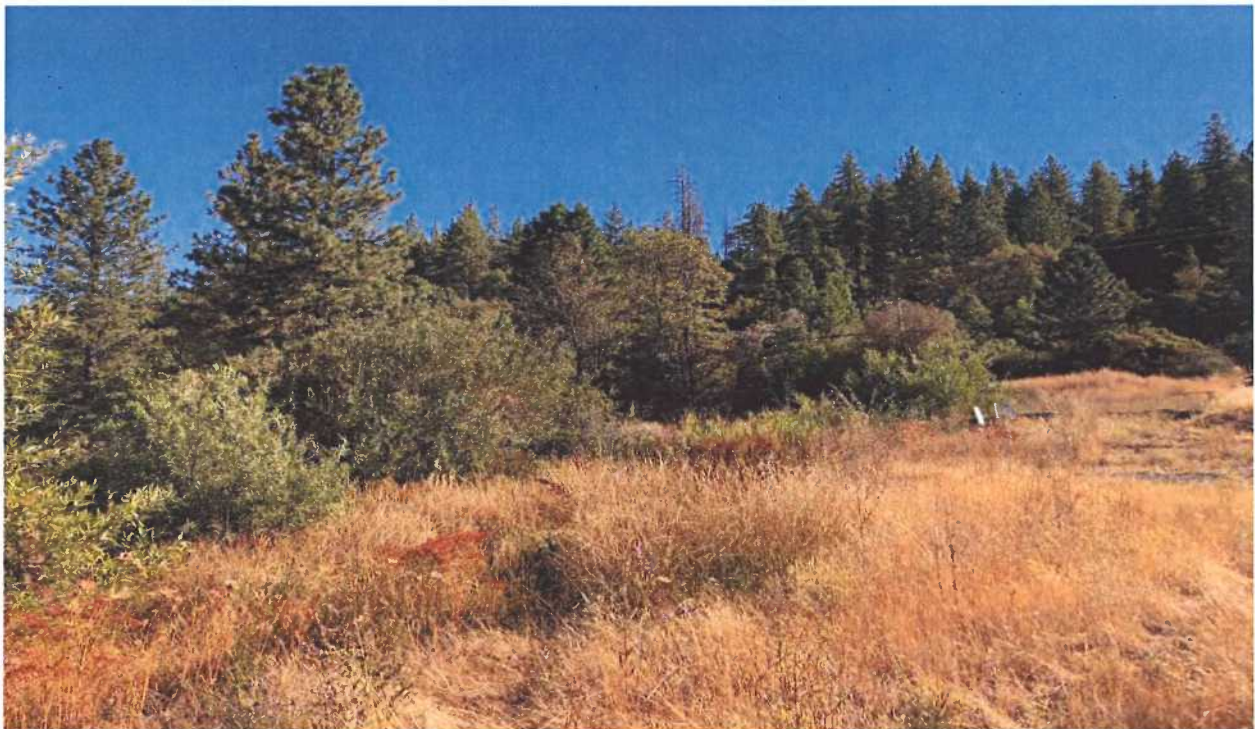


Photo 6: Photo is looking east towards La Barr Meadows Road and the leaking NID pipeline. Wetland edge is mapped to the left along the edge of wetland and upland plants in photo. Upland annual grasslands dominate to the right of the willow wetlands.



Photo 7: Photo from entrance to the Project area towards the southwest section of the Project area. Parking and storage area within the fence line in the photo. Area dominated by annual grasslands with ponderosa pine in background within the western section of the Project area.



Photo 8: Clear distinction between willow trees to the right and the upland annual grassland species that dominate along the edge of the willows to the left. Wetland mapping was done along the edge of the riparian wetlands and upland border.



Photo 9: Photo within the western section of the Project area. Western section of the Project area is dominated by ponderosa pine trees and manzanita shrubs.



Photo 10: Western section of the Project area looking east towards the lower area containing annual grasslands and the riparian wetlands. NID pipeline to right.



Photo 11: Photo within the western section of the Project area. Western section of the Project area is dominated by ponderosa pine trees and manzanita shrubs.



Photo 12: Photo within the western section of the Project area. Western section of the Project area is dominated by ponderosa pine trees and manzanita shrubs.



Photo 13: Photo within the western section of the Project area looking down into one of the empty ponds within the Project area.



Photo 14: Photo within the western section of the Project area along the upland edge of one of the empty ponds. Western section of the Project area is dominated by ponderosa pine trees and manzanita shrubs with other scattered trees and vegetation.



Photo 15: Photo within the eastern section of the Project area along the upland edge of La Barr Meadows Road to the right. Photo is looking north along road grade.



Photo 16: Photo within the eastern section of the Project area along the upland edge of La Barr Meadows to the right. Large wetland area to left and open grasslands with scattered trees looking north in photo.



Photo 17: Photo within the eastern section of the Project area along the upland edge of La Bar Meadows Road. Photo is looking southwest towards the large wetland area.



Photo 18: Eastern section of the Project area dominated by annual grassland species and manzanita and other shrubs.

Appendix C

Plants and Wildlife Observed

List of Plants Observed in the Rare Earth Project Area*, Grass Valley, CA

*September 20, 2018 survey focused on the uplands, riparian wetland boundaries, and ponds

Family	Scientific name	Common Name	Riparian Wetlands	Ponds	Upland
GYMNOSPERMS					
Cupressaceae		CYPRESS FAMILY			
	<i>Calocedrus decurrens</i>	incense cedar			x
Pinaceae		PINE FAMILY			
	<i>Pinus ponderosa</i>	ponderosa pine			x
	<i>Pseudotsuga menziesii</i>	Douglas fir			x
MONOCOTYLEDONS					
Agavaceae		AGAVE FAMILY			
	<i>Chlorogalum pomeridianum</i>	Indian soap plant			x
Alismataceae		WATER-PLANTAIN FAMILY			
	<i>Alisma triviale</i>	American water-plantain		x	
Cyperaceae		SEDGE FAMILY			
	<i>Carex praeegracilis</i>	clustered field sedge	x		
	<i>Cyperus eragrostis</i>	rall nutsedge	x		
	<i>Eleocharis bella</i>	annual spikerush		x	
Juncaceae		RUSH FAMILY			
	<i>Juncus balticus</i> ssp. <i>ater</i>	Baltic rush	x		
	<i>Juncus effusus</i> var. <i>pacificus</i>	Pacific rush	x		
	<i>Juncus xiphioides</i>	iris-leaved rush	x		
Poaceae		GRASS FAMILY			
	<i>Avena barbata</i>	wild oat			x
	<i>Bromus diandrus</i>	ripgut			x
	<i>Bromus hordeaceus</i>	soft chess	x		x
	<i>Cynosurus echinatus</i>	hedgehog dogtail-grass			x
	<i>Dactylis glomerata</i>	orchard grass	x		x
	<i>Danthonia californica</i>	California oatgrass	x		x
	<i>Echinochloa crus-galli</i>	Barnyardgrass		x	
	<i>Elymus glaucus</i> ssp. <i>jepsonii</i>	blue wildrye			x
	<i>Festuca arundinacea</i>	tall fescue	x		x
	<i>Festuca myuros</i>	rattail			x
	<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley	x		x
	<i>Lolium perenne</i>	Italian ryegrass	x		x
	<i>Muhlenbergia rigens</i>	deer grass	x		x
	<i>Phalaris aquatica</i>	Harding grass	x		
Potamogetonaceae		PONDWEED FAMILY			
	<i>Potamogeton natans</i>	floating-leaf pondweed		x	
Typhaceae		CATTAIL FAMILY			
	<i>Typha latifolia</i>	broadleaf cattail	x	x	
DICOTYLEDONS					
Anacardiaceae		SUMAC FAMILY			
	<i>Toxicodendron diversilobum</i>	poison oak			x
Apiaceae		CARROT FAMILY			

List of Plants Observed in the Rare Earth Project Area*, Grass Valley, CA

*September 20, 2018 survey focused on the uplands, riparian wetland boundaries, and ponds

<i>Daucus carota</i>	Queen Anne's lace	x	x
Apocynaceae	DOGBANE FAMILY		
<i>Asclepias speciosa</i>	showy milkweed		x
<i>Vinca major</i>	periwinkle	x	x
Asteraceae	SUNFLOWER FAMILY		
<i>Baccharis consanguinea</i>	coyote brush		x
<i>Bidens frondosa</i>	beggar's-ticks		x
<i>Centromadia pungens</i>	Fitch's spikweed	x	x
<i>Centaurea solstitialis*</i>	yellow star-thistle*		x
<i>Cirsium vulgare*</i>	bull thistle*		x
<i>Cichorium intybus</i>	chicory	x	x
<i>Erigeron philadelphus</i>	Philadelphia daisy		x
<i>Grindelia camporum</i>	curlycup gumweed		x
<i>Xanthium strumarium</i>	cockspur	x	x
Betulaceae	BIRCH FAMILY		
<i>Alnus rhombifolia</i>	white alder	x	
Boraginaceae	BORAGE FAMILY		
Brassicaceae	MUSTARD FAMILY		
Caprifoliaceae	HONEYSUCKLE FAMILY		
<i>Lonicera hispidula var. vacillans</i>	hairy honeysuckle		x
Ericaceae	HEATH FAMILY		
<i>Arctostaphylos viscida</i>	whiteleaf manzanita		x
<i>Arbutus menziesii</i>	Pacific madrone		x
Fabaceae	LEGUME FAMILY		
<i>Cytisus scoparius*</i>	Scotch broom*	x	x
<i>Lathyrus latifolius</i>	perennial sweetpea		x
Fagaceae	OAK FAMILY		
<i>Quercus chrysolepis</i>	canyon live oak		x
<i>Quercus douglasii</i>	blue oak		x
<i>Quercus kelloggii</i>	black oak		x
<i>Quercus wislizenii</i>	interior live oak		x
Geraniaceae	STORK'S-BILL FAMILY		
<i>Geranium dissectum</i>	cutleaf geranium	x	x
<i>Geranium molle</i>	dove-foot geranium		x
Lythraceae	LOOSESTRIFE FAMILY		
<i>Lythrum hyssopifolia</i>	hyssop loosestrife		x
Hypericaceae	ST. JOHN'S WORT FAMILY		
<i>Hypericum perforatum</i>	St. John's wort	x	x
Lamiaceae	MINT FAMILY		
<i>Mentha pulegium</i>	pennyroyal	x	
<i>Prunella vulgaris</i>	self-heal	x	x
Onagraceae	EVENING-PRIMROSE FAMILY		
<i>Epilobium ciliatum</i>	ciliate willow-herb	x	
Phrymaceae	LOPSEED FAMILY		
<i>Mimulus guttatus</i>	seep-spring monkeyflower	x	
Plantaginaceae	PLANTAIN FAMILY		
<i>Plantago lanceolata</i>	English plantain	x	x
Polygonaceae	BUCKWHEAT FAMILY		
<i>Eriogonum nudum</i>	nude buckwheat		x
<i>Rumex acetosella</i>	sheep sorrel		x

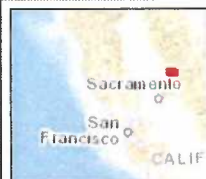
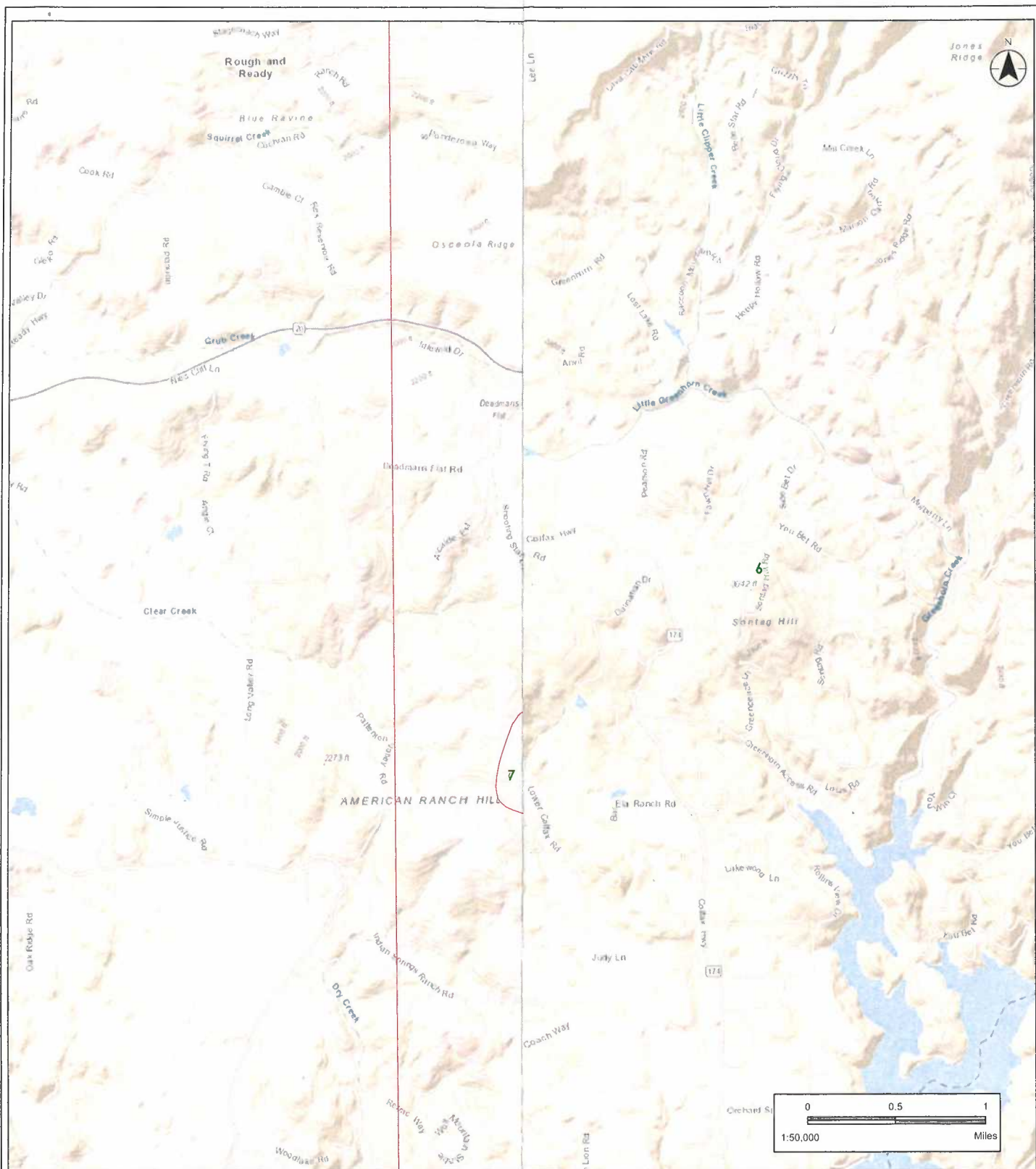
List of Plants Observed in the Rare Earth Project Area*, Grass Valley, CA

*September 20, 2018 survey focused on the uplands, riparian wetland boundaries, and ponds

<i>Rumex crispus</i>	curly dock	x	x	
Rhamnaceae	BUCKTHORN FAMILY			
<i>Ceanothus cuneatus</i>	buckbrush			x
<i>Frangula californica</i> ssp. <i>tomentella</i>	hoary coffeeberry			x
Rosaceae	ROSE FAMILY			
<i>Crataegus monogyna</i>	single-seed hawthorn			x
<i>Prunus cerasifera</i>	sweet cherry-plum (cultivated)			x
<i>Rosa canina</i>	dog rose	x		x
<i>Rubus armeniacus</i>	Himalayan blackberry	x	x	x
Rubiaceae	MADDER FAMILY			
<i>Cephalanthus occidentalis</i>	California button willow	x		
<i>Galium aparine</i>	common bedstraw	x		
Salicaceae	WILLOW FAMILY			
<i>Populus fremontii</i>	Fremont cottonwood	x		
<i>Populus nigra</i>	Lombardy poplar	x		x
<i>Salix exigua</i>	sandbar willow	x		
<i>Salix laevigata</i>	red willow	x		
<i>Salix lasiolepis</i>	arroyo willow	x	x	
Scrophulariaceae	FIGWORT FAMILY			
<i>Verbascum thapsus</i>	woolly mullein	x		x
Simaroubaceae	QUASSIA FAMILY			
<i>Ailanthus altissima</i>	tree-of-heaven			x
Vitaceae	GRAPE FAMILY			
<i>Vitis californica</i>	California wild grape			

Appendix D

CNDDDB Locations of Special Status Species within 3 Miles of Project Area



Legend

- Project Location
- 3 mile Buffer on Project Area
- CNDDB Plant Occurrence*
- CNDDB Wildlife Occurrence*
- Critical (none)
- Critical (none)

* California Natural Diversity Database (CNDDB) Data: Downloaded March 2019, from the California
 ** United States Fish and Wildlife Service (USFWS) Critical Habitat Data: Downloaded April, 2019

CRITICAL HABITAT OCCURRENCES**

Plant Habitat

None

Wildlife Habitat

None

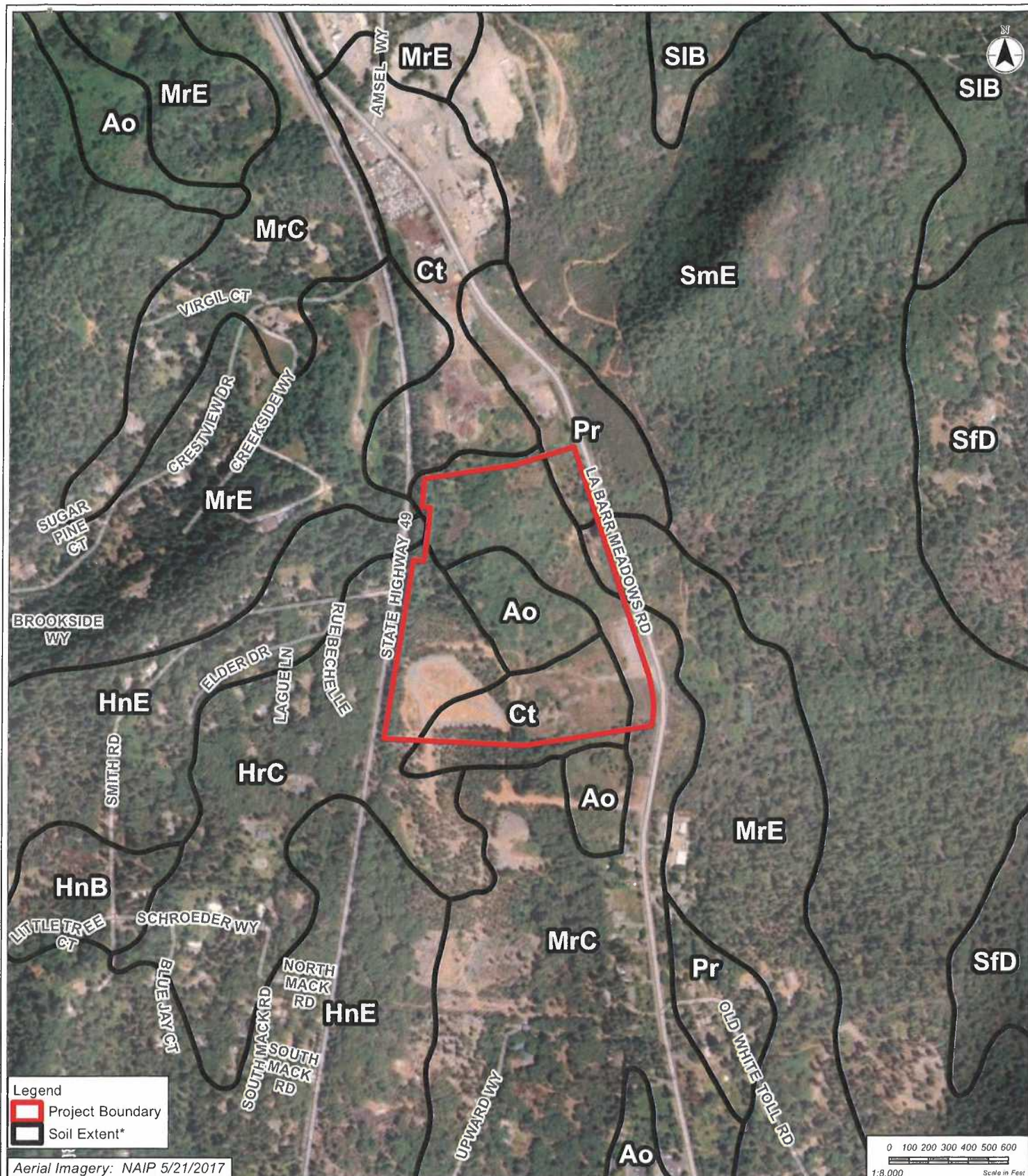
GREG MATUZAK
 Environmental Consulting LLC
 Nevada City, CA

Parcel Nos.: 022-160-006-000
 and 022-160-033-000

Figure 3. CNDDB and Critical Habitat Map

Appendix E

USDA Soils Map of Project Area



* Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, Web Soil Survey, Available online. Accessed 03/06/2019

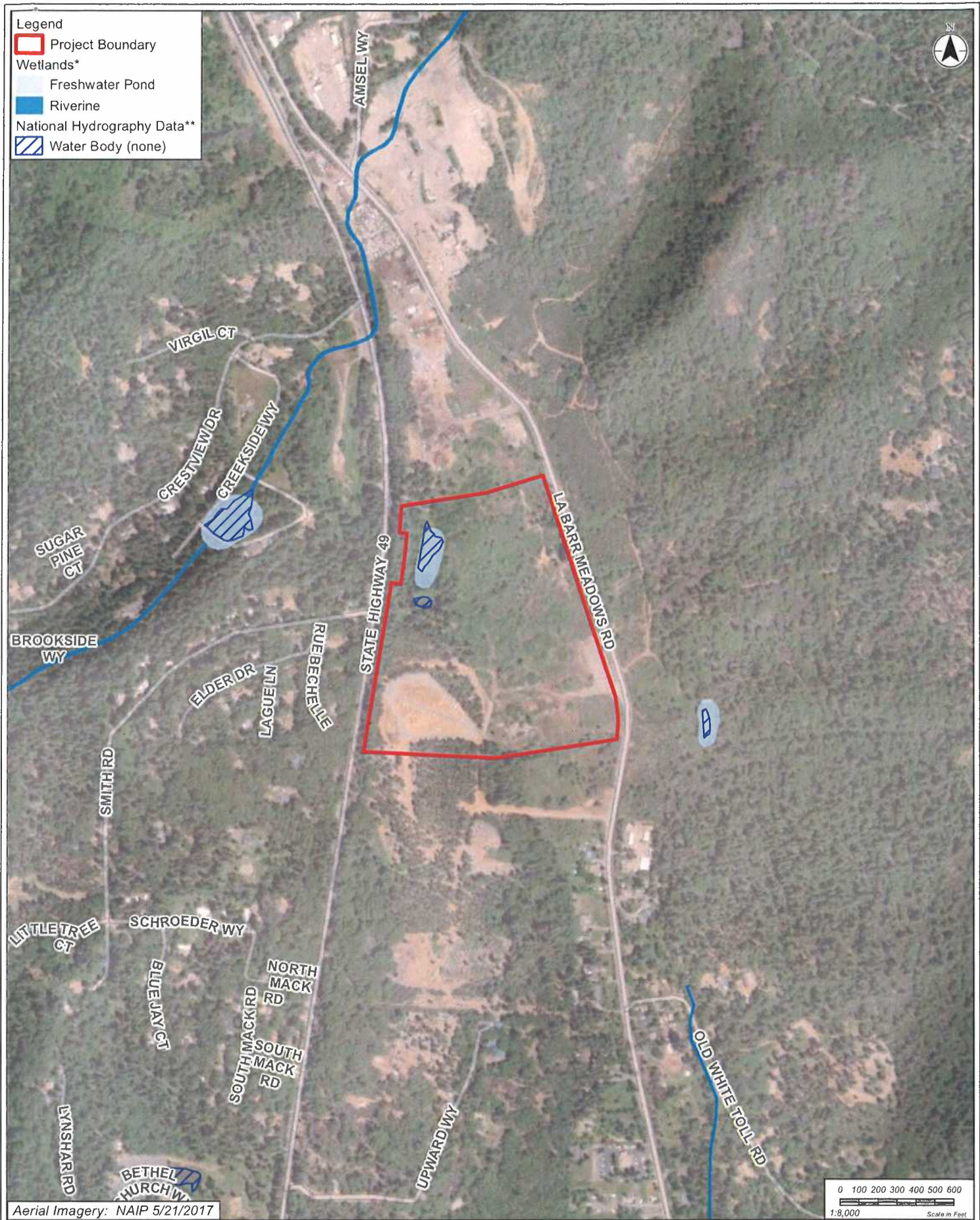
GREG MATUZAK
Environmental Consulting LLC
Nevada City, CA

Parcel Nos.: 022-160-006-000
and 022-160-033-000

Figure 4. Soils Map

Appendix F

National Wetland Inventory (NWI) Figure



GREG MATUZAK
Environmental Consulting LLC
Nevada City, CA

* Data downloaded from <https://www.fws.gov/wetlands/Data/Data-Download.html> 3/6/2019
** National Hydrography Dataset (NHD) downloaded from <http://nhd.usgs.gov> March, 2019

Parcel Nos.: 022-160-006-000
and 022-160-033-000

NOTE: Wetlands and NHD water features on this map have been adjusted approximately 316 feet west and 48 feet south to properly overlay the aerial image used in this map. As such, the feature locations are considered accurate with respect to the aerial imagery.

Figure 5. Wetlands and Water Features Map

Appendix G

CNDDDB Occurrence and USFWS IPaC Reports



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Mapndx IS (12076 OR 22745 OR 22746 OR 23689 OR 30490 OR 30554 OR 39883 OR 41294 OR 50474 OR 68011 OR 76676 OR 79239 OR 83108 OR 99346 OR A1922)

Map Index Number: 68011

Key Quad: Grass Valley (3912121)

Occurrence Number: 135

EO Index: 68166

Element Code: ABNME03041

Occurrence Last Updated: 2009-09-24

Scientific Name: *Laterallus jamaicensis coturniculus*

Common Name: California black rail

Listing Status: **Federal:** None

Rare Plant Rank:

* SENSITIVE *

State: Threatened

Other Lists: BLM_S-Sensitive
CDFW_FP-Fully Protected
IUCN_NT-Near Threatened
NABCI_RWL-Red Watch List
USFWS_BCC-Birds of Conservation Concern

CNDDDB Element Ranks: **Global:** G3G4T1

State: S1

General Habitat:

INHABITS FRESHWATER MARSHES, WET MEADOWS AND SHALLOW MARGINS OF SALTWATER MARSHES BORDERING LARGER BAYS.

Micro Habitat:

NEEDS WATER DEPTHS OF ABOUT 1 INCH THAT DO NOT FLUCTUATE DURING THE YEAR AND DENSE VEGETATION FOR NESTING HABITAT.

Last Date Observed: 2007-01-23

Occurrence Type: Natural/Native occurrence

Last Survey Date: 2007-01-23

Occurrence Rank: Good

Owner/Manager:

Trend: Unknown

Presence: Presumed Extant

Location:

SENSITIVE LOCATION INFORMATION SUPPRESSED.

Detailed Location:

PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological:

MEADOW/EMERGENT WETLAND HABITAT ASSOCIATED WITH SEEPAGE FROM A POND, DOMINATED BY TYPHA DOMINGENSIS, CAREX SP., JUNCUS EFFUSUS PACIFICUS, EPILOBIUM SPP, SALIX LESIDEPI, AND RUBUS DISCOLOR; SURROUNDED BY HOMES. BISECTED BY A ROAD.

Threats:

UPLAND, NOXIUS WEEDS INVADING MEADOW. SIPHON IN MEADOW DEGRADING WETLAND HABITAT. DEVELOPMENT PROPOSED IN 2007.

General:

PLSS: **Accuracy:** 80 meters

Area (acres): 0

UTM: **Latitude/Longitude:**

Elevation (feet): 2,225

County Summary: **Quad Summary:**

Nevada Grass Valley (3912121)

Sources:

MOR07F0001	MORAN, V. (ECOLOGICAL OUTREACH SERVICES) - FIELD SURVEY FORM FOR LATERALLUS JAMAICENSIS COTURNICULUS 2007-01-23
RIC08A0002	RICHMOND O.M. ET AL. (UNIVERSITY OF CALIFORNIA, BERKELEY) - DISTRIBUTION OF CALIFORNIA BLACK RAILS IN THE SIERRA NEVADA FOOTHILLS. J. FIELD ORNITHOL. 79(4):381-390 2008-XX-XX
TEC02F0001	TECKLIN, J. & D. SCHAEFER (UNIVERSITY OF CALIFORNIA, DAVIS) - FIELD SURVEY FORM FOR LATERALLUS JAMAICENSIS COTURNICULUS 2002-07-21
TEC07U0001	TECKLIN, J. (UNIVERSITY OF CALIFORNIA, DAVIS) - E-MAIL TO VIRGINIA MORAN ABOUT THE PRESENCE OF BLACK RAILS IN A MEADOW SSE OF GRASS VALLEY 2007-01-31



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	76676	EO Index:	77622
Key Quad:	Grass Valley (3912121)	Element Code:	ABNME03041
Occurrence Number:	264	Occurrence Last Updated:	2009-09-23

Scientific Name:	<i>Laterallus jamaicensis coturniculus</i>			Common Name:	California black rail
Listing Status:	Federal:	None		Rare Plant Rank:	
	State:	Threatened		Other Lists:	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern
CNDDDB Element Ranks:	Global:	G3G4T1			
	State:	S1			

General Habitat:	Micro Habitat:
INHABITS FRESHWATER MARSHES, WET MEADOWS AND SHALLOW MARGINS OF SALTWATER MARSHES BORDERING LARGER BAYS.	NEEDS WATER DEPTHS OF ABOUT 1 INCH THAT DO NOT FLUCTUATE DURING THE YEAR AND DENSE VEGETATION FOR NESTING HABITAT.

Last Date Observed:	XXXX-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	XXXX-XX-XX	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
VICINITY OF OLD AUBURN RD ABOUT 2.1 MI NORTH OF JUNCTION WITH HWY 49, ABOUT 4.3 MI SSW OF GRASS VALLEY (PO).

Detailed Location:
MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008. WITHIN THE CORE SURVEY AREA.

Ecological:
SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN SIERRA FOOTHILLS.

Threats:
General:
CA BLACK RAILS DETECTED BY RICHMOND ET AL AT 1 SITE DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2006. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FOOTHILLS, DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION.

PLSS:	T15N, R08E, Sec. 15, NW (M)	Accuracy:	2/5 mile	Area (acres):	0
UTM:	Zone-10 N4335903 E666050	Latitude/Longitude:	39.15650 / -121.07821	Elevation (feet):	1,860

County Summary:	Quad Summary:
Nevada	Grass Valley (3912121)

Sources:
RIC08A0002 RICHMOND O.M. ET AL. (UNIVERSITY OF CALIFORNIA, BERKELEY) - DISTRIBUTION OF CALIFORNIA BLACK RAILS IN THE SIERRA NEVADA FOOTHILLS. J. FIELD ORNITHOL. 79(4):381-390 2008-XX-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	99346	EO Index:	100891
Key Quad:	Grass Valley (3912121)	Element Code:	AMACC08010
Occurrence Number:	636	Occurrence Last Updated:	2016-03-01

Scientific Name:	<i>Corynorhinus townsendii</i>	Common Name:	Townsend's big-eared bat
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDDB Element Ranks:	Global: G3G4 State: S2	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority

General Habitat:

THROUGHOUT CALIFORNIA IN A WIDE VARIETY OF HABITATS. MOST COMMON IN MESIC SITES.

Micro Habitat:

ROOSTS IN THE OPEN, HANGING FROM WALLS AND CEILINGS. ROOSTING SITES LIMITING. EXTREMELY SENSITIVE TO HUMAN DISTURBANCE.

Last Date Observed:	2015-07-24	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2015-07-24	Occurrence Rank:	Good
Owner/Manager:	DPR-EMPIRE MINE SHP	Trend:	Unknown
Presence:	Presumed Extant		

Location:

EMPIRE MINE STATE HISTORIC PARK, ABOUT 0.6 MI SE OF E EMPIRE ST AT PINE ST & 0.8 MI NE OF HWY 49 AT E MCKNIGHT WAY.

Detailed Location:

MAPPED TO LOCATION OF VISITOR CENTER.

Ecological:

ATTIC OF VISITOR CENTER IN STATE HISTORIC PARK. PEOPLE ARE IN AND OUT OF THE DOWNSTAIRS CONSTANTLY, BUT THE ATTIC IS NEVER ENTERED. SURROUNDED BY PONDEROSA PINE, MIXED CONIFER AND BLACK OAK WOODLAND.

Threats:

PARK MANAGERS WANT TO CLOSE OFF THE ATTIC BECAUSE OF HUMAN HEALTH AND SAFETY ISSUES (I.E. EVICT BAT COLONY).

General:

MATERNAL ROOST OF ABOUT 40 BATS (ADULT FEMALES AND PUPS) OBSERVED ON 1 JUL & 24 JUL 2015.

PLSS:	T16N, R08E, Sec. 35, NW (M)	Accuracy:	80 meters	Area (acres):	0
UTM:	Zone-10 N4341565 E668643	Latitude/Longitude:	39.20699 / -121.04679	Elevation (feet):	2,600

County Summary:

Nevada

Quad Summary:

Grass Valley (3912121)

Sources:

LEW15F0004	LEWIS, A. (CALIFORNIA DEPARTMENT OF PARKS AND RECREATION) - FIELD SURVEY FORM FOR CORYNORHINUS TOWNSENDII 2015-07-24
SHA15D0001	SHAW, D. (CALIFORNIA DEPARTMENT OF PARKS AND RECREATION) - CALIFORNIA STATE PARK WILDLIFE SUMMARY 2015 [SC-002490] 2015-XX-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	23689	EO Index:	7330
Key Quad:	Grass Valley (3912121)	Element Code:	ARACF12100
Occurrence Number:	577	Occurrence Last Updated:	1998-10-05

Scientific Name:	<i>Phrynosoma blainvillii</i>	Common Name:	coast horned lizard
Listing Status:	Federal: None	Rare Plant Rank:	
	State: None	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern
CNDDDB Element Ranks:	Global: G3G4		
	State: S3S4		

General Habitat:

FREQUENTS A WIDE VARIETY OF HABITATS, MOST COMMON IN LOWLANDS ALONG SANDY WASHES WITH SCATTERED LOW BUSHES.

Micro Habitat:

OPEN AREAS FOR SUNNING, BUSHES FOR COVER, PATCHES OF LOOSE SOIL FOR BURIAL, AND ABUNDANT SUPPLY OF ANTS AND OTHER INSECTS.

Last Date Observed:	1995-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1995-XX-XX	Occurrence Rank:	Excellent
Owner/Manager:	NEV COUNTY, PVT	Trend:	Unknown
Presence:	Presumed Extant		

Location:

ABOUT 4 MILES SW OF GRASS VALLEY, MOSTLY SOUTH OF MCCOURTNEY ROAD IN AND AROUND COUNTY LANDFILL.

Detailed Location:

EAST SIDE OF MCCOURTNEY ROAD, 3 MILES SW OF GRASS VALLEY.

Ecological:

HABITAT CONSISTS OF CHAPARRAL, DOMINATED BY MANZANITA, WITH SOME GRAY PINE, YELLOW PINE, MACNAD CYPRESS, BLUE OAK, BLACK OAK AND LIVE OAK.

Threats:

DEVELOPMENT, COUNTY LANDFILL.

General:

TWO ADULT LIZARDS FOUND IN A LEACHFIELD AREA. LIZARDS COMMON AT THIS LOCATION, FIELDWORK DONE IN THE TIME PERIOD OF 1974 TO 1995.

PLSS:	T15N, R08E, Sec. 08, SE (M)	Accuracy:	nonspecific area	Area (acres):	253
UTM:	Zone-10 N4337572 E663345	Latitude/Longitude:	39.17205 / -121.10910	Elevation (feet):	2,250

County Summary:

Nevada

Quad Summary:

Grass Valley (3912121)

Sources:

BUR90F0018	BURRY, T. - FIELD SURVEY FORM FOR PHRYNOSOMA CORONATUM (FRONTALE POPULATION, CALIFORNIA HORNED LIZARD) 1990-09-13
HAR90F0010	HART, B. - FIELD SURVEY FORM FOR PHRYNOSOMA CORONATUM (FRONTALE POPULATION, CALIFORNIA HORNED LIZARD) 1990-08-21
HAR91F0011	HART, B. - FIELD SURVEY FORM FOR PHRYNOSOMA CORONATUM (FRONTALE POPULATION, CALIFORNIA HORNED LIZARD). (4 PHOTOGRAPHS IN ENVELOPE IN ELEMENT FILE LABELED AS ABOVE) 1991-06-10
HIS90F0002	HISCOX, K. - FIELD SURVEY FORM FOR PHRYNOSOMA CORONATUM (FRONTALE POPULATION, CALIFORNIA HORNED LIZARD) 1990-08-22
HIS93F0001	HISCOX, K.J. - FIELD SURVEY FORM FOR PHRYNOSOMA CORONATUM (FRONTALE POPULATION) 1993-04-12
OLI95F0003	OLIVER, R. - FIELD SURVEY FORM FOR PHRYNOSOMA CORONATUM (FRONTALE POPULATION) 1995-XX-XX
VAN90F0007	VAN VALER, V. - FIELD SURVEY FORM FOR PHRYNOSOMA CORONATUM (FRONTALE POPULATION, CALIFORNIA HORNED LIZARD) 1990-09-04



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	39883	EO Index:	34885
Key Quad:	Grass Valley (3912121)	Element Code:	ARACF12100
Occurrence Number:	599	Occurrence Last Updated:	1998-10-01

Scientific Name:	<i>Phrynosoma blainvillii</i>	Common Name:	coast horned lizard
Listing Status:	Federal: None	Rare Plant Rank:	
	State: None	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern
CNDDDB Element Ranks:	Global: G3G4		
	State: S3S4		

General Habitat:

FREQUENTS A WIDE VARIETY OF HABITATS, MOST COMMON IN LOWLANDS ALONG SANDY WASHES WITH SCATTERED LOW BUSHES.

Micro Habitat:

OPEN AREAS FOR SUNNING, BUSHES FOR COVER, PATCHES OF LOOSE SOIL FOR BURIAL, AND ABUNDANT SUPPLY OF ANTS AND OTHER INSECTS.

Last Date Observed:	1991-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1991-XX-XX	Occurrence Rank:	Poor
Owner/Manager:	CITY OF GRASS VALLEY	Trend:	Decreasing
Presence:	Presumed Extant		

Location:

GRASS VALLEY TREATMENT PLANT, 11808 ALTA VISTA AVE, GRASS VALLEY.

Detailed Location:

Ecological:

GROUND COVERED WITH PEA GRAVLE, MANY BUSHES AND SHRUBS, MANY ANTS.

Threats:

TREATMENT PLANT UNDERGOING MAJOR RECONSTRUCTION.

General:

OBSERVED LIZARDS FROM 1983 TO 1991; RESCUED DOZENS OF YOUNG OFF FLOATING RESERVOIR COVER. YOUNG APPEAR 1ST 2 WEEKS OF AUGUST. OBSERVED FEWER EACH YEAR, WITH ONLY 1 SEEN IN 1991.

PLSS:	T16N, R08E, Sec. 22 (M)	Accuracy:	1/5 mile	Area (acres):	0
UTM:	Zone-10 N4343842 E666824	Latitude/Longitude:	39.22785 / -121.06730	Elevation (feet):	2,560

County Summary:

Nevada

Quad Summary:

Grass Valley (3912121)

Sources:

BEA91F0001	BEATIE, J. - FIELD SURVEY FORM FOR PHRYNOSOMA CORONATUM (FRONTALE POPULATION, CALIFORNIA HORNED LIZARD) 1991-XX-XX
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Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 22745	EO Index: 8145
Key Quad: Grass Valley (3912121)	Element Code: PDCON040H0
Occurrence Number: 21	Occurrence Last Updated: 2004-09-28

Scientific Name: <i>Calystegia stebbinsii</i>	Common Name: Stebbins' morning-glory
Listing Status: Federal: Endangered State: Endangered	Rare Plant Rank: 1B.1
CNDDDB Element Ranks: Global: G1 State: S1	Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden

General Habitat: CHAPARRAL, CISMONTANE WOODLAND.	Micro Habitat: ON RED CLAY SOILS OF THE PINE HILL FORMATION; GABBRO OR SERPENTINE; OPEN AREAS. 300-705 M.
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Last Date Observed: 1991-06-12	Occurrence Type: Natural/Native occurrence
Last Survey Date: 2004-06-16	Occurrence Rank: None
Owner/Manager: UNKNOWN	Trend: Unknown
Presence: Possibly Extirpated	

Location:
0.5 KM (0.25 MI) SOUTH OF FRENCH RAVINE ALONG EITHER SIDE OF MCCOURTNEY ROAD, SOUTHWEST OF GRASS VALLEY.

Detailed Location:
ALONG EITHER SIDE OF MCCOURTNEY ROAD NEAR #14015 AND ACROSS THE ROAD NEAR TELEPHONE POLE #14067.

Ecological:
GROWING IN OPEN GRASS WHICH HAD RECENTLY BEEN CLEARED OF ARCTOSTAPHYLOS SP., CUPRESSUS MACNABIANA, AND PINUS SABINIANA. SOILS ARE BELIVED TO BE SERPENTINE DERIVED.

Threats:
PRESENT LAND USE IS RURAL RESIDENTIAL. IN 2004 AREA ON EAST SIDE OF ROAD HAD BEEN COMPLETELY LANDSCAPED.

General:
22 PLANTS SEEN IN 1991. MANY MORE PLANTS MAY BE IN AREA ACCORDING TO HISCOX, MOSTLY BLOOMING PLANTS WERE NOTED IN 1991. PLANTS NOT SEEN IN 2004; EAST SIDE OF ROAD IS COMPLETELY LANDSCAPED, BUT SUITABLE HABITAT REMAINS ON THE WEST SIDE.

PLSS: T15N, R08E, Sec. 05, SE (M)	Accuracy: specific area	Area (acres): 7
UTM: Zone-10 N4338615 E663631	Latitude/Longitude: 39.18139 / -121.10554	Elevation (feet): 2,200

County Summary: Nevada	Quad Summary: Grass Valley (3912121)
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Sources:

GOG04F0005	GOGOL-PROKURAT, M. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 2004-06-16
HIS91F0004	HISCOX, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 1991-06-12



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 22746 Key Quad: Grass Valley (3912121) Occurrence Number: 22	EO Index: 8144 Element Code: PDCON040H0 Occurrence Last Updated: 2017-12-08								
<hr/>									
Scientific Name: <i>Calystegia stebbinsii</i> Listing Status: <table border="0" style="width: 100%;"><tr><td style="width: 30%;">Federal:</td><td>Endangered</td></tr><tr><td>State:</td><td>Endangered</td></tr></table> CNDDDB Element Ranks: <table border="0" style="width: 100%;"><tr><td style="width: 30%;">Global:</td><td>G1</td></tr><tr><td>State:</td><td>S1</td></tr></table>	Federal:	Endangered	State:	Endangered	Global:	G1	State:	S1	Common Name: Stebbins' morning-glory Rare Plant Rank: 1B.1 Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden
Federal:	Endangered								
State:	Endangered								
Global:	G1								
State:	S1								
<hr/>									
General Habitat: CHAPARRAL, CISMONTANE WOODLAND.	Micro Habitat: ON RED CLAY SOILS OF THE PINE HILL FORMATION; GABBRO OR SERPENTINE; OPEN AREAS. 300-705 M.								
<hr/>									
Last Date Observed: 2015-05-22 Last Survey Date: 2015-05-22 Owner/Manager: NEV COUNTY, PVT Presence: Presumed Extant Location: MCCOURTNEY ROAD LANDFILL AND VICINITY, 1 MILE SOUTH OF FRENCH RAVINE ALONG MCCOURTNEY ROAD, SOUTHWEST OF GRASS VALLEY. Detailed Location: SEVERAL LOCATIONS INCLUDING 14383 MCCOURTNEY RD, MCCOURTNEY AND VAN TAM WAY, MCCOURTNEY AND WOLF MOUNTAIN RD, WOLF MOUNTAIN RD AT AMERICAN RANCH HILL RD, COUNTY ANIMAL SHELTER, COUNTY LANDFILL, AND ACROSS THE STREET FROM FIRE STATION. Ecological: GROWING ON SERPENTINE SOILS (POSSIBLY ALSO GABBRO) WITHIN SERPENTINE CHAPARRAL. WITH CUPRESSUS MACNABIANA, ARCTOSTAPHYLOS VISCIDA, PINUS SABINIANA, QUERCUS GARRYANA, PENSTEMON SPP., RHAMNUS ILICIFOLIA, PICKERINGIA MONTANA, ET AL. Threats: DEVELOPMENT, LANDFILL, RD MAINTENANCE, LACK OF FIRE OR MECHANICAL DISTURBANCE, INVASIVE SPECIES, DUMPING OF YARD WASTE. General: POPULATION NUMBERS FOR PARTS OF OCC: MANY PLANTS SEEN IN 1988, ~218 PLANTS IN 1991, 3 IN 1996, 20 IN 2004, 5 IN 2007, ~30 IN 2010, 714 IN 2014, 21+ IN 2015. COLLECTIONS FROM 1966, 1971, 1973, AND 1987 ARE ALSO ATTRIBUTED TO THIS SITE.	Occurrence Type: Natural/Native occurrence Occurrence Rank: Fair Trend: Unknown								
<hr/>									
PLSS: T15N, R08E, Sec. 05, SE (M) UTM: Zone-10 N4337748 E663219	Accuracy: specific area Latitude/Longitude: 39.17366 / -121.11051								
<hr/>									
County Summary: Nevada	Quad Summary: Grass Valley (3912121)								



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Sources:

BAR87S0001	BARBE, G. - BARBE #4271 CHSC #79287, DAV #144341 & #203442, CDA #39885 1987-05-01
CAL04F0003	CALLAHAN, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 2004-04-29
CAL07F0003	CALLAHAN, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 2007-05-15
CAL10U0001	CALLAHAN, K. - E-MAIL REGARDING CALYSTEGIA STEBBINSII EO#22 2010-05-27
CAL14F0002	CALLAHAN, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 2014-05-21
CAL14F0003	CALLAHAN, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 2014-04-28
CAL14F0004	CALLAHAN, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 2014-04-28
CAL15F0017	CALLAHAN, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 2015-05-22
CAL96F0001	CALLAHAN, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 1996-05-16
DEM66S0005	DEMPSTER, L. & G. STEBBINS - DEMPSTER #4286 JEPS #43785 1966-06-29
DEY88F0001	DEYOUNG, G. & L. GUNDERSON - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 1988-07-06
DEY88M0001	DEYOUNG, G. & L. GUNDERSON - MAP OF CALYSTEGIA STEBBINSII 1988-07-06
HIS91F0005	HISCOX, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 1991-06-17
HIS91F0006	HISCOX, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 1991-05-24
HIS91F0007	HISCOX, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 1991-05-24
HIS91F0008	HISCOX, K. - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 1991-07-29
NOS10F0003	NOSAL, T. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR CALYSTEGIA STEBBINSII 2010-05-26
TRU71S0003	TRUE, G. - TRUE #6552 RSA #595080, CAS-BOT-BC #224331 & #224332, CAS #920465 & #799709 1971-05-24
TRU73S0002	TRUE, G. - TRUE #7467 RSA #550548, SBBG #103610, UCR #74653, CAS-BOT-BC #224333, CAS #864979 1973-05-11



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	79239	EO Index:	80219
Key Quad:	Grass Valley (3912121)	Element Code:	PDFAB25101
Occurrence Number:	4	Occurrence Last Updated:	2010-06-30

Scientific Name:	<i>Lathyrus sulphureus</i> var. <i>argillaceus</i>	Common Name:	dubious pea
Listing Status:	Federal: None	Rare Plant Rank:	3
	State: None	Other Lists:	
CNDDDB Element Ranks:	Global: G5T1T2		
	State: S1S2		

General Habitat:	Micro Habitat:
CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST.	150-930 M.

Last Date Observed:	1926-04-17	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1926-04-17	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:

GRASS VALLEY.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB IN VICINITY OF COMMUNITY OF GRASS VALLEY.

Ecological:

Threats:

General:

ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1926 COLLECTION BY ROBBINS. NEEDS FIELDWORK.

PLSS:	T16N, R08E, Sec. 27 (M)	Accuracy:	1 mile	Area (acres):	0
UTM:	Zone-10 N4342786 E667322	Latitude/Longitude:	39.21825 / -121.06179	Elevation (feet):	

County Summary:

Nevada

Quad Summary:

Grass Valley (3912121)

Sources:

BRO01U0001	BROICH, S. - EMAIL COMMUNICATION REGARDING COLLECTIONS AND TAXONOMY OF LATHYRUS SULPHUREUS VAR. ARGILLACEUS 2001-11-07
ROB26S0001	ROBBINS, W. - ROBBINS #539 DAV (CITED IN BRO01U0001) 1926-04-17



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	12076	EO Index:	4484
Key Quad:	Grass Valley (3912121)	Element Code:	PDMAL110R0
Occurrence Number:	1	Occurrence Last Updated:	2009-05-18

Scientific Name:	<i>Sidalcea stipularis</i>	Common Name:	Scadden Flat checkerbloom
Listing Status:	Federal: None	Rare Plant Rank:	1B.1
* SENSITIVE *	State: Endangered	Other Lists:	SB_RSABG-Rancho Santa Ana Botanic Garden
CNDDDB Element Ranks:	Global: G1		
	State: S1		

General Habitat:	Micro Habitat:
MARSHES AND SWAMPS.	WET MONTANE MARSHES FED BY SPRINGS. 700-740 M.

Last Date Observed:	2008-07-20	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2008-07-20	Occurrence Rank:	Fair
Owner/Manager:		Trend:	Fluctuating
Presence:	Presumed Extant		

Location:
SENSITIVE LOCATION INFORMATION SUPPRESSED.

Detailed Location:
PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological:
PLANTS IN FIVE SMALL PATCHES IN WET MARSHY GROUND SURROUNDED BY PINUS PONDEROSA (INVADING MEADOW). ASSOCIATES INCLUDE SISYRINCHIUM, HOLCUS LANATUS, TYPHA LATIFOLIA, JUNCUS, LUZULA, SCIRPUS, MIMULUS, EPILOBIUM, PERIDERIDIA, AND RUBUS.

Threats:
NATIVE AND NON-NATIVE SPECIES ENCROACHING. GRAZING, HYDROLOGICAL CHANGES, HERBICIDE SPRAYING, OTHER ROAD MAINT.

General:			
PLSS:	Accuracy:	specific area	Area (acres): 9
UTM:	Latitude/Longitude:		Elevation (feet): 2,400

County Summary:	Quad Summary:
Nevada	Grass Valley (3912121)



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Sources:

ADA94U0001	ADAMS, L. - ANNUAL MONITORING REPORT ON SIDALCEA STIPULARIS 1994-01-25
ADA98M0001	ADAMS, L. - MEMO AND MAP SHOWING LOCATION OF SIDALCEA STIPULARIS 1998-06-23
AND98F0014	ANDREASON, K. - FIELD SURVEY FORM FOR SIDALCEA STIPULARIS 1998-08-02
AND98S0002	ANDREASEN, K. - ANDREASEN #287 JEPS 1998-09-02
BRO97U0001	BROWN, C. - RECORD OF PHONE CONVERSATION WITH J. HORENSTEIN REGARDING SEVERAL SITES 1997-12-22
CAL08F0002	CALLAHAN, K. - FIELD SURVEY FORM FOR SIDALCEA STIPULARIS 2008-07-20
CAR83F0001	CARVILLE, J. - FIELD SURVEY FORM FOR SIDALCEA STIPULARIS 1983-09-13
DFG83U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - LETTER FROM DFG DIRECTOR TO LEO TROMBATORE, DIRECTOR OF CALTRANS, REGARDING STATUS OF THE POPULATION. 1983-11-04
HOW74A0001	HOWELL, J.T. & G.H. TRUE - A NEW SIERRAN SIDALCEA. FOUR SEASONS 4:20-22. 1974-XX-XX
LOZ86U0001	LOZIER, L. - MEMO ON SCADDEN FLAT MARSH 1986-04-01
OES80U0001	OFFICE OF ENDANGERED SPECIES, F.W.S. - INFORMAL CONSULTATION, REALIGNMENT OF STATE ROUTE 20 AT SCADDEN FLAT, #1-1-80-I-26.? (9 PAGES + 2 MAPS) 1980-03-04
REI89F0011	REINER, R. - FIELD SURVEY FORM FOR SIDALCEA STIPULARIS 1989-08-01
REI89R0003	REINER, R. - MONITORING REPORT FOR SIDALCEA STIPULARIS IN SCADDEN FLAT 1989-08-XX
SAS03U0001	SASAKI, T. - EMAIL REGARDING SIDALCEA STIPULARIS LOCATIONS 2003-08-11
SAS95F0001	SASAKI, T. - FIELD SURVEY FORM FOR SIDALCEA STIPULARIS 1995-08-30
SHO05U0002	SHOWERS, M. - EMAIL TO R. BITTMAN REGARDING SIDALCEA STIPULARIS 2005-05-19
TAY95S0063	TAYLOR, D. - TAYLOR #15373 JEPS #100678, UC #1755050 1995-08-05
TNC88R0001	THE NATURE CONSERVANCY - NATURE CONSERVANCY ELEMENT MONITORING REPORTS, 1987 1988-XX-XX
TNC90R0001	THE NATURE CONSERVANCY - 1989 AND 1990 ELEMENT MONITORING REPORTS 1990-XX-XX
TNC91R0001	THE NATURE CONSERVANCY - ELEMENT MONITORING REPORTS, 1991 1991-XX-XX
TNC94R0002	THE NATURE CONSERVANCY - TNC ELEMENT MONITORING REPORT FOR 1994 1994-09-24
TRU73S0004	TRUE, G. - TRUE SN RSA #309603 1973-07-10
TRU73S0005	TRUE, G. - TRUE #7616 CHSC #43866 1973-07-23
TRU73S0006	TRUE, G.H. & J.T. HOWELL - TRUE #7630 UC #1506447, RSA #309601 1973-07-30
TRU74S0001	TRUE, G.H. & J.T. HOWELL - TRUE SN RSA #309602 1974-05-31
WIS88R0001	WISE, C. (THE NATURE CONSERVANCY) - MONITORING PLAN FOR SIDALCEA STIPULARIS IN SCADDEN FLAT 1988-XX-XX
WYM92F0006	WYMER, N. - FIELD SURVEY FORM FOR SIDALCEA STIPULARIS 1992-08-02
YOR86F0015	YORK ET AL. - FIELD SURVEY FORM FOR SIDALCEA STIPULARIS 1986-08-28



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 30554	EO Index: 4399
Key Quad: Chicago Park (3912028)	Element Code: PDMAL110R0
Occurrence Number: 2	Occurrence Last Updated: 2009-05-15

Scientific Name: <i>Sidalcea stipularis</i>	Common Name: Scadden Flat checkerbloom
Listing Status: Federal: None	Rare Plant Rank: 1B.1
* SENSITIVE * State: Endangered	Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden
CNDDDB Element Ranks: Global: G1	
State: S1	

General Habitat: MARSHES AND SWAMPS.	Micro Habitat: WET MONTANE MARSHES FED BY SPRINGS. 700-740 M.
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Last Date Observed: 1995-XX-XX	Occurrence Type: Natural/Native occurrence
Last Survey Date: 2008-07-28	Occurrence Rank: Poor
Owner/Manager:	Trend: Decreasing
Presence: Presumed Extant	

Location:
SENSITIVE LOCATION INFORMATION SUPPRESSED.

Detailed Location:
PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological:
FRESHWATER MARSH WITH TYPHA LATIFOLIA SURROUNDED BY PINUS PONDEROSA MARSH. OTHER ASSOCIATES INCLUDE CAREX SP. AND RUBUS PRO CERUS.

Threats:
USED AS PASTURE. CALTRANS PROPOSED TO WIDEN HWY; PLANTS 10 FT. S OF HWY. INVADING BLACKBERRY; MOWING; ALTERED HYDRO.

General:	PLSS:	Accuracy: 80 meters
	UTM:	Area (acres): 0
		Elevation (feet): 2,600
	Latitude/Longitude:	

County Summary:	Quad Summary:
Nevada	Chicago Park (3912028)

Sources:

ADA95U0001	ADAMS, L. - RECORD OF PHONE CONVERSATION WITH N. KANG REGARDING PEARLDALE OCCURRENCE 1995-02-24
BRO97U0001	BROWN, C. - RECORD OF PHONE CONVERSATION WITH J. HORENSTEIN REGARDING SEVERAL SITES 1997-12-22
CAL08F0001	CALLAHAN, K. - FIELD SURVEY FORM FOR SIDALCEA STIPULARIS 2008-07-28
CAR90F0002	CARVILLE, J. - FIELD SURVEY FORM FOR SIDALCEA STIPULARIS 1990-04-25
SAS03U0001	SASAKI, T. - EMAIL REGARDING SIDALCEA STIPULARIS LOCATIONS 2003-08-11



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 30490

Key Quad: Grass Valley (3912121)

Occurrence Number: 13

EO Index: 3876

Element Code: PDSTE03030

Occurrence Last Updated: 2017-06-22

Scientific Name: *Fremontodendron decumbens*

Common Name: Pine Hill flannelbush

Listing Status: **Federal:** Endangered

Rare Plant Rank: 1B.2

State: Rare

Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden
SB_UCBBG-UC Berkeley Botanical Garden

CNDDDB Element Ranks: **Global:** G1

State: S1

General Habitat:

CHAPARRAL, CISMONTANE WOODLAND.

Micro Habitat:

ROCKY RIDGES; GABBRO OR SERPENTINE ENDEMIC; OFTEN AMONG ROCKS AND BOULDERS. 425-770 M.

Last Date Observed: 2016-XX-XX

Occurrence Type: Natural/Native occurrence

Last Survey Date: 2016-XX-XX

Occurrence Rank: Poor

Owner/Manager: NEV COUNTY

Trend: Unknown

Presence: Presumed Extant

Location:

NEVADA COUNTY LANDFILL AND ANIMAL SHELTER ON MCCOURTNEY ROAD, SW OF GRASS VALLEY, NEAR VAN TAM WAY.

Detailed Location:

2 COLONIES. WESTERN COLONY IS BETWEEN LANDFILL AND ANIMAL SHELTER. EASTERN COLONY IS INSIDE LANDFILL BOUNDARY, IN VICINITY OF FENCED ENDANGERED PLANT PROTECTION AREAS.

Ecological:

GABBRO CHAPARRAL. ASSOC WITH CUPRESSUS MACNABIANA, ERIODICTYON, ARCTOSTAPHYLOS VISCIDA, CEANOTHUS LEMMONII, NAVARRETIA, TRITELEIA, BRODIAEA, GRASSES, MADIA; ALSO THE RARE CALYSTEGIA STEBBINSII, ALLIUM SANBORNII, AND PERIDERIDIA BACIGALUPII.

Threats:

THREATENED BY LANDFILL EXPANSION, LACK OF MANAGEMENT, LACK OF DISTURBANCE / SUCCESSION, INVASION BY NON-NATIVES.

General:

E COLONY: ~10 PLANTS SEEN IN 1994, 1 IN 1999, 3 IN 2004. W COLONY: 7 SEEN IN 2004, 2 SEEN IN 2010. UNKNOWN NUMBER IN 2016. IDENTITY OF PLANTS HAS BEEN QUESTIONED, TRAITS APPEAR INTERMEDIATE; STILL CONFIRMED ID AS F. DECUMBENS IN 2017.

PLSS: T15N, R08E, Sec. 05, SE (M)

Accuracy: specific area

Area (acres): 21

UTM: Zone-10 N4337785 E663405

Latitude/Longitude: 39.17396 / -121.10835

Elevation (feet): 2,260

County Summary:

Nevada

Quad Summary:

Grass Valley (3912121)

Sources:

BAR87F0004	BARBE, D. - FIELD SURVEY FORM FOR FREMONTODENDRON DECUMBENS (INCLUDING NOTES WHICH SUGGEST OCCURRENCE IS F. CALIFORNICUM) 1987-05-01
BAR87S0003	BARBE, G. & J. TAYLOR - BARBE #4270 CDA #36514 1987-05-01
CAL04F0004	CALLAHAN, K. - FIELD SURVEY FORM FOR FREMONTODENDRON DECUMBENS 2004-04-29
GOG04F0007	GOGOL-PROKURAT, M. - FIELD SURVEY FORM FOR FREMONTODENDRON DECUMBENS 2004-06-16
HOR93U0002	HORENSTEIN, J. ET AL. - CORRESPONDENCE REGARDING THE IDENTITY OF THE FREMONTODENDRON AT THE NEVADA COUNTY DUMP. INCLUDES NOTE FROM HORENSTEIN TO CNPS, R.M. LLOYD TO M. BRAGA, AND W. KELMAN TO M. BRAGA 1993-10-08
NOS10F0002	NOSAL, T. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR FREMONTODENDRON DECUMBENS 2010-05-26
NOS94F0002	NOSAL, T. - FIELD SURVEY FORM FOR FREMONTODENDRON DECUMBENS 1994-06-XX
NOS99F0001	NOSAL, T. & A. KASAMEYER - FIELD SURVEY FORM FOR FREMONTODENDRON DECUMBENS 1999-12-30
STI17U0001	STILL, S. - EMAIL REGARDING CONFIRMATION OF ID OF POPULATIONS OF FREMONTODENDRON DECUMBENS IN NEVADA COUNTY AND YUBA COUNTY 2017-05-16



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 41294	EO Index: 41294
Key Quad: Grass Valley (3912121)	Element Code: PDSTE03030
Occurrence Number: 14	Occurrence Last Updated: 2010-07-28

Scientific Name: <i>Fremontodendron decumbens</i>	Common Name: Pine Hill flannelbush
Listing Status: Federal: Endangered State: Rare	Rare Plant Rank: 1B.2
CNDDDB Element Ranks: Global: G1 State: S1	Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBBG-UC Berkeley Botanical Garden

General Habitat: CHAPARRAL, CISMONTANE WOODLAND.	Micro Habitat: ROCKY RIDGES; GABBRO OR SERPENTINE ENDEMIC; OFTEN AMONG ROCKS AND BOULDERS. 425-770 M.
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Last Date Observed: 2009-06-03	Occurrence Type: Natural/Native occurrence
Last Survey Date: 2009-06-03	Occurrence Rank: Fair
Owner/Manager: PVT	Trend: Unknown
Presence: Presumed Extant	

Location:

NORTH OF BENNETT ROAD, ABOUT 0.4 MILE EAST OF THE ELM RIDGE CEMETERY, GRASS VALLEY.

Detailed Location:

TWO COLONIES MAPPED WITHIN THE NW 1/4 SE 1/4 SECTION 26 ACCORDING TO A 1999 CALLAHAN MAP.

Ecological:

GROWING IN CHAPARRAL WITH CEANOTHUS CUNEATUS, ARCTOSTAPHYLOS VISCIDA, PINUS PONDEROSA, P. SABINIANA, QUERCUS DURATA, Q. GARRYANA VAR. BREWERI, PICKERINGIA MONTANA, WYETHIA BOLANDERI, RHAMNUS, CUPRESSUS MACNABIANA, AND TOXICODENDRON.

Threats:

PLANTS ARE LOCATED WITHIN FLAGGING FOR A TIMBER HARVEST ZONE. NEARBY DEVELOPMENT & PROPOSED MINE RE-OPENING ARE THREATS.

General:

SW COLONY: 3 PLANTS IN 1999 & 2008. NE COLONY: 7 IN 1999, ~100 IN 2009. IDENTITY OF THESE PLANTS HAS BEEN QUESTIONED; MAY BE F. CALIFORNICUM BASED ON HAIRS. PROBABLY A DISTINCT POP OF F. DECUMBENS OR F. DECUMBENS X F. CALIFORNICUM HYBRID.

PLSS: T16N, R08E, Sec. 26, SE (M)	Accuracy: specific area	Area (acres): 3
UTM: Zone-10 N4342776 E668688	Latitude/Longitude: 39.21789 / -121.04598	Elevation (feet): 2,520

County Summary: Nevada	Quad Summary: Grass Valley (3912121)
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Sources:

CAL08F0009	CALLAHAN, K. - FIELD SURVEY FORM FOR PERIDERIDIA BACIGALUPII & FREMONTODENDRON DECUMBENS 2008-07-13
CAL99F0001	CALLAHAN, K. - FIELD SURVEY FORM FOR FREMONTODENDRON DECUMBENS 1999-03-18
HOR93U0002	HORENSTEIN, J. ET AL. - CORRESPONDENCE REGARDING THE IDENTITY OF THE FREMONTODENDRON AT THE NEVADA COUNTY DUMP. INCLUDES NOTE FROM HORENSTEIN TO CNPS, R.M. LLOYD TO M. BRAGA, AND W. KELMAN TO M. BRAGA 1993-10-08
HUG09F0006	HUGHES, C. (SYCAMORE ENVIRONMENTAL CONSULTANTS, INC.) - FIELD SURVEY FORM FOR FREMONTODENDRON DECUMBENS 2009-06-03



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	A1922	EO Index:	103486
Key Quad:	Grass Valley (3912121)	Element Code:	PMCYP03M60
Occurrence Number:	9	Occurrence Last Updated:	2016-09-23

Scientific Name:	<i>Carex xerophila</i>	Common Name:	chaparral sedge
Listing Status:	Federal: None State: None	Rare Plant Rank:	1B.2
CNDDDB Element Ranks:	Global: G2 State: S2	Other Lists:	

General Habitat:

CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.

Micro Habitat:

SERPENTINITE, GABBROIC. 275-770 M.

Last Date Observed:	2014-08-09	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2014-08-09	Occurrence Rank:	Unknown
Owner/Manager:	PVT	Trend:	Unknown
Presence:	Presumed Extant		

Location:

ALONG HWY 20 ABOUT 0.4 AND 0.7 AIR MILE EAST OF PONDEROSA WAY, WEST OF GRASS VALLEY.

Detailed Location:

MAPPED AS 2 POLYGONS BY CNDDDB BASED ON 2007 KELCH & 2014 PRESTON COORDINATES, IN THE NE 1/4 SECTION 32.

Ecological:

SERPENTINE ROADSIDE, AT EDGE OF WOODY VEGETATION.

Threats:

General:

"COMMON" IN WEST POLYGON IN 2007. UNKNOWN NUMBER SEEN IN EAST POLYGON IN 2014.

PLSS:	T16N, R08E, Sec. 32, NE (M)	Accuracy:	specific area	Area (acres):	10
UTM:	Zone-10 N4341513 E664058	Latitude/Longitude:	39.20741 / -121.0999	Elevation (feet):	2,320

County Summary:

Nevada

Quad Summary:

Grass Valley (3912121)

Sources:

KEL07S0006	KELCH, D. & G. HRUSA - KELCH #7.167 CDA #9562, CHSC #101210 & #97911, UCR #198230 2007-04-20
PRE16U0001	PRESTON, R. - CNPS RARE PLANT STATUS REVIEW FORUM POSTING FOR CAREX XEROPHILA 2016-05-06



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 50474 EO Index: 50474
Key Quad: Grass Valley (3912121) Element Code: PMCYP0N080
Occurrence Number: 5 Occurrence Last Updated: 2019-01-11

Scientific Name: *Rhynchospora capitellata* Common Name: brownish beaked-rush
Listing Status: Federal: None Rare Plant Rank: 2B.2
State: None Other Lists:
CNDDB Element Ranks: Global: G5
State: S1

General Habitat: Micro Habitat:
LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS, MESIC SITES. 45-1710 M.
MARSHES AND SWAMPS, UPPER MONTANE CONIFEROUS FOREST.

Last Date Observed: 1973-07-23 Occurrence Type: Natural/Native occurrence
Last Survey Date: 1973-07-23 Occurrence Rank: Unknown
Owner/Manager: UNKNOWN Trend: Unknown
Presence: Presumed Extant

Location:
NORTHWEST CORNER OF FAIRGROUNDS, "NEVADA CITY."

Detailed Location:
MARSHY AREA ALONG HWY 20. MAPPED BY CNDDB AS BEST GUESS AROUND COUNTY FAIRGROUNDS.

Ecological:
WITH THE RARE SIDALCEA STIPULARIS.

Threats:

General:
NEVADA COUNTY FAIRGROUNDS ARE IN GRASS VALLEY. LOCATION ORIGINALLY CITED IN "FOUR SEASONS" ARTICLE WHICH IS CITED BY SOURCE. 1973 TRUE COLLECTIONS FROM "SCADDEN FLAT, JUST W OF GRASS VALLEY, AT HEAD OF SQUIRREL CREEK" ATTRIBUTED HERE.

PLSS: T16N, R08E, Sec. 33, NE (M) Accuracy: 1/5 mile Area (acres): 0
UTM: Zone-10 N4341493 E665744 Latitude/Longitude: 39.20691 / -121.08038 Elevation (feet):

County Summary: Quad Summary:
Nevada Grass Valley (3912121)

Sources:

TRU73S0003 TRUE, G. - TRUE #7615 SD #131004, CAS #856797, CAS-BOT-BC #111921 1973-07-23
TRU73S0012 TRUE, G. - TRUE #7590 CAS #835449, CAS-BOT-BC #111920 1973-06-19
USF98U0001 U.S. FOREST SERVICE - DRAFT REGION 5 USFS SENSITIVE PLANT SPECIES EVALUATION AND DOCUMENTATION FORM 1998-11-17



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	83108	EO Index:	84104
Key Quad:	Grass Valley (3912121)	Element Code:	PMJUN013E0
Occurrence Number:	3	Occurrence Last Updated:	2011-06-24

Scientific Name:	<i>Juncus digitatus</i>	Common Name:	finger rush
Listing Status:	Federal: None State: None	Rare Plant Rank:	1B.1
CNDDDB Element Ranks:	Global: G1 State: S1	Other Lists:	

General Habitat:

CISMONTANE WOODLAND (OPENINGS), LOWER MONTANE CONIFEROUS FOREST (OPENINGS), VERNAL POOLS.

Micro Habitat:

IN FULL SUN, IN THE VERNALLY DAMP GROUND OF SEEPS, VERNAL POOLS AND SWALES ON GENTLE SLOPES OVER VOLCANIC BEDROCK. 600-790 M.

Last Date Observed:	2011-06-01	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2011-06-01	Occurrence Rank:	Excellent
Owner/Manager:	NEVADA IRRIGATION DIST	Trend:	Unknown
Presence:	Presumed Extant		

Location:

JUST SE OF THE INTERSECTION OF IDAHO MARYLAND ROAD AND BRUNSWICK ROAD, GRASS VALLEY.

Detailed Location:

MAPPED IN THE WEST 1/2 OF THE NE 1/4 OF SECTION 25 ACCORDING TO 2011 BRONNY COORDINATES.

Ecological:

OPEN CHAPARRAL HABITAT SURROUNDED BY MIXED OAK / CONIFER WOODLAND ON A LOW GRADIENT, NORTH-FACING, VERNALLY MOIST HILLSLOPE. SANDY CLAY LOAM SOIL SUBSTRATES UNDERLAIN BY GRANITIC BEDROCK 6-13" BELOW SURFACE. MIX OF UPLAND / HYDROPHYTES.

Threats:

INFRASTRUCTURE DEVELOPMENT PROJECTS AND ALTERATION OF UPSLOPE MICRO-WATERSHED HYDROLOGY ARE THREATS.

General:

APPROXIMATELY 20,000 PLANTS OBSERVED IN 2011. ID CONFIRMED BY CAROL WITHAM AND ELLEN DEAN.

PLSS:	T16N, R08E, Sec. 25, NE (M)	Accuracy:	80 meters	Area (acres):	0
UTM:	Zone-10 N4343453 E670390	Latitude/Longitude:	39.22366 / -121.02610	Elevation (feet):	2,620

County Summary:

Quad Summary:

Nevada	Grass Valley (3912121)
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Sources:

BRO11F0006	BRONNY, C. - FIELD SURVEY FORM FOR JUNCUS DIGITATUS 2011-04-23
BRO11I0001	BRONNY, C. - PHOTOS OF JUNCUS DIGITATUS, CALPHOTOS ID #0000 0000 0511 1896 & 1897 2011-05-25
BRO11I0002	BRONNY, C. - PHOTO OF JUNCUS DIGITATUS, CALPHOTOS ID #0000 0000 0611 0029 2011-06-01

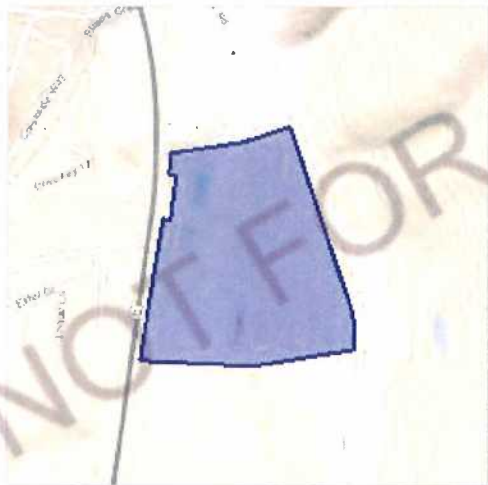
IPaC resource list

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

Nevada County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

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

Endangered species

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

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

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

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

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

Listed 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.
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:

Amphibians

NAME

STATUS

California Red-legged Frog *Rana draytonii*

Threatened

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

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

Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus*

Threatened

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

<https://ecos.fws.gov/ecp/species/321>

Flowering Plants

NAME

STATUS

Pine Hill Flannelbush *Fremontodendron californicum* ssp. *decumbens*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4818>

Stebbins' Morning-glory *Calystegia stebbinsii*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3991>

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty 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 habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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

Additional information can be found using the following links:

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

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

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

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

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

<https://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Aug 31

Rufous Hummingbird *selasphorus rufus*

Breeds elsewhere

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

<https://ecos.fws.gov/ecp/species/8002>

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

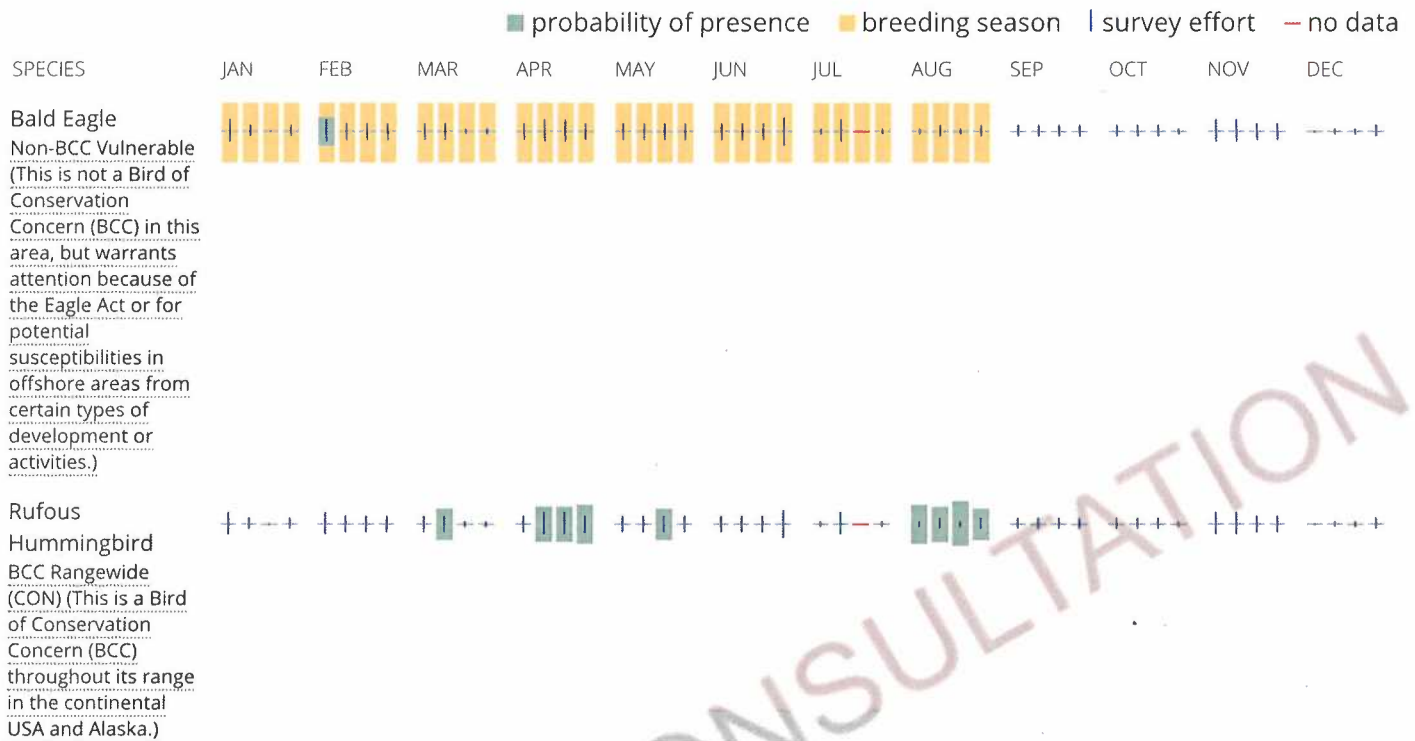
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

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

Survey Timeframe

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



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](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

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

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

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

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

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

This location overlaps the following wetlands:

FRESHWATER POND

[PUBK](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

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

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

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

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or 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.

Appendix H

Jurisdictional Determination Map