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Water and Energy Consulting Services

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January 27, 2022

Subject: Updated Final Biological Report for San Juan Water District's Eureka Road Pipeline Replacement Project

Dear Mr. Dugan,

EN2 Resources, Inc. (EN2) is pleased to submit the attached Updated Final Biological Report for the San Juan Water District's (SJWD) Eureka Road Pipeline Replacement Project. This report was prepared in accordance with State Water Resources Control Board's (SWRCB) Drinking Water State Revolving Fund (DWSRF) Program as part of SJWD's financial assistance application for the Project.

Based on the comments from the California State Water Resources Control Board, the changes listed below were made to the Biological Report:

- Updated Section 3.2 Desktop Evaluation to include the results of the federal database (IPaC) query,
- Updated the discussion of potential species to occur in Section 5.0,
- Added additional references for species habitat analysis in Section 6.0,
- Updated and added details to the project description to include items requested by Maria Pang from California Water Resources Control Board, and
- Included author resumes with report package.

We appreciate the opportunity to support D&A and SJWD on this Project. Please feel free to contact us if you have any questions or wish to discuss the enclosed.

Sincerely,

Jeremy Waites
Project Manager

Enclosure

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UPDATED FINAL BIOLOGICAL REPORT

EUREKA ROAD PIPELINE REPLACEMENT PROJECT

Updated January 27, 2022

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1.0 INTRODUCTION

The following sections address the San Juan Water District's (SJWD) proposed Eureka Road Pipeline Replacement Project (Project), which consists of replacing approximately 4,000 linear feet of steel water pipeline with new ductile iron water pipeline along Eureka Road, between Barton Road and Providence Lane in Granite Bay, CA.

This Biological Report (Report) describes the purpose of the evaluation, the studies conducted during the site visit and personnel conducting those studies, limitations on the evaluation, and maps showing the Project site and surrounding area.

1.1 Project Description

As mentioned above, this Project consists of replacing approximately 850 linear feet of 18-inch and 3,070 linear feet of 16-inch steel pipeline along Eureka Road, between Barton Road and Providence Lane, in Granite Bay, CA with new ductile iron pipeline. The Project area, shown in Figure 1 and Figure 2 (Appendix A), is adjacent to Eureka Road on the north side and connects to seventeen lateral water lines on the north and south side of the road. The existing pipe and old service lines will be abandoned in-place. The new water transmission main will be installed over 10-feet from the existing main. Residential and commercial connections to existing lateral pipelines range in size from 6 inches to 12 inches and between 12 feet to 30 feet in length from the main with a minimum depth of 30 inches below finished grade. Ground-disturbing activities include mechanical excavation with heavy machinery (excavators, backhoes), hand excavation with shovels, augering, and grading. Ground disturbance for pipelines and water services will have an approximate depth of 6 feet below surface, with a maximum of 8 feet below surface.
The Project also includes the following:

- Isolation valves, combination air valves, and blow-offs
- Connections to existing pipelines on both east and west ends of new pipeline
- Fire hydrant connections

Project specifics have not identified a staging area. The contract documents do list two potential properties outside the Project area. It will be the Contractor's responsibility to identify acceptable staging areas per the contract document requirements. These properties were included in the biological survey.

1.2 Purpose of the Report

This Report summarizes the results of a desktop evaluation and pedestrian field survey of biological resources within the Project site and discusses the potential for sensitive biological resources to occur at the Project site or in the surrounding area. Biological resources that were evaluated include federally and State listed threatened and endangered species, as well as species that are candidates for listing, rare species which must be considered under the California Environmental Quality Act (CEQA), and habitats protected by federal or state laws.

These taxa are known collectively as special status species. They are tracked by the California Department of Fish and Wildlife (CDFW) through the California Natural Diversity Database (CNDDB) and the U.S. Fish & Wildlife Service through Information for Planning and Consultation (IPaC) and include:

- Species officially listed as Threatened and/or Endangered by the United States Fish and Wildlife Service (USFWS) or the CDFW
- Species which are candidates for listing in the near future
- Species that meet the criteria for listing, but are not currently included on any list
- Species considered to be of Special Concern by the State
- Species threatened with extirpation in the State
- Habitat that is declining in the State at an alarming rate or that is in limited distribution
- Habitat that is used by listed species
- Habitat that is within the jurisdiction of one or more State and/or federal agencies, such as designated Critical Habitat

For most plant and animal species, the CNDDB tracks sightings, or "Occurrences", which indicate the presence of an individual or a population. This Report does not constitute a jurisdictional determination of a wetland delineation.

1.3 Survey Dates and Personnel

EN2 Resources, Inc. (EN2) staff Senior Ecologist, Jeremy Waites (J. Waites), and Biologist/Natural Resources Analyst, Kristen Hunter (K. Hunter) visited the Project site and completed pedestrian field surveys of the area on July 27, 2021 and September 2, 2021. The field survey focused on 1) completing a habitat assessment for sensitive species, 2) evaluating wetlands, and 3) surveying vegetation cover types with a focus on oak resource impact. Prior to the site visit, EN2 staff completed a desktop evaluation of published resources with information regarding the site and the surrounding area. Late July at the elevation of the Project site, 365 feet, is after the peak blooming period for many foothill species. Despite the lateness of the season, J. Waites and K. Hunter were able to positively identify vegetation habitat conditions (including the lack of potential wetlands) and identify the majority of plant species, including the quality of the habitat at the Project site for special status species. Photos taken during the site visit are included in Appendix B.

2.0 REGULATORY BACKGROUND

The following section summarizes regulatory requirements for the Project site applicable to biological resources, including the Federal Endangered Species Act (ESA), California Endangered Species Act (CESA), CEQA, Migratory Bird Treaty Act (MBTA), Section 401 of the Clean Water Act (CWA), Section 404 of the CWA, Placer County General Plan, and the California Native Plant Society (CNPS) Listings.

This biological review is being performed in accordance with State Water Resources Control Board's (SWRCB) Drinking Water State Revolving Fund (DWSRF) Program Environmental Review Requirements as part of SJWD's financial assistance application for the Project. The information presented in this Report addresses the information specified in the DWSRF's Environmental Package (Construction).

2.1 Federal Endangered Species Act

ESA prohibits the take of federally listed endangered or threatened wildlife species. The definition of "take" includes killing, hunting, pursuing, wounding, trapping, capturing, or collecting wildlife species or the attempt to engage in such conduct. The definition of "take" also precludes harassing or harming protected species, including significantly modifying or degrading habitat for such species. Actions that result in take of a protected species can result in civil or criminal penalties.

2.2 California Endangered Species Act

CESA is similar to ESA but pertains to State-listed endangered and threatened wildlife and plant species. CESA prohibits the taking of State-listed endangered or threatened species. During the environmental review under CEQA, public agencies that serve as lead agencies under CEQA must consult with CDFW [formerly known as California Department of Fish and Game (CDFG)] on projects to determine if State-listed species could be affected and, if so, identify reasonable alternatives to the project which are consistent with conserving the species.

Birds of prey are protected under the California State Fish and Wildlife Code. It is unlawful to take, possess, or destroy any bird of prey, or the nests or eggs of any such bird. Construction disturbance during the breeding season of a bird of prey could result in the incidental loss of eggs or nestlings or could lead to nest abandonment, and such disturbance is considered "take" by CDFW.

2.3 Migratory Bird Treaty Act

MBTA gives protection to birds that migrate across international borders. The MBTA makes it unlawful to pursue, take, kill, possess, sell, or export, at any time, in any manner, any migratory bird, or any part of a nest or egg of any such bird (16 USC 703). The MBTA protects the nesting of migratory birds.

2.4 Section 401 of the Clean Water Act

A Water Quality Certification (Certification), as defined under Section 401 of the CWA, must be obtained from the Regional Water Quality Control Board (RWQCB) when obtaining a Section

404 permit through the U.S. Army Corps of Engineers (USACE) and under other circumstances involving discharges to waters. This 401 Certification must be issued prior to project construction and states that the project will adhere to USACE 404(b)(1) Guidelines, which specify that projects must avoid impacts to wetlands and that impacts to affected wetlands are minimized and mitigated.

2.5 Placer County and California

The Placer County Conservation Program

The Placer County Conservation Program (PCCP) applies to land area of western Placer County and specific areas in neighboring Sutter County. The PCCP's goal is to provide a framework to protect, enhance, and restore the natural resources in specific areas in the counties. The Project site is covered by the PCCP and is within the Plan A Foothills Potential Future Growth area where most growth will occur and with a goal of conservation management.

Placer County General Plan

Last updated in 2013, the Placer County General Plan (General Plan) is a legal document that provides guidance for land use and development as well as the framework for the exercise of the land management powers by local officials.

According to land use designations within the General Plan, the Project site falls within an area designated as Rural Residential with 2.3- to 4.6-acre minimum parcel size.

The Project area is within Tree Ordinance Area 1. Placer County requires preservation of native trees and Oak Woodland resources through replacement and dedication as open space. Removal of an oak tree greater than 6 inches in diameter at breast height (DBH) requires a permit, except when trees interfere with a public utility such as water delivery infrastructure (Placer 2004). The proposed Project will protect oak trees within the disturbance area, when possible, by avoidance through design plans, exclusion by fencing around tree dripline, and prevention of root damage by tunnelling instead of trenching within the dripline of oak trees.

2.6 California Native Plant Society Listing

CNPS is a 501(c)3 non-profit dedicated to conserving California native plants and their natural habitats that works closely with decision-makers, scientists, and local planners to advocate for well-informed and environmentally friendly policies, regulations, and land management practices. CNPS has ranked the rarity of flora across the state of California into six categories. Plants ranked as 1A, 1B, 2A, and 2B are rare enough to meet the requirements for listing under the California Fish and Game Code Sections 2061 and 2067. Plants of these four ranks must be fully considered during the preparation of environmental review documents pertaining to CEQA.

3.0 METHODOLOGY

Development of this Report involved a desktop evaluation and a field survey. The methodology for each is described below.

3.1 Desktop Evaluation

The desktop evaluation of the Project site consisted of the review of current databases maintained by CDFW and USFWS to identify special-status species which have the potential to occur on the Project site (CDFW 2021) (USFWS 2022). Other sources such as the National Wetland Inventory (NWI) Maps, United States Geological Survey (USGS) topographical maps, and Natural Resource Conservation Service (NRCS) soil maps were also reviewed. In addition, J. Waites completed a search of database records in the CNDDB for reported occurrences of special status species. The CNDDB s
earch included the Project site and a 5-mile buffer around the Project site. Table 1 summarizes the species identified in this focused query (CDFW 2021). The CNDDB occurrences are shown in Figure 3 (Appendix A). Table 2 summarizes the species identified in U.S. Fish & Wildlife Service's Information for Planning and Consultation (IPaC) database.

Table 1. CNDDB Species

Common Name	Scientific Name	Federal Listing	State Listing	Habitat	Habitat Present
Plants					
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	None	Endangered	Vernal Pools	None
Animals					
American badger	*Taxidea taxus*	None	None	Agricultural lands, deserts, grasslands, prairies	Poor
California linderiella	*Linderiella occidentalis*	None	None	Vernal Pools	None
great blue heron	*Ardea herodias*	None	None	Open water shores, wetlands	None
Pallid bat	*Antrozous pallidus*	None	None	Rocky outcrops, grasslands	Poor
Ricksecker's water scavenger beetle	*Hydrochara ricksecker*i	None	None	Vernal Pools	None
Silver-haired bat	*Antrozous pallidus*	None	None	Forests near water	Poor
Steelhead trout	*Oncorhynchus mykiss irideus*	None	None	Streams with ocean access	None
Swainson's hawk	*Buteo swainsoni*	None	Threatened	Grasslands	Good
tricolored blackbird	*Agelaius tricolor*	None	Threatened	Agricultural, marshes, grasslands	Poor
valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	None	None	Elderberry shrubs	None

Common Name	Scientific Name	Federal Listing	State Listing	Habitat	Habitat Present
vernal pool fairy shrimp	*Branchinecta lynchi*	Threatened	None	Vernal Pools	None
western pond turtle	*Emys marmorata*	None	None	Vegetated lakes, rivers	None
western spadefoot	*Spea hammondii*	None	None	Ponds, Streams	None
White-tailed kite	*Elanus leucurus*	None	None	Open savannas, woodlands, fields	Good

Table 2. U.S. Fish & Wildlife Service – IPaC List

Species	Scientific Name	Federal Status	Potential to Occur
Reptiles			
Giant Garter Snake	*Thamnophis gigas*	Threatened	None
Amphibians			
California Red-legged Frog	*Rana draytonii*	Threatened	None
California Tiger Salamander	*Ambystoma californiense*	Threatened	None
Fish			
Delta Smelt	*Hypomesus transpacificus*	Threatened	None
Insects			
Monarch Butterfly	*Danaus plexippus*	Candidate	Low
Valley Elderberry Longhorn Beetle	*Desmocerus californicus dimorphus*	Threatened	None
Crustaceans			
Conservancy Fairy Shrimp	*Branchinecta conservatio*	Endangered	None
Vernal Pool Fairy Shrimp	*Branchinecta lynchi*	Threatened	None
Vernal Pool Tadpole Shrimp	*Lepidurus packardi*	Endangered	None
Flowering Plants			
Sacramento Orcutt Grass	*Orcuttia viscida*	Endangered	None

3.2 Pedestrian Field Survey

The pedestrian field survey included a habitat analysis and a floristic botanical survey in which every plant species was identified, meaning that every plant taxon was identified to the taxonomic level necessary to determine if potential sensitive plant species could occur. Unknown species were identified using a taxonomic key in the Jepson Manual (Jepson 2020). The survey extent was comprehensive over the entire Project site.

4.0 RESULTS BASED ON DESKTOP EVALUATION AND FIELD SURVEY

The following section provides details on the wetland features, specific habitat characteristics at the site, conditions which influence those habitats, and includes information gathered during the July and September 2021 site visits.

The local topography surrounding the Project site is mostly flat land in residential or agricultural production. As shown in Table 1 and Table 2, there is potential habitat for as many as seven (7) special status species within or near the Project site. However, for five of these species, habitat is poor due to site characteristics found during the field survey. For the other two species (Swainson's hawk, a State-listed species and White-tailed kite), habitat exists for nesting and foraging.

4.1 Biological Setting

The Project site is located within the eastern portion of the Central Valley and has a Mediterranean climate characterized by hot and dry summer months and cold and wet winter months. The average minimum temperatures in the Folsom Lake area range from a minimum of 38°F in January to a maximum of 95°F in July, and the average annual precipitation is 24 inches, with the wettest period during November-March (Western Regional Climate Center 2021). The Project site is situated at an elevation of approximately 400 feet. The topography is very flat with little slope and no clear drainages. Linda Creek is located less than one mile to the southeast. The Project site is rural with low density residential. The vegetation is characterized by annual grassland and oak woodlands with mostly nonnative grasses in the understory. No riparian habitat was evident.

4.2 Wetland Features

The field survey found that there are no vernal pools, drainages, riparian vegetation, or other wetland features within or adjacent to the Project area. Database searches within the NWI and Placer County showed no wetland features within the Project area. Project activities do not include the fill or other disturbance of any wetland features.

4.3 Vegetation Classification

The classification system of woodland resources in Placer County is based upon the WHR system used by CDFW. In Placer County, the WHR system identifies a total of 36 different natural communities (Placer 2004, Sawyer, 2009). The classifications have been updated by the PCCP. These vegetation communities are shown in Figure 4 (Appendix A). The Project site is classified as Rural Residential. Adjacent to the Project area, the area is classified as Rural Residential Forested, Pasture, Row Crops, and Orchard. The site is dominated by Grassland species with small areas of interior live oak trees (*Quercus wislizeni*).

Most tree species are a mix of planted non-native tree species. At the time of the survey, no elderberry shrubs were present within the Project site.

5.0 DISCUSSION

The following section provides details on Project impacts and the specific habitat characteristics for potential threatened, endangered and sensitive (TES) species that are present at the Project site. These TES species are listed in Table 1 with a habitat rating of poor or better and Table 2 with a potential to occur rating of low or better. TES species that historically occur in the surrounding area are mostly associated with vernal pools such as the Sacramento Orcutt grass, vernal pool fairy shrimp, Boggs Lake hedge-hyssop, and California linderiella, as shown in Section 3.1 (Desktop Evaluation). Based on the existing conditions of the Project area, no vernal pools or evidence of seasonal water retention areas exist within the Project boundary. Because of the habitat conditions present, the species most likely to occur within the Project site are avian species that are covered under the PCCP and protected by the MBTA. The remaining species were eliminated from further consideration because of the lack of suitable habitat conditions.

5.1 Swainson's Hawk

Habitat for nesting and foraging raptors such as the Swainson's hawk is present within the Project area. The Swainson's hawk nests almost exclusively in larger trees of any species that are generally isolated and along drainages, windbreaks, and farmsteads. Suitable nesting trees occur with the Project site, although no active (occupied) or inactive nests were detected within the Project site or within the viewshed of adjacent properties during the pedestrian survey in late July 2021. Project activities could lead to adverse impacts to Swainson's hawk if construction occurs in the vicinity of an active nest during the nesting season. A pair of red-tailed hawks were observed during the field survey; therefore, this area could be used for foraging and possible nesting. The construction of the Project would be implemented as to not remove potential nesting trees which would reduce potential impacts to less-than-significant.

5.2 Pallid Bat

Pallid bats occur in semi-arid and arid landscapes in western North America. They are found primarily in grasslands, shrub-steppe, and desert environments with rocky outcrops, but also dry open oak or ponderosa forest, and open farmland. They utilize open vegetation at ground level up to a few meters above the ground for foraging, and roost sites that offer a range of thermal environments. Roosts are most commonly rock crevices, but buildings, bridges, live trees and snags are also used (Gervais 2016). Project activities are not expected to impact this species.

5.3 American Badger

Badgers live in dry, open grasslands, fields, and pastures with friable soil. They can also live in deserts and marshes. Badgers are elusive, shy mammals that do not tolerate human activity well. Due to the intense human use and activity, badgers are unlikely to occur in the Project area. Project activities are not expected to impact this species.

5.4 Silver-haired Bat

Silver-haired Bat is found in forests near bodies of water, such as rivers, lakes, streams, estuaries or ponds. Summer day roosts are typically under loose bark in trees, willows (Salix), maple (Acer), and ash (Fraxinus) trees. They can also be found in snags that have loose bark to provide cover, and cavities in these trees. The bat may forage near the Project area, but roosting sites and overall habitat are poor. Project activities are not expected to impact this species.

5.5 White-tailed kite

The white-tailed kite inhabits a wide variety of habitats including open oak grassland, desert grassland, farm country, and marshes. Nearby open areas are suitable for hunting and trees could be used for nesting. Construction of the Project would be implemented such that potential nesting trees would not be removed. This would reduce potential impacts of the Project to less-than-significant.

5.6 Tricolored Blackbird

Tricolored blackbirds are found in areas near water, such as marshes, grasslands, and wetlands. They require shrub, thickets, or other vegetative structure for nest building. They also need foraging areas, which can consist of grassland or agricultural pastures. The Project site contains little structure for nesting. Tricolored blackbirds are known to nest in Himalayan blackberry thickets. One such blackberry thicket exists on site as shown in Appendix B – Photograph Log, photo #15. Although overall habitat conditions are poor for nesting, foraging, and migrating birds may occur. Project activities could lead to adverse impacts to tricolored blackbird if construction occurs during the nesting season. The construction of the Project would be implemented as to not remove potential nesting substrate which would reduce potential impacts to less-than-significant.

5.7 Monarch Butterfly

The monarch butterfly uses various species of milkweeds (Asclepias ssp.) as host plants. They also require native flowering plants for food sources. The roadside conditions in the Project area contain few native flowering plants and no milkweed species were observed during the field survey.

Vegetation management within the right-of-way inhibits most species except non-native Mediterranean grasses. The overall habitat for this species is very poor. Project activities are not likely to cause significant impact.

5.8 Other Species

The following species were found during database searches but have no suitable habitat. The lack of habitat creates conditions in which the likelihood of occurrences is extremely low. From the discussion in this section and further lack of TES species occurrences during the field survey, the potential for these TES occurrences on the Project site is negligible.

Plants

Boggs Lake hedge-hyssop (*Gratiola heterosepala*) – This plant is found in muddy soils, shallow water and the edges of vernal pools. No habitat exists within Project site.

Sacramento Orcutt Grass (*Orcuttia viscida*) - Sacramento orcutt grass occurs in the bottom of vernal pools. No habitat exists within Project site.

Amphibians

California Red-legged Frog (*Rana draytonii*) - The California red-legged frog requires a variety of habitat elements with aquatic breeding areas embedded within a matrix of riparian and upland dispersal habitats. Breeding sites of the California red-legged frog are in aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons. Additionally, California red-legged frogs frequently breed in artificial impoundments such as stock ponds. Upland habitats downed woody vegetation, leaf litter, and small mammal burrows; habitats that provide protection from predators and prevent desiccation (drying) of California red-legged frogs (Bulger et. Al 2003). Habitat for breeding does not exist. Project activities are not likely to cause significant impact.

California Tiger Salamander (*Ambystoma californiense*) – Habitat for this species is in grasslands and low foothills with seasonal (vernal) pools or ponds that are required for breeding. Outside of pools it lives underground, using burrows made by burrowing mammals. No vernal pools or existing burrows were observed during the field survey. Project activities are not likely to cause significant impact.

Western spadefoot (*Spea hammondii*) – Western spadefoot toads are usually found in grasslands, chaparral, scrub, and oak woodlands (from 0 to 4,600 feet above sea level). They are typically found in areas where the soil is favorable for burrowing. Western spadefoots prefer treeless habitats and areas where temporary pools of water form. They are also found along sandy, gravel washes and small seasonal streams. During dry seasons, they are typically only found buried. Western spadefoots burrow about three feet deep into loose soil to avoid extreme temperatures and lack of moisture.

Birds

Great blue heron (*Ardea Herodias*) – The great blue heron inhabits open water shores, wetlands, and streams. No suitable habitat is located within the Project site.

Crustaceans

California linderiella (*Linderiella occidentalis*) – This fairy shrimp lives in vernal pools. No suitable habitat is located within the Project site.

Conservancy Fairy Shrimp (*Branchinecta conservatio*) - This shrimp lives in vernal pools. No suitable habitat is located within the Project site.

Vernal pool fairy shrimp (*Branchinecta lynchi*) – This fairy shrimp lives in vernal pools. No suitable habitat is located within the Project site.

Vernal Pool Tadpole Shrimp (*Lepidurus packardi)* This shrimp lives in vernal pools. No suitable habitat is located within the Project site.

Insects

Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*) – This beetle lives in vernal pools. No suitable habitat is located within the Project site.

Valley elderberry longhorn beetle (*Desmocerus californicus*) – This species is nearly always found on or close to its host plant, red or blue elderberry (*Sambucus* sp.), along rivers and streams. No plants/suitable habitat are located within the Project site.

Fish

Delta Smelt *(Hypomesus transpacificus)* - The delta smelt occurs only in the San Francisco estuary in cool and sometimes brackish water. No suitable habitat is located within the Project site.

Steelhead trout (*Oncorhynchus mykiss irideus*) – This fish inhabits streams, creeks and open waters with connectivity to the ocean. No suitable habitat is located within the Project site.

Reptiles

Giant Garter Snake (*Thamnophis gigas*) – This snake lives in agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley.

Western pond turtle (*Emys marmorata*) – The western pond turtle lives in vegetated ponds and rivers. No suitable habitat is located within the Project site.

6.0 DESIGN AND CONSTRUCTION PROVISIONS

If construction will start between March 1 and September 15, the proposed design and construction for the project requires a preconstruction survey for tri-colored blackbird, and Swainson's hawk and other raptors to avoid impacts to these species. The survey will be completed by a qualified biologist and according to CDFW protocols. The nesting period for Swainson's hawk is from March 1 - September 15 (CDFW 1994). The nesting season for the tri-colored blackbird is from March to August (CDFW 2008). The survey will include all potential nesting sites and burrows within 0.5 mile of the proposed area of disturbance for active nests and potential nesting areas within ¼ mile of the Project for raptors. If no active nests are located, survey results will be submitted and no further actions will be required. If an active nest exists, the location will be recorded and reported to the CDFW to determine appropriate buffers and any additional construction limitation or other requirements.

If negative impacts are determined from discharge of the existing pipeline such as localized flooding or erosion, the discharge site will be relocated or use alternative discharge methods or rates. A slow release of water would not cause significant impacts to any sensitive resources.

7.0 LIST OF PREPARERS

Name	Education	Role
Rick A. Lind	M.A. Geography (Water Resources) UC Davis	Principal-in-Charge, Document Review
Jeremy A. Waites	M.S. Coursework, Forestry, Auburn University, Alabama B.S. Forestry, Auburn University, Alabama	Author and Editor, GIS Mapping
Kristen Hunter	B.S. Biological Science, UC Davis	Co-author
Rayann La France	B.S. Criminal Justice CSU Sacramento	Document Editing, Formatting

8.0 REFERENCES

Bulger J. B., J. S. Norman, and R. B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frogs Rana aurora draytonii in coastal forests and grasslands. Biological Conservation 110:85-95.

CDFW 1994. California Department of Fish and Game. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California. Sacramento, CA.

CDFW 2008. Tricolored Blackbird (Agelaius tricolor) Edward C. Beedy Studies of Western Birds 1:437–443, 2008.

CDFW 2021. GIS database query of the California Natural Diversity Database (CNDDB) maintained by the California Department of Fish and Wildlife, Sacramento, CA. Query of the area surrounding the Project. July 23, 2020.

Gervais, Jennifer 2016. Conservation Assessment for the Pallid Bat (Antrozous pallidus) in Oregon and Washington. June 2016. Oregon Wildlife Institute.

Jepson Flora Project (eds.) 2020. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/ [accessed on Jun 02, 2020].

Placer 2004. Placer County Planning Department 2004. Placer County Natural Resources Report.

Placer County 2013. Placer County General Plan Update. Countywide General Plan Policy Document.

Sawyer, 2009. Sawyer, J.O., T. Keeler-Wolf and J.M. Evens. A Manual of California Vegetation. California Native Plant Society. 2009.

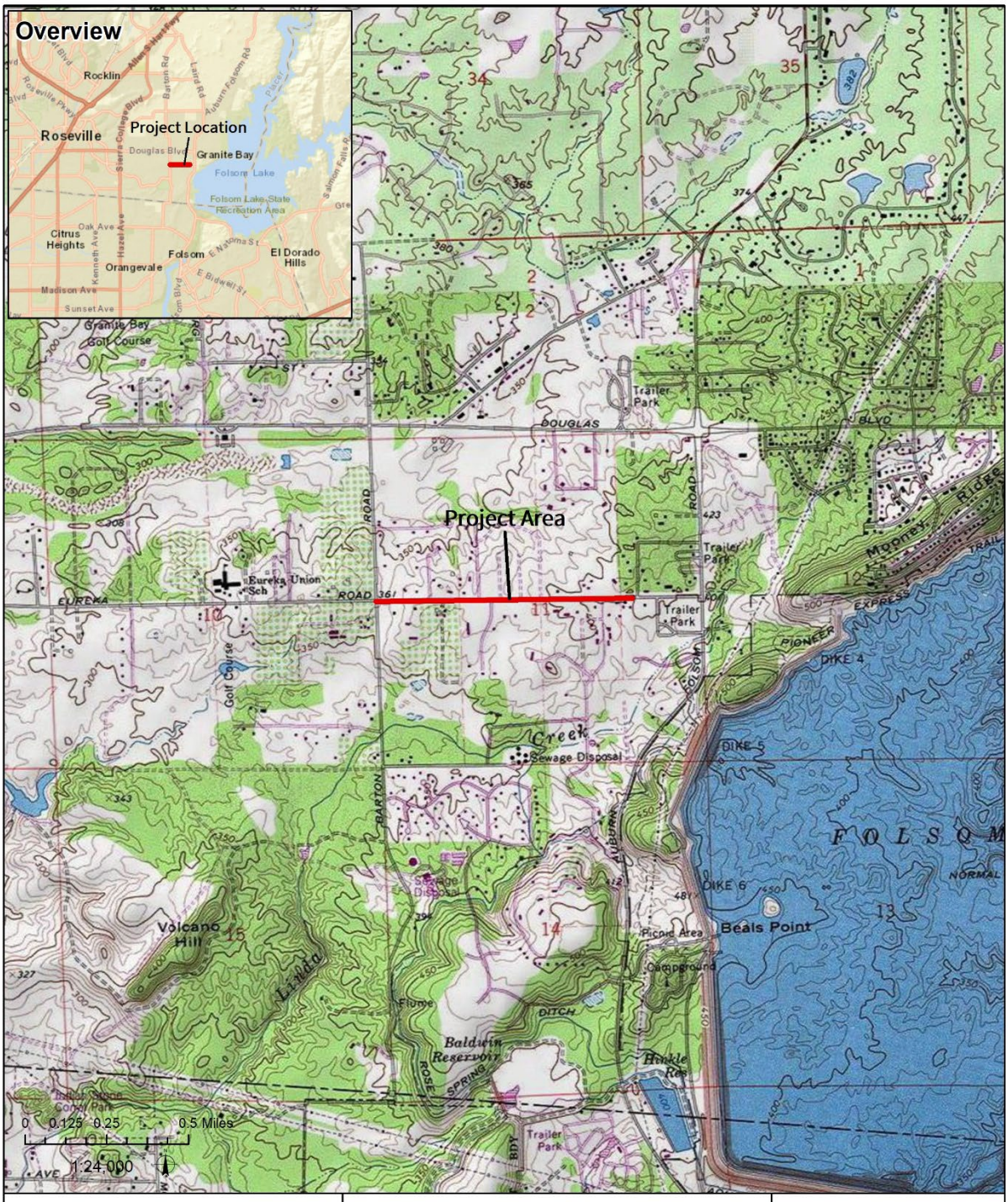
USFWS 2022. U.S. Fish & Wildlife Service IPaCInformation for Planning and Consultation Powered by ECOS - the Environmental Conservation Online System. https://ecos.fws.gov/ipac/. Accessed January 20, 2022.

Western Regional Climate Center (WRCC). 2021. Period of Record Monthly Climate Summary Rocklin, California, 1993-2008 Monthly Climate Summary. Available online at https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3113.

Appendix A

Project Figures

Figure 1. Project Vicinity



Eureka Road
Pipeline Replacement

Project Regional and Vicinity Map

USGS 7.5 min.Topographic
Quadrangle: Folsom - T10N R7E, Section 11
38.7363, -121.1791 Decimal Degrees
Eureka Road, Granite Bay, CA 95746
Placer County, California

EN2 RESOURCES, INC. Water and Energy Consulting Services

Date: 7/19/2021

Figure 2. Project Site

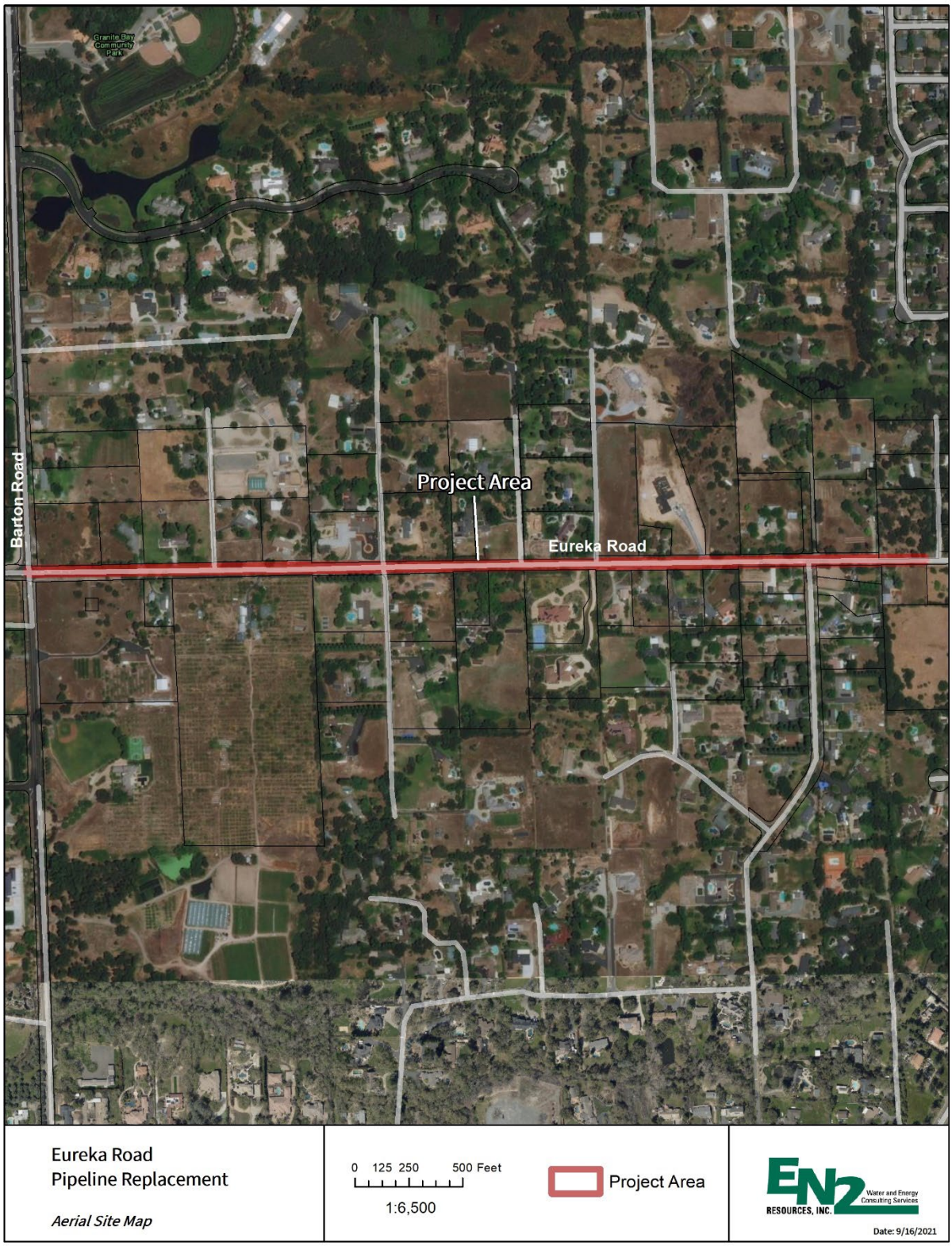


Figure 3. CNDDB Species

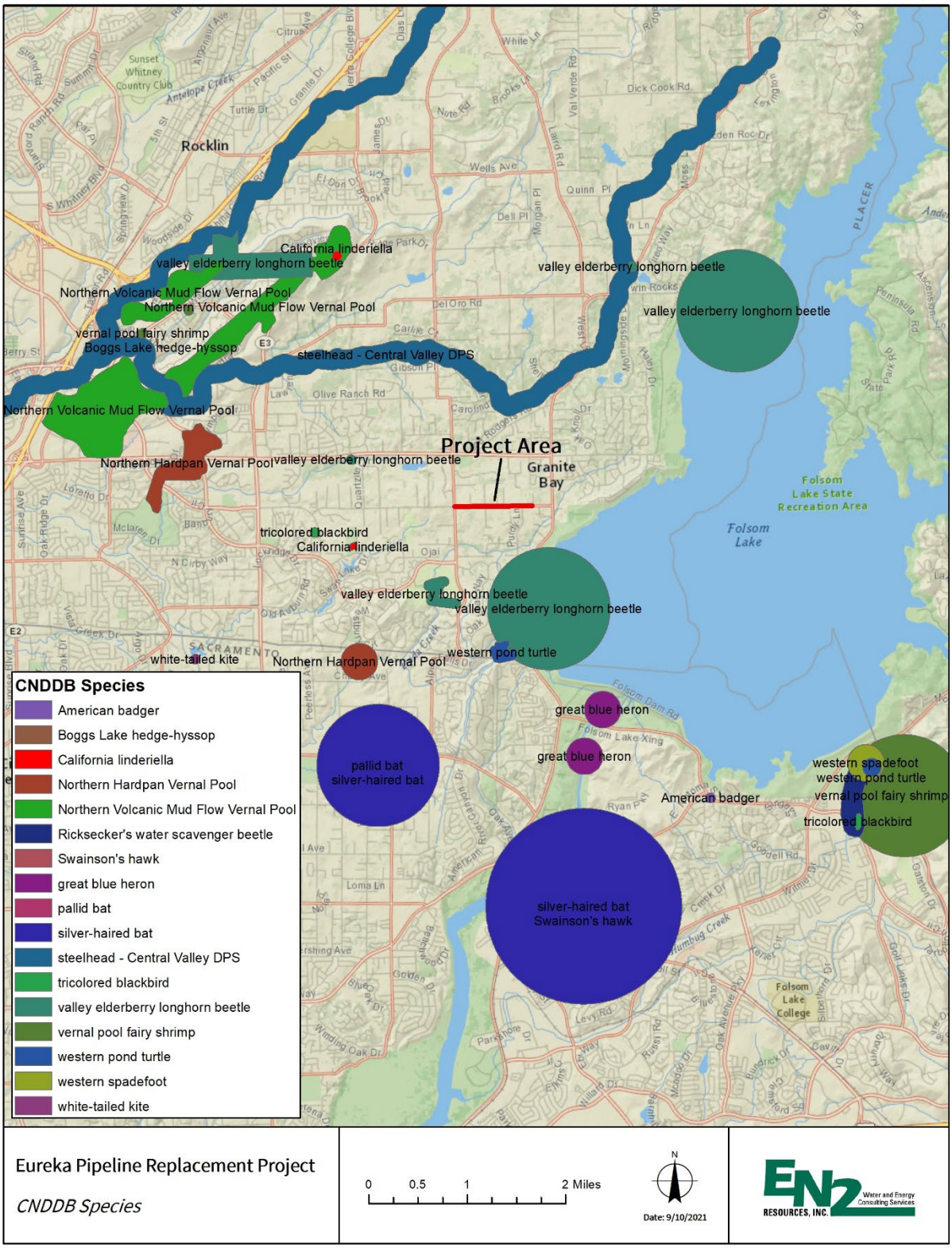
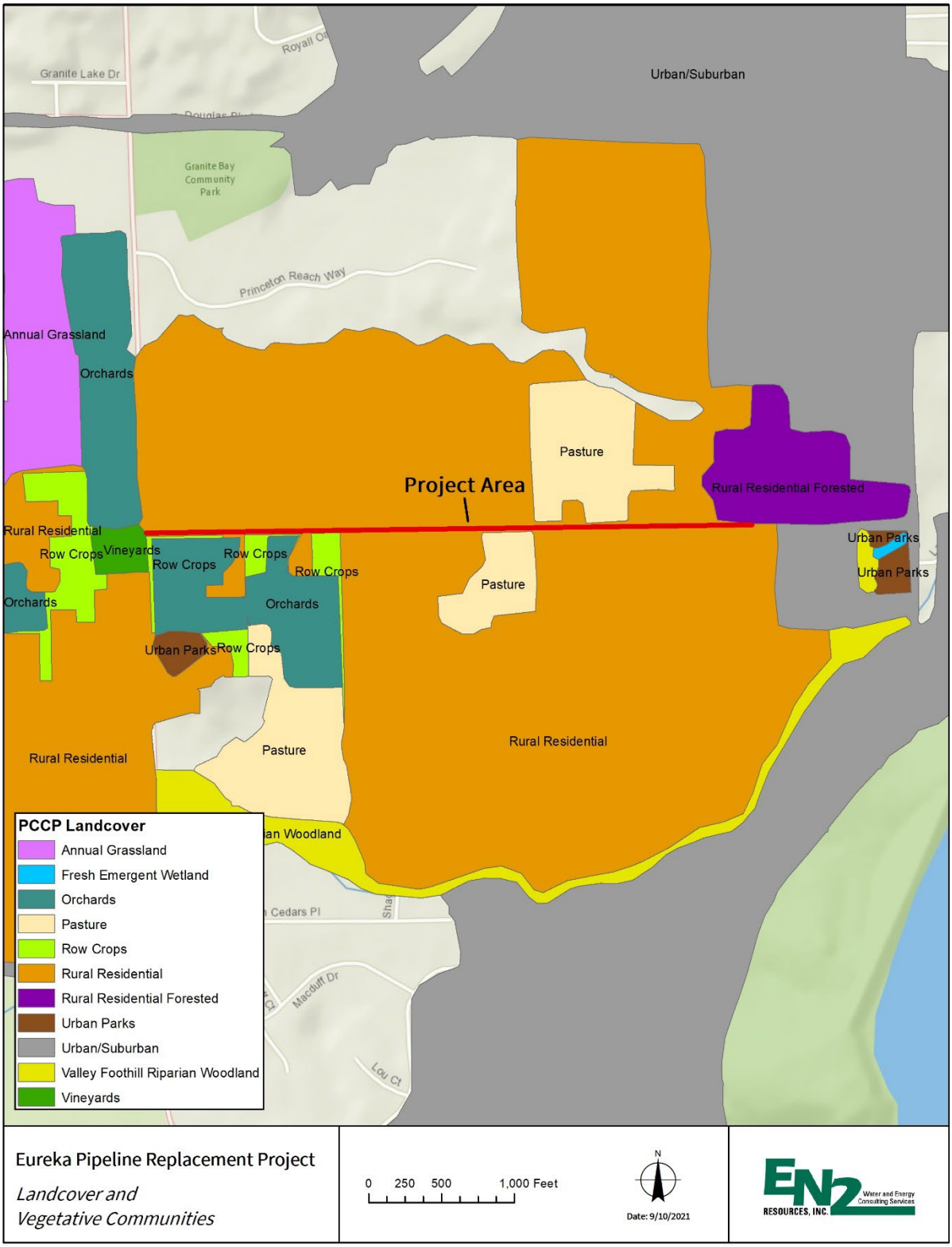


Figure 4. PCCP Land Classification



Appendix B

Photograph Log

Photo 1. North side of Eureka Road looking west at eastern tie-in

Photo 2. The Project area lateral connector

Photo 3. North side of Eureka Road looking east

Photo 4. North side of Eureka Road looking west

Photo 5. North side of Eureka Road looking west

Photo 6. North side of Eureka Road looking west

Photo 7. North side of Eureka Road looking west toward western tie-in

Photo 8. North side of Eureka Road looking at junction of Eureka Road and Barton Road at western tie-in

Appendix C

Author Resumes

EN2 Resources, Inc.
Jeremy Waites, Ecologist/GIS Specialist
Kristen Hunter, Biologist/Natural Resources Analysist

JEREMY WAITES
Ecologist/GIS Specialist

17+ Year of Experience
MS, Coursework (Forestry)
BS, Forestry

Professional History

- Sr. Regulatory/Biological Resources, EN2 Resources, Inc., 2012 to present
- USFS, Eldorado National Forest, Botanist, 2012
- National Park Service, Lassen National Park., GIS Coordinator/Botanist, 2009-2011
- USFS Southern Research Station, Research Technician, 2005-2009

Certifications

- ISA Certified Arborist
- ArcGIS Desktop 10.4 Certification
- California DPR Qualified Applicator License

Background

Mr. Jeremy Waites has 12+ years of ecology experience in the Sierra Nevada, the Cascade Mountains and the California central valley. He also has 6 years of ecology experience in systems of the coastal plain and piedmont plateau of the southeastern United States. He is proficient in Biological Sections in CEQA documentation, Wetland Delineations with permit applications, and vegetation restoration plans and implementation. He has authored Biological Assessments and Evaluations as well as Environmental Impact Reports. He has performed numerous species specific wildlife surveys and habitat assessments for fish and wildlife.

Representative Experience

El Dorado Irrigation District - El Dorado Hydroelectric Project Noxious Weed and Rare Plant Survey -- Completed noxious weed survey of facilities and licensee-maintained roads within the project area. Prepared subset maps and managed GIS data.

El Dorado County – Rubicon Vegetation Restoration Project on Ellis and Gerle Creek – Responsible for managing a vegetation restoration project on the Eldorado National Forest, including habitat assessment, monitoring, and writing reports.

Rio Linda / Elverta Community Water District - Water Tank Construction – Performed CEQA analysis for construction activities. Completed botanical survey and wrote the biological resource section and the CEQA checklist.

Eldorado National Forest – Trail Restoration -- Responsible for restoring relocated or removed trails, roads, and creek crossings. Identified potential threats to sensitive species from restoration activities. Created a monitoring plan and collected pre project monitoring data. Created planting and seeding plans for restoration.

Yuba City – Phase 2: Performed avian and nesting surveys as well as rare plant and botanical surveys in project area. Completed a project-wide wetland delineation. Performed vegetation monitoring in riparian restoration areas. Prepared a Project Restoration Plan. Performed biological resource assessment for federal permitting.

Tahoe Regional Planning Agency - Aquatic Invasive Species Program -- Analyzed survey data on the occurrence and abundance of submerged aquatic invasive vegetation within the near-shore areas of Lake Tahoe. Density analysis was completed to establish relative cover over the infestation areas. Managed GIS data and prepared figures and maps.

Sacramento Municipal Utility District – Union Valley Reservoir Bike Trail Extension Design -- Performed rare plant and botanical surveys along proposed bike trail. Completed a wetland delineation along proposed route. Author of the trail Riparian Conservation Objectives report. Created diagrams and drawings for the construction design plan. Also responsible for all GIS work including data management and map creation.

Lassen National Park – Vegetation Restoration Projects – Performed various vegetation restoration projects due to road and building construction, trail reroutes, and a ski chair lift removal. Responsible for planting, native seed and cone collection, monitoring, and crew supervision.

El Dorado County – Rubicon Vegetation Restoration Project on Tennessee and Weber Creek – Responsible for creating vegetation restoration plans and managing vegetation restoration for bridge replacement projects including habitat assessment, monitoring, and writing reports.

Sacramento Municipal Utility District - High Country Recreation Improvements – Completed rare plant and botanical surveys along trail and proposed rerouted trail section. Responsible for all GIS tasks including GPS data collection, spatial analysis, and map creation. Collected data and maintained database of construction activities on trail segments. Created diagrams and drawings for the construction design plan.

Nyland Quarry – Wetland Delineation and Habitat Assessment – Completed a wetland delineation on project site and quarry and performed a habitat assessment for red legged frogs for surrounding property.

El Dorado Irrigation District – Upper Main Ditch Wetland Delineation -- Completed wetland delineation for the installation of a pipe along the unlined ditch.

El Dorado Irrigation District – Forebay Modification Rare Plant Survey - Completed a rare plant survey in project area and inspected reference populations.

Tahoe Keys Property Owners Association – Tahoe Keys Aquatic Macrophyte Survey – Performed ongoing annual aquatic macrophyte monitoring with hydroacoustic sampling. Completed biomass estimation and spatial statistics analysis and authored report.

Veerkamp – Highway 50 Hazard Tree Removal – Performed preconstruction surveys for sensitive biological resources and performed monitoring during tree removal in critical habitat for listed species

Sacramento Municipal Utility - Robbs Peak Forebay Streamflow Gage Project –District – Completed botanical survey, wetland delineation, and wrote the biological resource section to meet FERC requirements for the South Fork Rubicon River and adjacent area for the construction of a new weir and streamflow gage to more accurately quantify streamflow below Robbs Forebay, part of the Upper American River Project.

KRISTEN HUNTER
Biologist/Natural Resources Analyst

6 Years of Experience
BS, Biological Sciences (Plant Biology)

Professional History

- Biologist / Natural Resources Analyst, SEA, January 2016 – Present
- Boa Vista Orchards, 2011 – 2014

Certifications and Training

- CEQA Practice Certificate, UC San Diego Extension (*In Progress*)
- Graduate Certificate, Conservation Actions with Lands, Animals, and People, Colorado State University, 2020
- CPR, 2020
- Advanced Open Water SCUBA Certification, PADI 2012

Background

Ms. Hunter, a biologist with a specialization in plants and CEQA compliance documentation preparation. She has logged hundreds of hours in the field, primarily in the foothills and Sierra Nevada, since 2016. She is experienced in plant identification in the field and via dichotomous keys, surveys for nesting and fledging birds and raptors, aquatic macrophyte sampling, and water quality sampling. Ms. Hunter regularly compiles and presents primary data from field sites, researches and synthesizes academic literature, and contributes to a wide range of grant applications, environmental compliance documents and permitting applications including CEQA documents, wetland delineations, Section 401 and 404 applications, and Lake and Streambed Alternations Agreement applications.

Representative Experience

Tahoe Keys lagoons - Tahoe Keys Property Owners Association (TKPOA) (2016-Present) – Ms. Hunter manages SEA staff for the TKPOA lagoons project and is the primary author numerous field and literature review research reports (2016-2021). As Project Manager, Ms. Hunter oversees compiling, organizing and creating of database containing all the documents found during the search for literature pertinent to current studies. Responsible for collection of water quality, sediment, benthic macroinvertebrate, and macrophyte samples.

Tahoe Keys Lagoons Aquatic Weed Control Methods Test - Tahoe Keys Property Owners Assocation (2021)– As Assistant Project Manager, prepared detailed application to Lahontan Regulatory Water Quality Control Board (Lahontan) Basin Plan Exemption for project. Responsible for coordination with regulatory agencies to complete requirements for project. Responsible for 3-year budget development, detailed monitoring tables, and field monitoring schedule for project. Responsible for coordination with field staff for implementation project related activities and data collection. Responsible for GIS analysis and preparation of maps for project.

Leek Springs Meadow Restoration – American River Conservancy (2021) – Ms. Hunter conducted field analysis for biological resources and wetland features and was a co-author on the biological resources report and wetland delineation for the project.

Euer Valley Restoration Project – Truckee River Watershed Council (2019-2021) – Responsible for the CEQA IS/MND preparation and analysis. Prepared section, including, but not limited to, aesthetics, air quality, geology, land use, utilities, transportation, population, wildfire, greenhouse gas, and energy. Acted as document editor.

Coldstream Canyon Restoration Project – Truckee River Watershed Council (2019) – Responsible for the CEQA IS/MND preparation and analysis. Prepared section, including, but not limited to, aesthetics, air quality, geology, land use, utilities, transportation, population, wildfire, greenhouse gas, and energy. Acted as document editor.

El Dorado Hydroelectric Project Noxious Weed and Rare Plant Survey– El Dorado Irrigation District (2016-Present) - Completed noxious weed survey of facilities and licensee-maintained roads within the project area. Responsible for GPS, photo documentation of site, data entry, QA/QC, and annual reporting.

Feather River Parkway Phase II – City of Yuba City (2016-Present) - Responsible for permitting compliance and coordination with regulatory agencies. Performed pre-construction surveys including: arborist, riparian-riverine, elderberry shrubs, western pond turtle, Ferris mild-vetch, and bird and raptor. Conducted weekly construction monitoring during ground-breaking activities.

Rubicon River Revegetation Projects – El Dorado County (2016-2018) - Completed revegetation survey to evaluate the effectiveness of erosion control materials, survival rate of planted vegetation, and document the current condition and remaining number of plants as a field assistant. Responsible for photo documentation of sites and reviewing/editing the draft report.