

Appendix B

Biological Resources Assessment

DRAFT

**Biological Resources Assessment for the
Cloverdale South Fields Project, Sonoma County, California**

Prepared for:

Cloverdale Unified School District

97 School Street

Cloverdale, California 95425

Contact: Jeremy Decker, Superintendent

Prepared by:

DUDEK

853 Lincoln Way, Suite 105

Auburn, California 95603

Contact: Anna Godinho, Biologist

JANUARY 2021

Table of Contents

<u>SECTION</u>	<u>PAGE NO.</u>
ACRONYMS AND ABBREVIATIONS.....	III
SUMMARY OF FINDINGS.....	V
1 PROJECT SITE AND DESCRIPTION.....	1
2 PROJECT SETTING	7
2.1 Environmental Setting.....	7
2.1.1 Soils	7
2.1.2 Hydrology	7
2.2 Regulatory Setting	7
2.2.1 Federal.....	7
2.2.2 State	13
3 METHODS	17
3.1 Literature Review.....	17
3.2 Field Assessment	17
3.2.1 Biological and Botanical Survey.....	17
3.2.2 Delineation of Wetlands and Other Waters.....	18
4 RESULTS	21
4.1 Vegetation Communities and Land Cover Types.....	21
4.1.2 Natural Land Cover Types	21
4.1.3 Non-Natural Land Cover Types	21
4.1.3 Aquatic Habitat Types.....	22
4.2 Potential Jurisdictional Aquatic Resources.....	27
4.3 Plant and Wildlife Species Observed	28
4.4 Special-Status Species Potentially Occurring on the Property.....	28
4.4.1 Special-Status Plants.....	28
4.4.2 Special-Status Wildlife.....	28
4.5 Sensitive Natural Communities	29
4.6 Wildlife Corridors and Habitat Linkages.....	29
5 LITERATURE CITED	31

ATTACHMENTS

- A Special-Status Plants with Potential To Occur
- B Special-Status Wildlife with Potential To Occur
- C Representative Site Photographs
- D Plants and Wildlife Observed Onsite During the Site Visit
- E OHWM Data Sheets

FIGURES

1	Project Location	3
2	Project Site	5
3	Soils	9
4	Hydrologic Setting	11
5	CNDDDB Occurrences	19
6	Vegetation Communities and Land Cover Types.....	23
7	Preliminary Jurisdictional Delineation of Wetlands and Other Waters	25

TABLES

1	Vegetation Communities and Land Cover Types in the Project Site	21
2	Potential Jurisdictional Aquatic Resources in the Project Site	27

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ACOE	U.S. Army Corps of Engineers
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of Cloverdale
CNDDB	California Natural Diversity Database
CWA	Clean Water Act
District	Cloverdale Unified School District
FESA	federal Endangered Species Act
ID	intermittent drainage
OHW	Ordinary High Water Mark
MBTA	Migratory Bird Treaty Act
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
TNW	Traditionally Navigable Water
USFWS	U.S. Fish and Wildlife Service

INTENTIONALLY LEFT BLANK

Summary of Findings

On November 24, 2020, Dudek Biologists Anna Godinho and Paul Keating conducted a biological field survey and preliminary jurisdictional delineation of potential waters of the U.S. or state at the Cloverdale South Fields Project (project) site in Sonoma County, California. The focus of the survey was to characterize existing conditions of onsite biological resources and to identify potential biological and aquatic resource constraints to the project. This document describes the methods and results of the biological survey and provides recommendations to avoid and minimize constraints.

There are three natural vegetation community types present in the project site: blue oak woodland, grazed pastureland, and Valley oak riparian woodland. In addition, there are six aquatic habitat features onsite: two seasonal wetland swales, two ephemeral drainages, and two unnamed intermittent drainages. All six features may meet the definition of jurisdictional waters of the U.S. and/or State, regulated by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and/or California Department of Fish and Wildlife through Sections 401 and 404 of the Clean Water Act and/or Fish and Game Code Sections 1600–1602. A discussion of aquatic features and their anticipated jurisdiction is included in Section 4.2, Potential Jurisdictional Aquatic Resources.

No special-status plant species were documented onsite. There are eight special-status plant species with potential to occur in the project site: bent-flowered fiddleneck (*Amsinckia lunaris*), narrow-anthered brodiaea (*Brodiaea leptandra*), Rincon Ridge ceanothus (*Ceanothus confuses*), congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *Congesta*), thin-lobed horkelia (*Horkelia tenuiloba*), Colusa layia (*Layia septentrionalis*), beaked tracyina (*Tracyina rostrata*), and Santa Cruz clover (*Trifolium buckwestiorum*).

No special-status wildlife species were documented onsite. There are four California species of Special Concern with potential to occur in the project site: grasshopper sparrow (*Ammodramus savannarum*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western red bat (*Lasiurus blossevillii*). The project site provides potential habitat for migratory birds and birds of prey protected by Fish and Game Code Sections 3503 and 3513 and/or the federal Migratory Bird Treaty Act. In addition, the project site provides potential roosting habitat for other native bats protected by Fish and Game Code Section 4150. However, land covers onsite provide poor quality habitat for a majority of these species due to regular human disturbance and/or a lack of suitable microhabitat features.

INTENTIONALLY LEFT BLANK

1 Project Site and Description

The Cloverdale South Fields Project (project) would construct athletic fields on a portion of a vacant property at the south end of the City of Cloverdale. The project is proposed by the Cloverdale Unified School District (District) to develop a sports field complex that would support existing District athletic programs and allow community use outside of school hours. The sports fields would include a baseball field, softball field, and two soccer fields, which are proposed to be located in the northeastern portion of the property. The Project would also construct a parking lot and restroom to support use of the fields.

The project would develop approximately 16 acres of the 31-acre property owned by the District (Assessor's Parcel Number [APN] 117-040-055) located on South Cloverdale Boulevard (Figure 1, Project Location). The project site is located in Township 11 North, Range 10 West, Section 30 Mt. Diablo Base and Meridian within the Cloverdale U.S. Geological Survey (USGS) 7.5-minute quadrangle (Figure 2, Project Site). The approximate center of the site corresponds to 38° 46.667' north latitude and 123° 0.596' west longitude. Access to the athletic fields would be provided by creation of a public roadway extending westerly from South Cloverdale Boulevard. The road on the north side of the project site, currently signed as Kelly Road, would be widened and paved as a public City of Cloverdale roadway.

The project site is currently undeveloped with unpaved roadways adjacent to the north and south site boundaries. The eastern portion of the site contains gently sloping pastureland with an individual large oak tree as well as drainages that support scattered trees and riparian vegetation. The western portion of the site contains rolling hills that support oak woodland and grassland. Elevations onsite range from 320 feet above mean sea level (MSL) in the eastern portion of the site, to approximately 400 feet near the western edge of the proposed athletic fields. The project site has recently been used for grazing and pasture.

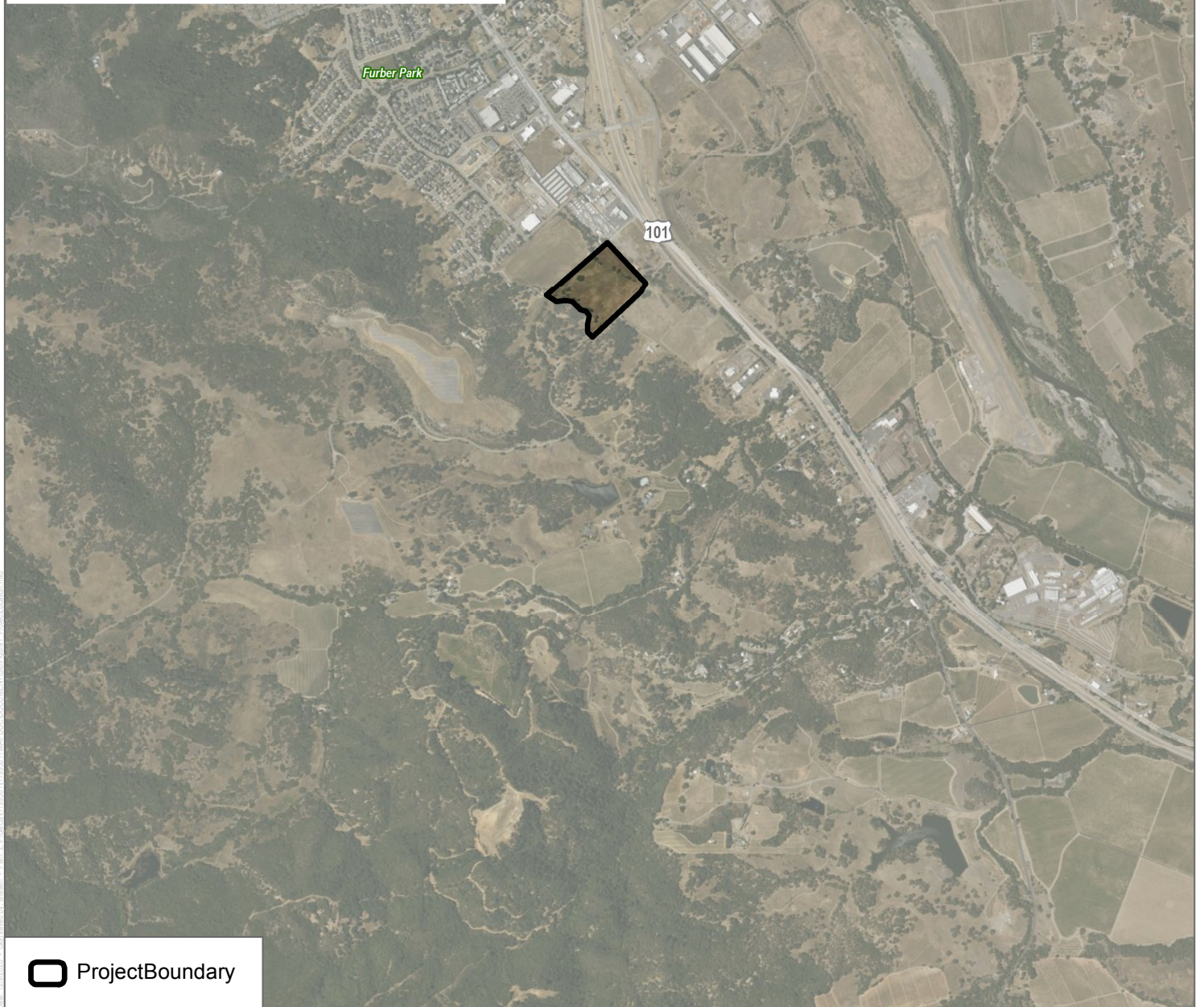
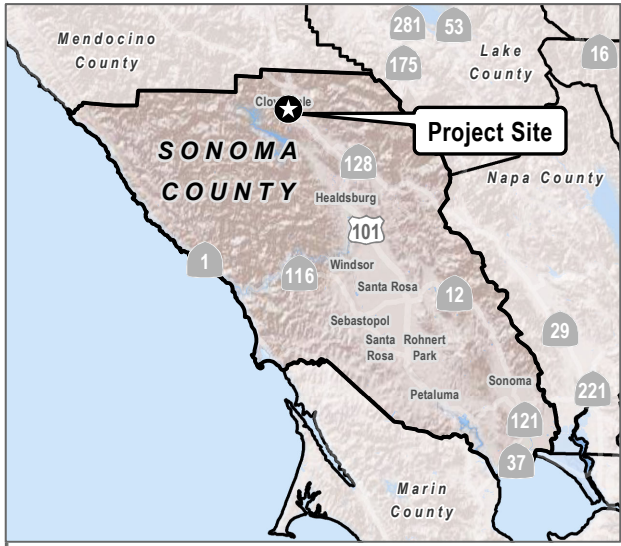
The property immediately north of the project site contains a single-family residence, various outbuildings, and a barn. That property has recently been approved for a residential development called Baumgardner Ranch. Development of Baumgardner Ranch would include annexing the site into the City of Cloverdale, bringing the city boundary adjacent to the Cloverdale South Fields project site. The City approved re-designating the Baumgardner Ranch site to High Density Residential and granted a Planned Unit Development permit to construct 304 homes. The property east of the northern portion of the Cloverdale South Fields site is proposed for development as the Sonoma County Vintners Co-op. There is a Payless storage facility adjacent to the northeastern corner of the site and, further east, a Renner Petroleum gas station that fronts on South Cloverdale Boulevard.

The project is located on District-owned land located in the County of Sonoma and is also within the City of Cloverdale Sphere of Influence and Urban Growth Boundary. The proposed project consists of developing a baseball field, softball field, two soccer fields, associated parking and a restroom facility. Pedestrian/maintenance pathways and other physical improvements including storage and lighting are also proposed for the site.

Construction of the proposed project is anticipated to occur during daylight hours from Monday through Friday, between approximately mid-April and mid-August 2021. Construction would involve vegetation clearing and grubbing in the Spring of 2021. Cleared and grubbed vegetation will be removed and disposed of off-site. The Project may also require the removal of trees along the southern frontage, but this has not been determined at the time of BRA preparation. Rough grading and utility line trenching is proposed to also occur in Spring 2021. Grading is expected to balance onsite; no soil import or export needed. Final grading (which is expected to balance onsite and not require soil import or export) and utility line extensions are anticipated to occur in Summer 2021. Paving and construction will also occur in Summer 2021, and will include paving the parking lot, pouring the foundation for the restroom, and constructing the restroom facility. Field surfacing and final improvements will occur during

the Summer/fall of 2021, including the installation of natural turf, fencing, benches, soccer goals and other components, and landscaping.

The proposed project would be required to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit and Stormwater Pollution Prevention Plan (SWPPP). The proposed project would also implement commonly used best management practices for erosion control, including fiber wattles and silt fencing, covering exposed soil piles, and mulching disturbed areas during construction. The project includes stormwater and drainage facilities onsite.



SOURCE: Bing 2020

FIGURE 1
Project Location

INTENTIONALLY LEFT BLANK



SOURCE: ESRI Basemaps (Accessed 2020)

INTENTIONALLY LEFT BLANK

2 Project Setting

2.1 Environmental Setting

The project site is located in the Alexander Valley on the west side of the Russian River. Elevations within the project site vary from approximately 320 feet above mean sea level in the southeastern portion of the project site to approximately 400 feet above mean sea level in the southwestern portion of the site. Topography in the project site consists primarily of grasslands that are gently sloping downhill from the west to the east.

2.1.1 Soils

Three soil types occur in the project site: Clear Lake Clay, 2 to 5 percent slopes, positas gravelly loam, 0-9 percent slopes and Suther loam, 30 to 50 percent slopes (Figure 3, Soils).

2.1.2 Hydrology

The project site is within the Gill Creek-Russian River subwatershed (Hydrologic Unit Code 180101100602; Figure 4, Hydrologic Setting) of the greater Middle Russian River watershed, which drains approximately 185 square miles of Alexander Valley (CDFW 2019a).

Since the project site is currently undeveloped and has not been disturbed by grading or other ground disturbance activities, hydrology within the project site is relatively undisturbed. Surface run-off in the project site is directed to the two seasonal wetland swales and the two ephemeral drainages which flow into an intermittent drainage, which exits the property in the northeast corner of the project site. The intermittent drainage flows into a ditch along the eastern margin of the property and eventually into Icaria Creek located south of the site, which is tributary to the Russian River east of the project site.

The United States (U.S.) Fish and Wildlife Service (USFWS) National Wetlands Inventory and the U.S. Geologic Survey (USGS) do not identify any waters of the U.S. or state, including wetlands, in or adjacent to the project site (USFWS 2019; USGS 2019). However, these datasets are mapped at a coarse scale, resulting in reconnaissance-level data on the presence, location, and size of waters.

2.2 Regulatory Setting

2.2.1 Federal

Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973, as amended, (16 USC 1531 et seq.) serves as the enacting legislation to list, conserve, and protect threatened and endangered species, and the ecosystems on which they depend, from extinction. In addition, for those wildlife species listed as federally endangered, FESA provides for the ability to designate critical habitat, defined as that habitat considered “essential to the conservation of the species” and that “may require special management considerations or protection.” Under FESA Section 7, if a project that

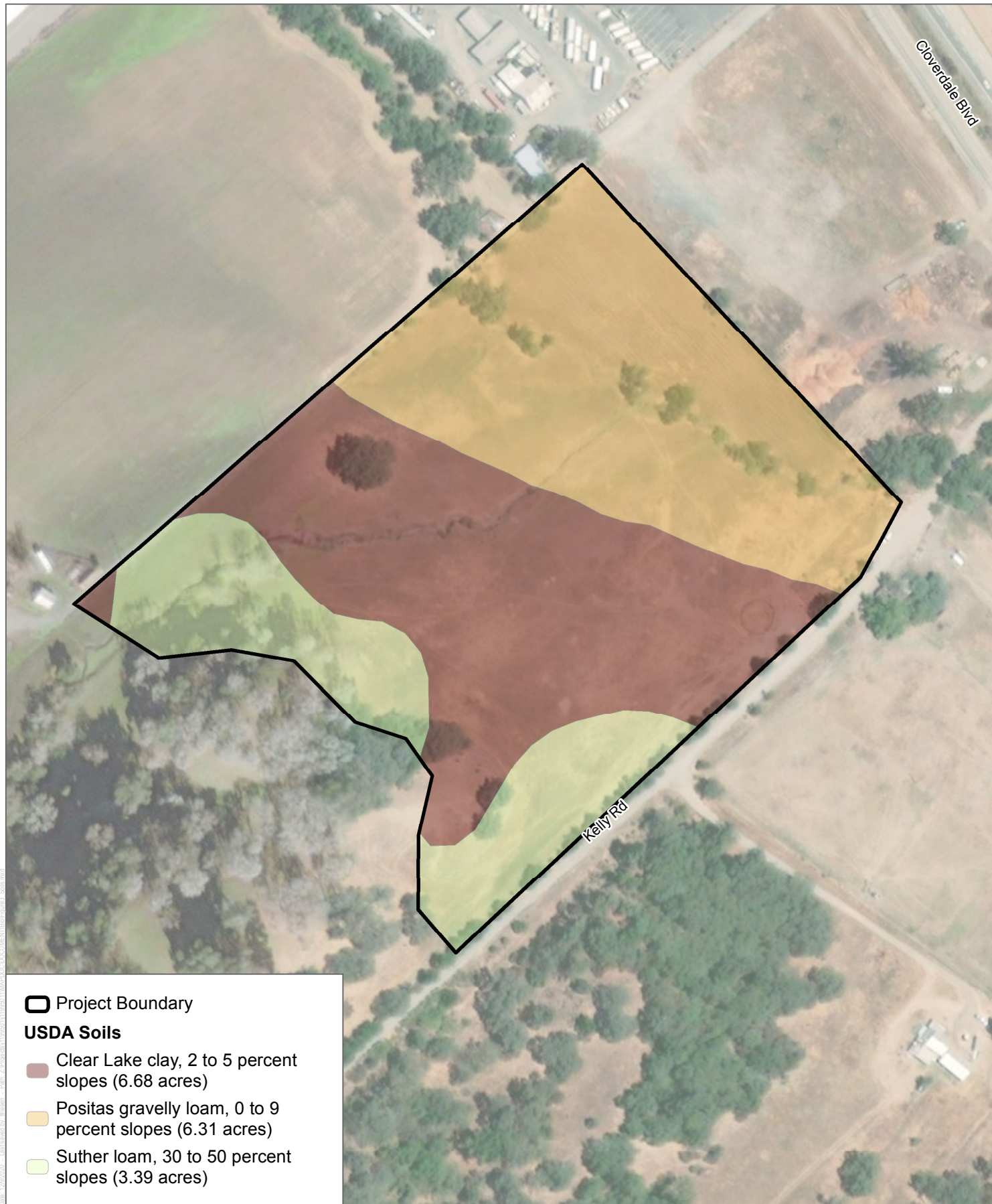
would potentially result in adverse impacts to threatened or endangered species includes any action that is authorized, funded, or carried out by a federal agency, that agency must consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any such action is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat for that species. FESA Section 9(a)(1)(B) prohibits the taking, possession, sale, or transport of any endangered fish or wildlife species. “Take” is defined to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 USC 1532 (19)). With respect to any endangered species of plant, Sections 9(a)(2)(A) and 9(a)(2)(B) prohibit the possession, sale, and import or export, of any such species, and prohibits any action that would “remove and reduce to possession any such species from areas under federal jurisdiction; maliciously damage or destroy any such species on any such area; or remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law.” Pursuant to FESA Section 10(a)(1)(B), the USFWS may issue a permit for the take of threatened or endangered species provided that such taking is “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50, Section 10.13 of the Code of Federal Regulations. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country and is enforced in the United States by the U.S. Fish and Wildlife Service. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50, Section 20 of the Code of Federal Regulations. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). In late December 2017, the Department of Interior issued an opinion that interprets the above prohibitions as only applying to direct and purposeful actions of which the intent is to kill, take, or harm migratory birds; their eggs; or their active nests. Incidental take of birds, eggs, or nests that are not the purpose of such an action, even if there are direct and foreseeable results, is not prohibited.

Federal Clean Water Act (Section 404)

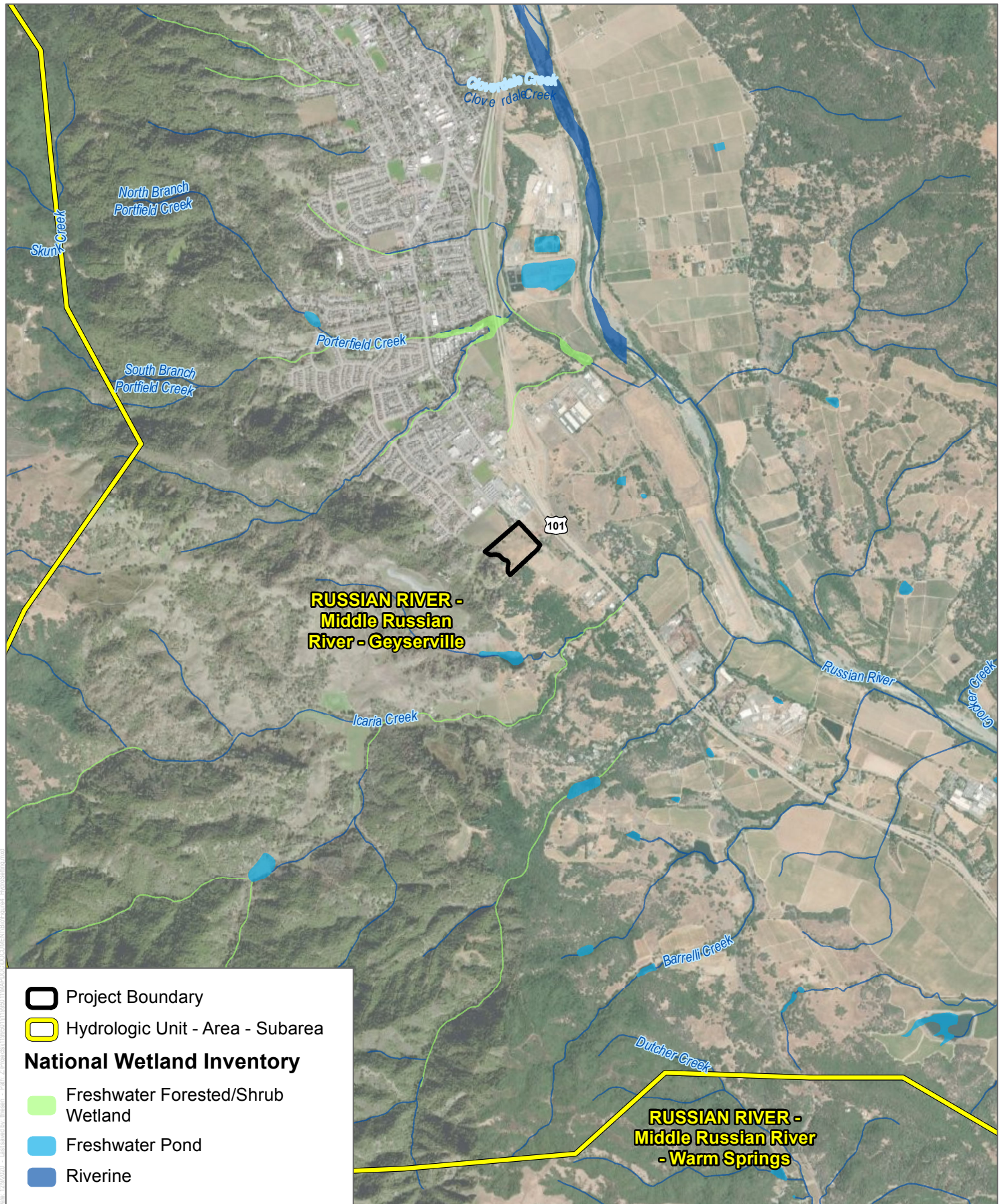
The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation’s waters. Under Section 404 of the CWA, the U.S. Army Corps of Engineers (ACOE) has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. The ACOE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.



SOURCE: ESRI Basemaps (Accessed 2020), USDA 2011

FIGURE 3
Project Soils

INTENTIONALLY LEFT BLANK



SOURCE: ESRI 2020, USFWS 2019

FIGURE 4
Hydrologic Setting

INTENTIONALLY LEFT BLANK

Federal Clean Water Act (Section 401)

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state’s water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards. The North Coast Regional Water Quality Control Board (RWQCB) has authority for Section 401 compliance in the project area. A request for certification is submitted to the regional board at the same time that an application is filed with the ACOE.

2.2.2 State

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Fish and Wildlife Commission has the responsibility of maintaining a list of threatened species and endangered species. The California Department of Fish and Wildlife (CDFW) also maintains lists of species of special concern. A Species of Special Concern is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role
- Is listed as threatened or endangered federally, but not by the state
- Meets the state definition of threatened or endangered, but has not formally been listed
- Is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for threatened or endangered status by the state
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines that would qualify it for threatened or endangered status by the state

The CESA prohibits the take of state-listed animals and plants in most cases, but CDFW may issue incidental take permits under special conditions. Pursuant to the requirements of the CESA, a state agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present on the property and determine whether the project would have a potentially significant impact on such species.

Fish and Game Code Sections 3503, 3511, 3513

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Fish and Game Code Section 4150

California Fish and Game Code Section 4150 states a mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a non-game mammal. A non-game mammal may not be taken or possessed under this code. All bat species occurring naturally in California are considered non-game mammals and are therefore prohibited from take as stated in California Fish and Game Code Section 4150.

California Department of Fish and Wildlife Lake and Streambed Alteration Agreement

Under Sections 1600–1616 of the California Fish and Game Code, the CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFW’s jurisdiction are defined in the code as the “... bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit ...” (Section 1601). In practice, the CDFW usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

California Department of Fish and Wildlife Wetlands Protection Regulations

CDFW derives its authority to oversee activities that affect wetlands from state legislation. This authority includes Sections 1600–1616 of the Fish and Game Code (lake and streambed alteration agreements), the California Endangered Species Act (protection of state-listed species and their habitats, which could include wetlands), and the Keene–Nejedly California Wetlands Preservation Act of 1976 (states a need for an affirmative and sustained public policy program directed at wetlands preservation, restoration, and enhancement). In general, the CDFW asserts authority over wetlands within the state through any of the following: review and comment on ACOE Section 404 permits, review and comment on California Environmental Quality Act (CEQA) documents, preservation of state-listed species, or through lake and streambed alteration agreements.

Sensitive Natural Communities

Section 1940 of the California Fish and Game Code requires CDFW to develop and maintain a vegetation mapping standard for the state. More than half of the vegetation communities in the state have been mapped through the Vegetation Classification and Mapping Program.

Natural vegetation communities are evaluated by CDFW and are assigned global (G) and state (S) ranks based on rarity of and threats to these vegetation communities in California. Natural communities with ranks of S1–S3 are considered sensitive natural communities to be addressed in the environmental review processes of CEQA and its equivalents. Sensitive natural communities are defined by CDFW as vegetation alliances with state ranks of S1–S3 (S1: critically imperiled; S2: imperiled; S3: vulnerable), as identified in the List of Vegetation Alliances and Associations (CDFG 2010) and subsequent updates. Additionally, all vegetation associations within the alliances with ranks of S1–S3 are considered sensitive habitats. CEQA requires that impacts to sensitive natural communities be evaluated and mitigated to the extent feasible.

Sensitive natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. These communities may or may not contain special-status species or their habitats. For purposes of this assessment, sensitive natural communities are considered to include vegetation communities listed in CDFW’s California Natural Diversity Database and communities listed in the Natural Communities List with a rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act established the State Water Resources Control Board (SWRCB) and each RWQCB as the principal state agencies responsible for the protection of water quality in California. The North Coast RWQCB has regulatory authority over the project area.

The RWQCB regulates discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code, Section 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Control Act. The SWRCB defines a waters of the State as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code, Section 13050(e)). As of April 2019, the SWRCB has narrowed their definition of a waters of the state to include the following:

1. *Natural wetlands,*
2. *Wetlands created by modification of a surface water of the state,*
3. *Artificial wetlands that meet any of the following criteria:*
 - a. *Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;*
 - b. *Specifically identified in a water quality control plan as a wetland or other water of the state;*
 - c. *Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or*
 - d. *Greater than or equal to one acre in size unless the artificial wetland was constructed and is currently used and maintained, primarily for one or more of the following purposes: industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration, or treatment of stormwater run-off and other pollutants or run-off subject to regulation under a municipal, construction, or industrial permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling water; active surface mining – even if the site is managed for interim wetlands functions and values; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or fields flooded for rice growing.*

All waters of the U.S. are waters of the state. Wetlands such as isolated seasonal wetlands that are not generally considered waters of the U.S. are considered waters of the state if, “under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.” (State Water Resources Control Board 2019).

Before ACOE will issue a CWA Section 404 permit, applicants must receive a CWA Section 401 Water Quality Certification from the RWQCB. If a CWA Section 404 permit is not required for the project, the RWQCB may still require a permit (i.e., Waste Discharge Requirement) for impacts to waters of the state under the Porter-Cologne Water Quality Control Act.

INTENTIONALLY LEFT BLANK

3 Methods

3.1 Literature Review

Special-status biological plant and wildlife species present or potentially present on the project site were identified through a desktop literature search using the following sources: USFWS Information, Planning, and Conservation (IPaC) Trust Resource Report; CDFW California Natural Diversity Database (CNDDDB); and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants. Additionally, the Natural Resources Conservation Service's Web Soil Survey was queried to determine soil types that exist within the boundary of the project site (USDA 2019a).

The above-referenced databases were searched for the Cloverdale and eight surrounding USGS 7.5-minute quadrangles: Yorkville, Hopland, Highland Springs, Big Foot Mountain, Asti, Tombs Creek, Warm Springs Dam, and Geyserville. CNDDDB search results within three miles of the project site were overlain on aerial imagery to assess proximity of known occurrences to the project site (Figure 5, CNDDDB Map). Special-status species include those that are considered threatened, endangered, or species of special concern by CDFW, USFWS or the CNPS. California Rare Plant Rank 1 and 2 plant species were included in the California Native Plant Society search. Following a review of these resources, Dudek also reviewed relevant life history information on those species documented as occurring in the region, including habitat type, soils, and elevation preferences.

3.2 Field Assessment

3.2.1 Biological and Botanical Survey

On November 24, 2020, Dudek Biologists Anna Godinho and Paul Keating performed a biological field survey of the project site. The survey consisted of walking throughout the project site and along its periphery to map and characterize vegetation communities; collect data on the relative quality of existing habitats and their potential to support the special-status species identified during the preliminary database and resources review; and to identify any other sensitive biological resources present or potentially present within the site. An aerial photograph (Google 2019) and georeferenced mobile map with an overlay of the property boundary were utilized to map the vegetation communities and record any special-status or sensitive biological resources while in the field.

All plant species encountered during the field surveys were identified to the lowest taxonomic group possible and recorded directly into a field notebook. Common and scientific names for plant species with a California Rare Plant Rank (formerly CNPS List) follow the CNPS online Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2019). Nomenclature for all other plant species observed on the site follow *The Jepson Manual, Vascular Plants of California, Second Edition* (Jepson Flora Project 2019).

Wildlife species detected during the field surveys by sight, calls, tracks, scat, or other signs were recorded directly into a field notebook. The site was visually scanned with and without binoculars to identify wildlife; however, focused or protocol-level surveys for special-status plants or wildlife species were not conducted. A list of plant and wildlife species with potential to occur within the project site is included in Attachments A and B, respectively. Representative photographs of the project site are provided in Attachment C. A list of plant and wildlife species

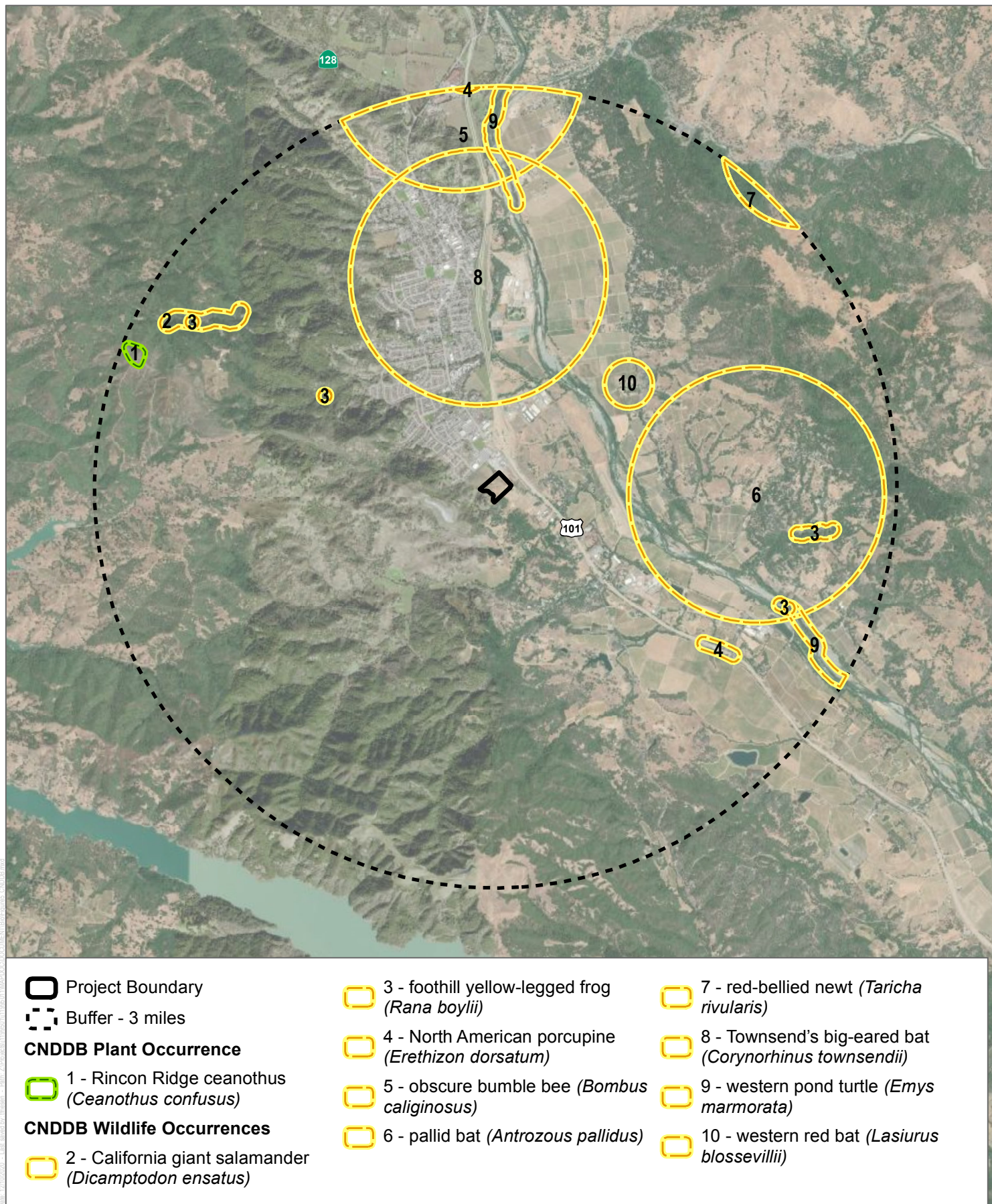
identified onsite during the November 2020 fieldwork is included in Attachment D; and Ordinary High-Water Mark datasheets are provided in Attachment E.

3.2.2 Delineation of Wetlands and Other Waters

Concurrent with the biological reconnaissance survey described above, Ms. Godinho performed a delineation of wetlands and other waters (i.e., waters of the U.S. and waters of the state) to identify and map the extent of aquatic features on the property that are potentially subject to regulation under Sections 401 and 404 of the federal CWA, under Section 1602 Fish and Game Code, or under the provisions of the Porter-Cologne Act. The specific methodology for the delineation is described below.

Prior to conducting fieldwork at the project site, Dudek reviewed a 1:200-scale aerial photograph (Google Earth 2020), historic aerial photographs (Historicaerials.com 2019), the USGS Cloverdale 7.5-minute topographic quadrangle (USGS 2019), U.S. Department of Agriculture Natural Resources Conservation Services (NRCS) Web Soil Survey (USDA 2019a), and National Wetland Inventory (USFWS 2019).

Potential wetlands or waters of the U.S. were delineated based on methodology described in the 1987 Corps of Engineers Wetlands Delineation Manual (ACOE 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008), and applicable regulatory guidance provided by the ACOE, U.S. Environmental Protection Agency, and/or RWQCB, including the geographic extent of jurisdiction based on the respective agency's interpretation of the CWA (see Section 2.2, Regulatory Setting). Non-wetland waters of the U.S. were delineated based on the presence of an OHWM, as determined using the methodology in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western U.S.* (Lichvar and McColley 2008). Plant indicator status for each plant was determined using the Arid West region of the National Wetland Plant List: 2016 (Lichvar et al. 2016). Data were collected at six channel transects to assess channel hydrology and geomorphology. Channel transects are included in this report as Attachment E. The extent of potentially jurisdictional or non-jurisdictional wetlands or other waters within the project site are depicted on Figure 7, Aquatic Resources.



SOURCE: ESRI 2020, CDFW 2020

DUDEK



0 0.5 1 Miles

FIGURE 5

CNDDDB Occurrences

Biological Resources Assessment for the Cloverdale High School South Fields Project

INTENTIONALLY LEFT BLANK

4 Results

4.1 Vegetation Communities and Land Cover Types

The land cover within the project area include natural vegetation communities (Figure 6, Project Vegetation Communities and Land Cover Types), as well as aquatic land cover types (see Figure 7, Preliminary Jurisdictional Delineation of Wetlands and Other Waters). The vegetation communities and land covers have been adapted from the California Wildlife Habitat Relationships System (CDFW 2019a). The following vegetation communities and land cover types were documented onsite and are described in further detail later in this section: riparian woodland, blue oak woodland, and grazed pasture (see Table 1). Refer to Attachment C for representative photographs of onsite vegetation communities and land cover types.

Table 1. Vegetation Communities and Land Cover Types in the Project Site

Macrogroup	Vegetation Community/ Land Cover Type	Acres	Linear Feet
Terrestrial			
Natural Land Cover	Blue Oak Woodland	2.00	NA
	Valley Oak Riparian Woodland	1.10	NA
Non-Natural Land Cover	Grazed Pasture	13.3	NA
	Total	16.4	NA
Aquatic			
Non-Wetland Waters	Ephemeral Drainages	0.05	405
	Intermittent Drainages	0.58	1,788
	Seasonal Wetland Swales	0.02	265
	Total	0.65	2,458

4.1.2 Natural Land Cover Types

Blue Oak Woodland. Along the south-southwestern boundary of the project site is a blue oak woodland that becomes denser as it ascends the hill along the eastern project boundary. This community is dominated by blue oak (*Quercus douglasii*). Other oak species present within this community were interior live oak (*Q. wislizeni*) and Valley oak (*Q. lobata*).

Valley Oak Riparian Woodland. There is a sparse riparian corridor associated with the intermittent drainages. This community type was mapped to include the tree canopy where present along the drainages. Arroyo willow (*Salix lasiolepis*) and Pacific blackberry (*Rubus ursinus*) dominate the understory, below an overstory generally dominated by interior live oak and Valley oak.

4.1.3 Non-Natural Land Cover Types

Grazed Pasture. This landcover dominates the bulk of the project site. Horses were actively grazing on site during the November 2020 fieldwork. Heavy grazing made identification of plant species challenging in many areas, but where

identifiable, this landcover was dominated by a mix of non-native grasses including slender oat (*Avena barbata*), soft brome (*Bromus hordeaceus*), and medusahead (*Elymus caput-medusae*), and hayfield tarplant (*Hemizonia congesta*).

4.1.3 Aquatic Habitat Types

Non-Wetland Waters

Intermittent Drainage. Two unnamed intermittent drainages occur within the project site that flow in a southeasterly direction. The drainages are not identified by the USFWS National Wetlands Inventory or USGS National Hydrography Dataset but appear to contain intermittent hydrology. Ponded water, approximately 2 inches deep, was present intermittently in the drainage at the time of the November 2020 fieldwork. Evidence of an OHWM included bed and bank, shelving, sediment sorting, water staining, and a change in plant community and cover. The drainage bed contained small to large gravel. Herbaceous vegetation was heavily disturbed by horse grazing. A narrow riparian corridor occurred along both banks of the drainage (discussed above).

Ephemeral Drainage. Two ephemeral drainages on the property flow from east to west along topographic contours in the sloping hillside into Intermittent Drainage-01. One of the ephemeral drainages loses its bed and bank and transitions into a seasonal wetland swale before entering Intermittent Drainage-01. These drainages were identifiable by a defined bed and bank, shelving, and a change in vegetation to seaside barley (*Hordeum marinum*) and fiddle dock (*Rumex pulcher*), which were the most common wetland indicator plants present. Upland species common in the grazed pasture were also abundant in the drainages.

Seasonal Wetland Swale. Two seasonal wetland swales on the property flow from east to west along topographic contours in the sloping hillside into Intermittent Drainage-01. One of these swales receives water from Ephemeral Drainage-01. The swales were identifiable by a change in the vegetation present and contained the same facultative wetland vegetation as the ephemeral drainages. Upland species common in the grazed pasture were also abundant.

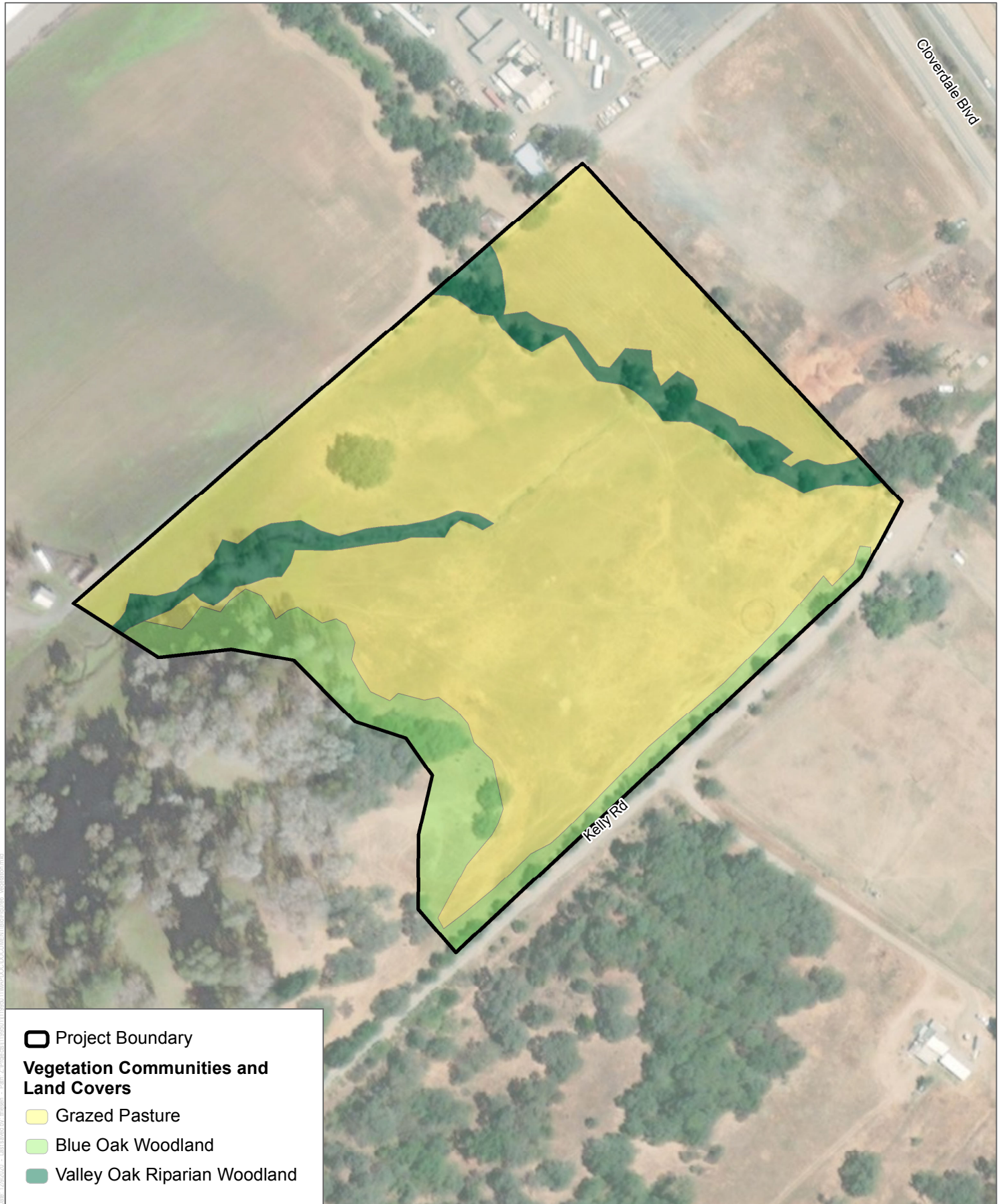
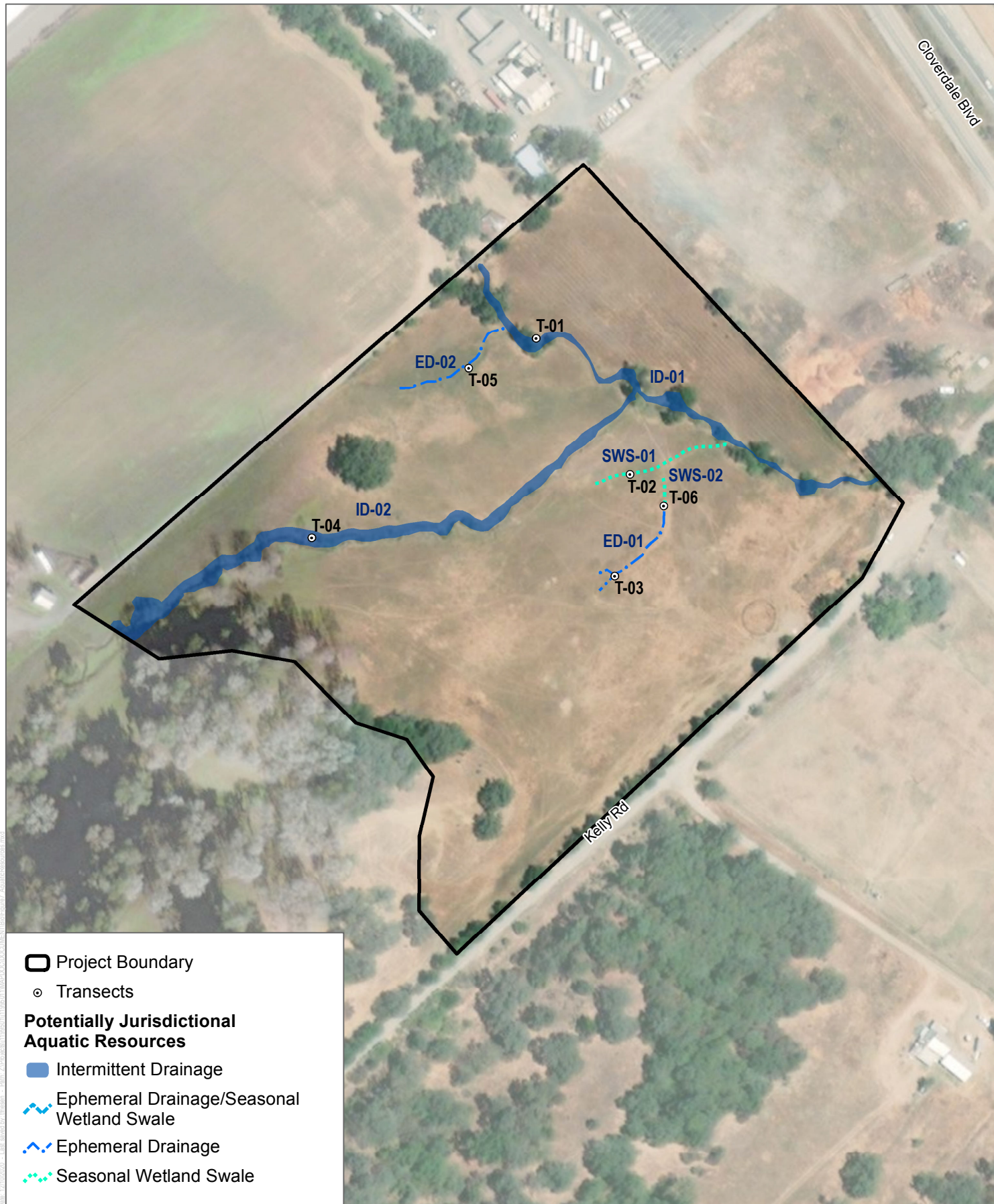


FIGURE 6

Vegetation Communities and Land Cover Types

Biological Resources Assessment for the Cloverdale High School South Fields Project

INTENTIONALLY LEFT BLANK



SOURCE: ESRI Basemaps (Accessed 2020)

FIGURE 7

Preliminary Jurisdictional Delineation of Aquatic Resources
 Biological Resources Assessment for the Cloverdale High School South Fields Project

INTENTIONALLY LEFT BLANK

4.2 Potential Jurisdictional Aquatic Resources

Table 2 includes the total acreage of potentially jurisdictional waters of the U.S. and/or state documented in the project site. These results are based on the delineation performed by Ms. Godinho, Dudek biologist, on November 24, 2020, and are discussed in detail below.

Table 2. Potential Jurisdictional Aquatic Resources in the Project Site

Feature	Cowardin Code	Potential Jurisdiction	Acres	Linear Feet
Intermittent Drainage-01	R4	ACOE/CDFW/RWQCB	0.2	808
Intermittent Drainage-02	R4	ACOE/CDFW/RWQCB	0.4	980
Ephemeral Drainage-01	R6	CDFW/RWQCB	0.02	202
Ephemeral Drainage-02	R6	CDFW/RWQCB	0.03	203
Seasonal Wetland Swale-01	R6	CDFW/RWQCB	0.01	218
Seasonal Wetland Swale-02	R6	CDFW/RWQCB	0.01	47
Total			0.67	2,458

Notes: ACOE = Army Corps of Engineers; CDFW = California Department of Fish and Wildlife. RWQCB = Regional Water Quality Control Board; R4 = Riverine, intermittent; R6= Riverine, ephemeral.

Waters of the U.S.

The project site supports 0.6-acre (1,788 linear feet) of waters that are anticipated to meet the criteria for jurisdictional waters of the U.S. These findings are preliminary until verified by the San Francisco District of the ACOE.

The project site does not support Traditionally Navigable Waters (TNWs), interstate waters, or waters that support interstate commerce; therefore, potential ACOE jurisdiction was determined based on connectivity or adjacency to off-site waters of the U.S. The unnamed intermittent drainage in the project site conveys water across the eastern end of the site into a drainage ditch that flows southeasterly along the west side of Dutcher Creek Road. The intermittent drainage flows into a ditch along the eastern margin of the property and eventually into Icaria Creek located south of the site, which is tributary to the Russian River east of the project site, and indirectly into the Russian River via Cloverdale Creek, located outside of the project site. The Russian River is considered a TNW. As such, the unnamed drainage meets the definition of a tributary (i.e., waters of the U.S.), unless the drainage is determined to lack a significant nexus to the Russian River, which is approximately 0.75 miles from the project site. The length in river miles between the onsite drainage and the Russian River is unknown as much of the feature outside of the project site flows through culverts below roadways and is not discernible in aerial photographs (Google Earth 2020).

Waters of the State

The project site supports 0.67-acre (2,458 linear feet) of waters that Dudek anticipates meet the criteria for jurisdictional waters of the state. All drainages on-site are potential waters of the state under the joint jurisdiction of the RWQCB and CDFW. The criteria used to make these determinations include whether the feature meets the RWQCB's definition of a waters of the state (SWRCB 2019) and/or CDFW's definition of a waters of the state (i.e., contains a defined bed and bank, and/or could support riparian vegetation and wildlife).

4.3 Plant and Wildlife Species Observed

A total of 22 species of vascular plants, including 12 native (55%) and 10 non-native (45%) plant species were recorded during the November 24, 2020 field survey (see Attachment D). Five (5) wildlife species were also recorded (3 native and 2 non-native). The lack of species diversity and presence of non-native species reflect the conditions of the site.

4.4 Special-Status Species Potentially Occurring on the Property

This section discusses special-status plant and wildlife species determined to have the potential to occur on the project site, based on the literature review and field assessment of existing habitats. Tables summarizing the potential occurrence of special-status plant and wildlife species are included in Attachment A and B, respectively. Species are not expected to occur if the property is clearly outside the known geographic range of the species, or if no suitable habitat for the species is present on or adjacent to the site.

4.4.1 Special-Status Plants

Results of the CNDDDB and CNPS searches revealed 28 special-status plant species that have potential to occur in the database search area (see Attachment A). An abbreviated list of those special-status species with potential to occur on the site was then produced based on habitat suitability on the project site, elevation, soils, geographic range, and past occurrence data in the region (listed in the following paragraph). Plants with no potential to occur onsite due to lack of suitable soils or habitat, or because the project site is outside their known elevation or geographic ranges, are not discussed further in this document.

Of the 28 special-status plant species, eight have low to moderate potential to occur in the project site, including bent-flowered fiddleneck (*Amsinckia lunaris*), narrow-anthered brodiaea (*Brodiaea leptandra*), Rincon Ridge ceanothus (*Ceanothus confusus*), congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *Congesta*), thin-lobed horkelia (*Horkelia tenuiloba*), Colusa layia (*Layia septentrionalis*), beaked tracyina (*Tracyina rostrata*), and Santa Cruz clover (*Trifolium buckwestiorum*). The project site provides poor to marginal habitat for these species due to the heavily grazed nature of the site and overall dominance of non-natural land cover types and non-native plants. None of these species were observed during the November 2020 field survey; however, the timing of this visit was outside the bloom period for most species.

4.4.2 Special-Status Wildlife

Results of the CNDDDB and USFWS searches revealed 14 listed or special-status wildlife species, or species proposed for listing as rare, threatened, or endangered by either the CDFW or the USFWS that have potential to occur in the database search area. Of these, 10 were removed from consideration due to lack of suitable habitat within or adjacent to the project site, or due to the project site being outside of the species' known range (see Attachment B).

The project site provides potential habitat for native bat species, including three special-status bat species. In addition, the project site provides potential habitat for birds of prey and migratory birds, including the grasshopper sparrow (*Ammodramus savannarum*), a California Species of Special Concern. However, land covers onsite provide

poor to marginal quality habitat for most of these species due to regular human disturbance and/or a lack of suitable microhabitat features. None of these species were detected during the November 2020 field survey, except for common and migratory birds protected by California Fish and Game Code and/or the MBTA. Special-status species with a potential to occur onsite are discussed in detail below.

Nesting and Migratory Birds and Birds of Prey, including the Grasshopper Sparrow. Trees, shrubs, and human-made structures in and adjacent to the project site provide potential nesting habitat for birds of prey and local and migratory birds, including the grasshopper sparrow. Migratory bird species are protected by the federal MBTA and native birds of prey are protected by Section 3503.5 of the California Fish and Game Code (CDFW 2018b).

Roosting Bats, including the Pallid bat, Townsend's Big-eared Bat, and Western Red Bat. Roosting bats have a low potential to occur in the project site. There are no caves, lava tubes, hollow trees, abandoned buildings, or tunnels on the project site. It is unlikely that these species would utilize trees for roosting, as they are located adjacent to areas of regular human disturbance. No evidence of roosting (e.g., guano, urine stains, and insect prey remains) was noted in the project site during the November 2020 field visit.

4.5 Sensitive Natural Communities

Riparian woodland within the project site is considered a sensitive natural community regulated by CDFW under California Fish and Game Code Section 1600.

4.6 Wildlife Corridors and Habitat Linkages

The project site is currently is bounded by a tilled field along the northwestern boundary; however, this area has been approved for a residential development called Baumgardner Ranch. Southwest and south of the site consists of relatively open oak woodland and non-native grassland areas that connect with similar habitat to the northwest, west, southwest, and south of the site. Development is present to the north of the site, and to some extent to the east of the site between Highway 101 and the project site. Open grassland and scrub habitat is present to the southeast of the site between the highway and the project site. A few mature trees and some shrubs occur along portions of the intermittent drainage which provides limited cover and a potential link between habitats on site and habitats to the northwest, west and southwest of the project site. In addition, a majority of the project site itself is fenced to keep horses on the property, which further reduces habitat connectivity in the immediate vicinity.

INTENTIONALLY LEFT BLANK

5 Literature Cited

- ACOE (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetlands Delineation Manual*. Online ed. Environmental Laboratory, Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station. January 1987. Accessed December 2020. http://www.fedcenter.gov/Bookmarks/index.cfm?id=6403&pge_id=1606.
- ACOE. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. Environmental Laboratory, ERDC/EL TR-08-28. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center. September 2008. Accessed December 2020. <http://el.erdcl.usace.army.mil/elpubs/pdf/trel08-28.pdf>.
- CDFW (California Department of Fish and Wildlife). 2018a. List of Vegetation Alliances and Associations: Natural Communities List Arranged Alphabetically by Life Form. October 2018. <https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List>.
- CDFW. 2018b. Natural Diversity Database. Special Animals List. Periodic publication. Last updated November 2018. Accessed December 2020. <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.
- CDFW. 2019a. California Natural Diversity Database (CNDDDB). RareFind, Version 5. (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Accessed December 2020. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.
- CDFW. 2019b. California Wildlife Habitat Relationships. Accessed December 2020. <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.
- CDFW. 2019c. California Wildlife Habitat Relationships: Life History Accounts and Range Maps. Accessed June 2019. <https://www.wildlife.ca.gov/Data/CWHR/Life-History-and-Range>.
- City of Cloverdale. 2009. City of Cloverdale General Plan. Adopted by the City Council of the City of Cloverdale by Resolution 022-2009, May 13, 2009. Amended June 28, 2010 and November 10, 2010.
- CNPS (California Native Plant Society, Rare Plant Program). 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Accessed December 2020. <http://www.rareplants.cnps.org>.
- Google. 2018. "Assessor's Parcel Number 001-141-022 and 001-141-023." 38°48'32.21"N, 123°1'7.77"W. Google Earth Pro (Version 7.3.2.5776). Accessed December 2020.
- Historicaerials.com. Accessed December 2020. Historic aerial photograph.
- Jepson Flora Project. 2019. Jepson eFlora. Berkeley, California: University of California. <http://ucjeps.berkeley.edu/IJM.html>.

- Lichvar, R. W. and S. M. McColley. 2008. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States – A Delineation Manual*. Environmental Laboratory, ERDC/CRREL TR-08-12. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center. August 2008. Accessed June 2019.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 wetland ratings*. Phytoneuron 2016-30: 1–17. Published 28 April 2016. ISSN 2153 733X. Accessed June 2019. <http://wetland-plants.usace.army.mil.html>
- NatureServe. 2019. NatureServe Explorer: An Online Encyclopedia of Life. Last updated March 2018. Accessed December 2020. <http://explorer.natureserve.org/index.htm>.
- State Water Resources Control Board. 2019. Resolution NO. 2019-0015. Amendment to the Water Quality Control Plan for Ocean Waters of California and the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California to Establish a State Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Sacramento, California. April 2, 2019.
- USDA (United States Department of Agriculture). 2019a. *Natural Resources Conservation Service (NRCS). Web Soil Survey*. Accessed December 2020. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- USDA. 2019b. NRCS. *List of Hydric Soils*. Accessed December 2020. <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>
- USFWS (U.S. Fish and Wildlife Service). 2019. “The National Wetlands Inventory.” Accessed December 2020. fws.gov/wetlands/NWI/index.html.
- USGS (U.S. Geological Survey). 2019. “Cloverdale, CA.” 7.5-Minute Series (Topographic). Accessed December 2020. <https://ngmdb.usgs.gov/topoview/viewer/>

Attachment A

Special-Status Plants with Potential To Occur

ATTACHMENT A

Special-Status Plants with Potential to Occur

Common Name	Scientific Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Franciscan onion	<i>Allium peninsulare</i> var. <i>franciscanum</i>	None/None/1B.2	Cismontane woodland, Valley and foothill grassland; clay, volcanic, often serpentinite/perennial bulbiferous herb/(Apr)May–June/171–1,000	Not expected to occur. Cismontane woodland is present on-site, but Valley and foothill grassland habitat is of poor quality with a history of grazing. Moreover, serpentine soils are absent from the project site, and no known occurrences have been recorded within 3 miles of the site.
bent-flowered fiddleneck	<i>Amsinckia lunaris</i>	None/None/1B.2	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland/annual herb/Mar–June/10–1,640	Low potential to occur. Cismontane woodland is present on-site, but Valley and foothill grassland habitat is of poor quality with a history of grazing. Only one historical occurrence of this species was recorded within the 9-quad search area. No known occurrences have been recorded within 3 miles of the site.
The Cedars manzanita	<i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i>	None/SR/1B.2	Closed-cone coniferous forest, Chaparral; serpentinite seeps/perennial evergreen shrub/Feb, Apr, May/607–2,490	Not expected to occur. The site is outside of the species' known elevation range, and suitable habitat and soils are absent.
Konocti manzanita	<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	None/None/1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest; volcanic/perennial evergreen shrub/(Jan)Mar–May(July)/1,295–5,295	Not expected to occur. The site is outside of the species' known elevation range.
Rincon Ridge manzanita	<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>	None/None/1B.1	Chaparral (rhyolitic), Cismontane woodland/perennial evergreen shrub/Feb–Apr(May)/246–1,210	Not expected to occur. Cismontane woodland for this species occurs on site. However, the 3 CNDDDB occurrences within the 9-quad search area were all recorded on Bradford Mountain, approximately 7 miles south of the project site.
Raiche's manzanita	<i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	None/None/1B.1	Chaparral, Lower montane coniferous forest (openings); rocky, often serpentinite/perennial evergreen shrub/Feb–Apr/1,475–3,395	Not expected to occur. The site is outside of the species' known elevation range, and suitable habitat is absent.
narrow-anthered brodiaea	<i>Brodiaea leptandra</i>	None/None/1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; volcanic/perennial bulbiferous herb/May–July/361–3,000	Low potential to occur. Cismontane woodland habitat occurs on site, but Valley and foothill grassland habitat is of poor quality with a history of grazing. No known occurrences have been recorded within 3 miles of the site.
The Cedars fairy-lantern	<i>Calochortus raichei</i>	None/None/1B.2	Closed-cone coniferous forest, Chaparral; serpentinite/perennial bulbiferous herb/May–Aug/656–1,605	Not expected to occur. The site is outside of the species' known elevation range, and suitable habitat and soils are absent.

ATTACHMENT A (Continued)

Common Name	Scientific Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
small-flowered calycadenia	<i>Calycadenia micrantha</i>	None/None/1B.2	Chaparral, Meadows and seeps (volcanic), Valley and foothill grassland; Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas/annual herb/June–Sep/16–4,920	Not expected to occur. Valley and foothill grassland habitat on site is of poor quality with a history of grazing. Moreover, serpentine soils are absent from the project site, and no known occurrences have been recorded within 3 miles of the site.
bristly sedge	<i>Carex comosa</i>	None/None/2B.1	Coastal prairie, Marshes and swamps (lake margins), Valley and foothill grassland/perennial rhizomatous herb/May–Sep/0–2,050	Not expected to occur. Valley and foothill grassland habitat is of poor quality with a history of grazing, and wetland habitat is absent. Only one historical occurrence of this species was recorded within the 9-quad search area. No known occurrences have been recorded within 3 miles of the site.
Rincon Ridge ceanothus	<i>Ceanothus confusus</i>	None/None/1B.1	Closed-cone coniferous forest, Chaparral, Cismontane woodland; volcanic or serpentinite/perennial evergreen shrub/Feb–June/246–3,490	Low potential to occur. Cismontane woodland occurs on site, although serpentine soils are absent. Five CNDDDB occurrences have been recorded in the 9-quad search area, with the closest occurrence recorded approximately 3 miles northwest of the site in 1985.
serpentine cryptantha	<i>Cryptantha dissita</i>	None/None/1B.2	Chaparral (serpentinite)/annual herb/Apr–June/1,295–1,900	Not expected to occur. The site is outside of the species' known elevation range, and suitable habitat and soils are absent.
The Cedars buckwheat	<i>Eriogonum cedrorum</i>	None/None/1B.3	Closed-cone coniferous forest; serpentinite/perennial herb/June–Sep/1,195–1,800	Not expected to occur. The site is outside of the species' known elevation range, and suitable habitat and soils are absent.
Guggolz' harmonia	<i>Harmonia guggolziorum</i>	None/None/1B.1	Chaparral (open areas, serpentinite)/annual herb/Apr–May/525–640	Not expected to occur. The site is outside of the species' known elevation range, and suitable habitat and soils are absent.
congested-headed hayfield tarplant	<i>Hemizonia congesta</i> ssp. <i>congesta</i>	None/None/1B.2	Valley and foothill grassland; sometimes roadsides/annual herb/Apr–Nov/66–1,835	Moderate potential to occur. Valley and foothill grassland habitat on site is of poor quality with a history of grazing. Two CNDDDB occurrences have been recorded in the 9-quad search area, both approximately 5 miles west and southwest of the site. <i>Hemizonia congesta</i> has been documented on site.
glandular western flax	<i>Hesperolinon adenophyllum</i>	None/None/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland; usually serpentinite/annual herb/May–Aug/492–4,310	Not expected to occur. Cismontane woodland habitat occurs on site, but Valley and foothill grassland habitat is of poor quality with a history of grazing. Seven CNDDDB occurrences have been recorded in the 9-quad search area, all of which are located approximately 9 miles northeast of the site.

ATTACHMENT A (Continued)

Common Name	Scientific Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Bolander's horkelia	<i>Horkelia bolanderi</i>	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland; edges, vernal mesic areas/perennial herb/(May)June–Aug/1,475–3,605	Not expected to occur. The site is outside of the species' known elevation range.
thin-lobed horkelia	<i>Horkelia tenuiloba</i>	None/None/1B.2	Broadleafed upland forest, Chaparral, Valley and foothill grassland; mesic openings, sandy/perennial herb/May–July(Aug)/164–1,640	Low potential to occur. Valley and foothill grassland habitat on site is of poor quality with a history of grazing. Two historical CNDDDB occurrences of this species were recorded within the 9-quad search area. No known occurrences have been recorded within 3 miles of the site.
small groundcone	<i>Kopsiopsis hookeri</i>	None/None/2B.3	North Coast coniferous forest/perennial rhizomatous herb (parasitic)/Apr–Aug/295–2,900	Not expected to occur. Suitable habitat absent.
Colusa layia	<i>Layia septentrionalis</i>	None/None/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland; sandy, serpentinite/annual herb/Apr–May/328–3,590	Low potential to occur. Cismontane woodland habitat occurs on site, but Valley and foothill grassland habitat is of poor quality with a history of grazing. Serpentine soils are absent. Seven CNDDDB occurrences have been recorded in the 9-quad search area, the closest of which was recorded approximately 3 miles north of the site in 1949.
Cobb Mountain lupine	<i>Lupinus sericatus</i>	None/None/1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest/perennial herb/Mar–June/902–5,000	Not expected to occur. The site is outside of the species' known elevation range.
white-flowered rein orchid	<i>Piperia candida</i>	None/None/1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest; sometimes serpentinite/perennial herb/(Mar)May–Sep/98–4,295	Not expected to occur. Suitable habitat and soils are absent.
Hoffman's bristly jewelflower	<i>Streptanthus glandulosus</i> ssp. <i>hoffmanii</i>	None/None/1B.3	Chaparral, Cismontane woodland, Valley and foothill grassland (often serpentinite); rocky/annual herb/Mar–July/394–1,555	Not expected to occur. Cismontane woodland is present on-site, but Valley and foothill grassland habitat is of poor quality with a history of grazing. Moreover, serpentine soils are absent from the project site, and no known occurrences have been recorded within 3 miles of the site.
Morrison's jewelflower	<i>Streptanthus morrisonii</i> ssp. <i>morrisonii</i>	None/None/1B.2	Chaparral (serpentinite, rocky, talus)/perennial herb/May, Aug, Sep/394–1,915	Not expected to occur. Suitable habitat and soils absent.

ATTACHMENT A (Continued)

Common Name	Scientific Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
beaked tracyina	<i>Tracyina rostrata</i>	None/None/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland/annual herb/May–June/295–4,165	Low potential to occur. Cismontane woodland is present on-site, but Valley and foothill grassland habitat is of poor quality with a history of grazing. Three CNDDDB occurrences of this species were recorded within the 9-quad search area. No known occurrences have been recorded within 3 miles of the site.
Napa bluecurls	<i>Trichostema ruygtii</i>	None/None/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland, Vernal pools/annual herb/June–Oct/98–2,230	Not expected to occur. Cismontane woodland is present on-site, but Valley and foothill grassland habitat is of poor quality with a history of grazing. Only one historical CNDDDB occurrence was recorded within the 9-quad search area, which is now believed to be extirpated. No known occurrences have been recorded within 3 miles of the site.
Santa Cruz clover	<i>Trifolium buckwestiorum</i>	None/None/1B.1	Broadleafed upland forest, Cismontane woodland, Coastal prairie; gravelly, margins/annual herb/Apr–Oct/344–2,000	Low potential to occur. Cismontane woodland occurs on site. However, only one occurrence of this species was recorded within the 9-quad search area. No known occurrences have been recorded within 3 miles of the site.
oval-leaved viburnum	<i>Viburnum ellipticum</i>	None/None/2B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest/perennial deciduous shrub/May–June/705–4,590	Not expected to occur. The site is outside of the species' known elevation range.

Federal

FE: Federally listed as endangered

FT: Federally listed as threatened

FC: Federal candidate for listing as threatened or endangered

State

SE: State listed as endangered

ST: State listed as threatened

SR: State listed as rare

CRPR (California Rare Plant Rank)

CRPR 1A: Plants presumed extinct in California and either rare or extinct elsewhere

CRPR List 1B: Plants rare, threatened, or endangered in California and elsewhere

CRPR List 2A: Plants rare, threatened, or endangered in California but common elsewhere

CRPR List 2B: Plants rare, threatened, or endangered in California but more common elsewhere

Threat Rank

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

.2 Fairly endangered in California (20% to 80% of occurrences threatened/moderate degree and immediacy of threat)

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

APPENDIX A (Continued)

References:

CalFlora. 2020. Observation Search. Accessed December 1, 2020 at <https://www.calflora.org/entry/observ.html>.

California Native Plant Society (CNPS). 2020. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). California Native Plant Society. Sacramento, CA. Accessed on December 1, 2020.

California Department of Fish and Wildlife (CDFW). 2020. Rare Find 5.

iNaturalist. 2020. Observations Search. Accessed December 1, 2020 at <https://www.inaturalist.org/observations>.

ATTACHMENT A (Continued)

INTENTIONALLY LEFT BLANK

Attachment B

Special-Status Wildlife with Potential To Occur

ATTACHMENT B

Special-Status Wildlife with Potential To Occur

Row Labels	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Amphibians</i>				
<i>Dicamptodon ensatus</i>	California giant salamander	None/SSC	Known from wet coastal forests and chaparral near streams and seeps from Mendocino Co. south to Monterey Co. and east to Napa Co. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	No potential to occur. Habitat not suitable for larvae or adults. Drainages and wetland swales are seasonal.
<i>Rana boylei</i>	foothill yellow-legged frog	None/SSC, SE	Rocky streams and rivers with open banks in forest, chaparral, and woodland	No potential to occur. Suitable habitat not present. Drainages are earthen and lack rocky substrate.
<i>Taricha rivularis</i>	red-bellied newt	None/SSC	Redwood forests (and sometimes other forest types) along coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean rocky substrate.	No potential to occur. Drainages are earthen and seasonal and lack suitable habitat.
<i>Reptiles</i>				
<i>Actinemys marmorata</i>	northwestern pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	No potential to occur. No permanent water bodies are present within or adjacent to the project site.
<i>Birds</i>				
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	No potential to occur. Suitable habitat is not present within or adjacent to the project site.
<i>Ammodramus savannarum</i> (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Low potential to occur. Limited potential habitat is present on the project site. The only nearby known occurrence was recorded over 10 miles north of the project site.
<i>Artemisospiza belli belli</i>	Bell's sage sparrow	BCC/WL	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	No potential to occur. Suitable scrub/chaparral habitat absent.

ATTACHMENT B (Continued)

Row Labels	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Fishes</i>				
<i>Lavinia exilicauda chi</i>	Clear Lake hitch	None/ST	Found only in Clear Lake, Lake County, and associated ponds; spawns in streams flowing into Clear Lake	No potential to occur. Suitable aquatic habitat absent, and project site located outside of the known range of this species.
<i>Oncorhynchus kisutch</i> pop. 4	coho salmon - central California coast ESU	FE/SE	Streams and small freshwater tributaries during first half of life cycle and estuarine and marine waters of the Pacific Ocean during the second half of life cycle. Spawns in small streams with stable gravel substrates.	No potential to occur. Drainages are intermittent and/or ephemeral and therefore do not provide suitable habitat.
<i>Oncorhynchus mykiss irideus</i> pop. 8	steelhead - central California coast DPS	FT/None	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	No potential to occur. Drainages are intermittent and/or ephemeral and therefore do not provide suitable habitat.
<i>Mammals</i>				
<i>Antrozous pallidus</i>	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Low potential to occur. Roosting and foraging habitat present.
<i>Arborimus pomo</i>	Sonoma tree vole	None/SSC	Old-growth and other forests including Douglas-fir, redwood, and montane hardwood-conifer forests	Not expected to occur. No suitable vegetation present.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Moderate potential to occur. This species may forage across the project area but roosting habitat is absent. One CNDDB occurrence was recorded in the general vicinity of Cloverdale from an unknown date.
<i>Lasiurus blossevillii</i>	western red bat	None/SSC	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	Low potential to occur. Roosting and foraging habitat present. One occurrence was recorded within a mile of the project site in 1954. No other occurrences are known within 20 miles of the project site.

Attachment C

Representative Site Photographs



Photo 1. Representative photo of blue oak woodland on east-facing slopes.



Photo 2. Representative photo of grazed pastureland.



Photo 3. Representative photo of Valley oak riparian woodland along an intermittent drainage.



Photo 4. Representative photo of an ephemeral drainage.



Photo 5. Representative photo of a seasonal wetland swale.



Photo 6. Intermittent Drainage-02.



Photo 7. Horse grazing observed during the field survey.

Attachment D

Plants and Wildlife Observed Onsite During the Site Visit

Plant Species

Eudicots

Vascular Species

ADOXACEAE—MUSKROOT FAMILY

Sambucus nigra—blue elderberry

ASTERACEAE—SUNFLOWER FAMILY

Baccharis pilularis—coyote brush

* *Centaurea solstitialis*—yellow star-thistle

Centromadia pungens—common tarweed

* *Erigeron bonariensis*—asthmaweed

Hemizonia congesta—hayfield tarweed

Holocarpha heermannii—Heermann's tarweed

BRASSICACEAE—MUSTARD FAMILY

Brassica nigra—black mustard

FAGACEAE—OAK FAMILY

Quercus douglasii—blue oak

Quercus lobata—valley oak

Quercus wislizeni—interior live oak

POLYGONACEAE—BUCKWHEAT FAMILY

* *Rumex crispus*—curly dock

* *Rumex pulcher*—fiddle dock

ROSACEAE—ROSE FAMILY

Heteromeles arbutifolia—toyon

Rubus ursinus—California blackberry

SALICACEAE—WILLOW FAMILY

Populus fremontii—Fremont cottonwood

Salix gooddingii—black willow

Monocots

Vascular Species

POACEAE—GRASS FAMILY

- * *Avena barbata*—slender oat
- * *Bromus hordeaceus*—soft brome
- * *Cynodon dactylon*—Bermudagrass
- * *Elymus caput-medusae*—medusahead
- * *Hordeum marinum*—seaside barley

Wildlife Species – Vertebrates

Bird

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Buteo jamaicensis—red-tailed hawk

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—California scrub-jay

Corvus brachyrhynchos—American crow

NEW WORLD QUAIL

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

NEW WORLD VULTURES

CATHARTIDAE—NEW WORLD VULTURES

Cathartes aura—turkey vulture

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

QUAILS, PHEASANTS AND RELATIVES

PHASIANIDAE—PARTRIDGES, GROUSE, TURKEYS, AND OLD WORLD QUAIL

Phasianus colchicus—ring-necked pheasant

TITMICE

PARIDAE—CHICKADEES AND TITMICE

Baeolophus inornatus—oak titmouse

WOODPECKERS

PICIDAE—WOODPECKERS AND ALLIES

Colaptes auratus—northern flicker

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Zonotrichia leucophrys—white-crowned sparrow

CATHARTIDAE—NEW WORLD VULTURES

Cathartes aura—turkey vulture

* signifies introduced (non-native) species

INTENTIONALLY LEFT BLANK

Attachment E

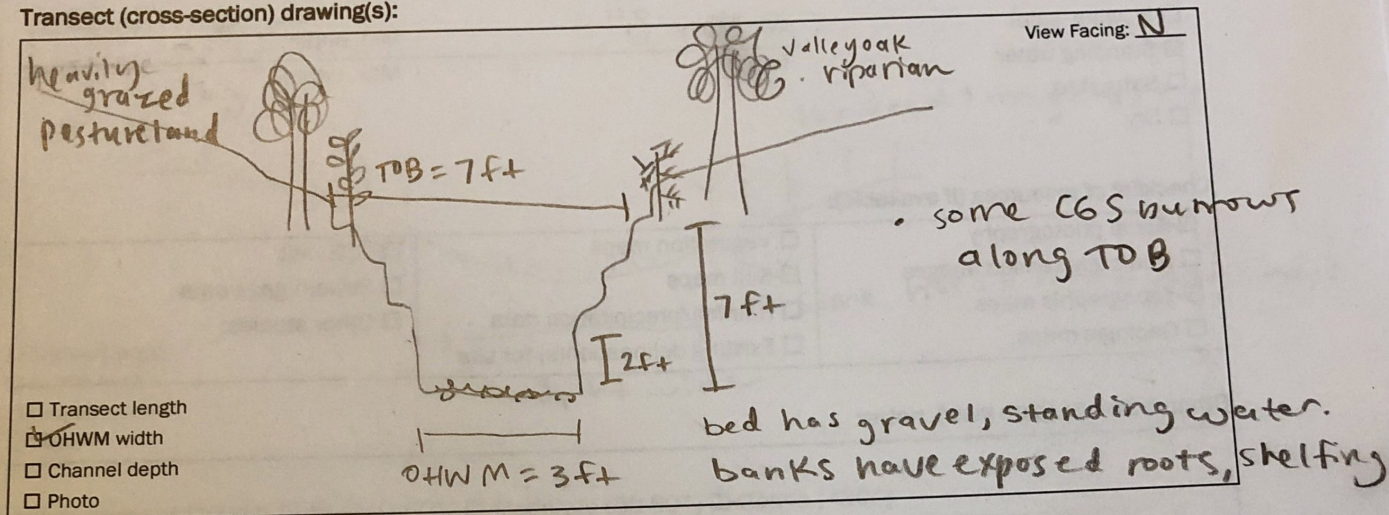
OHWL Data Sheets

Project: 11995 Date: 11/24/20 Transect: 01
Investigator(s): AG + PK Feature Name: 1D-01

Site Location: Claverdale

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):



Break in Slope at OHWM: ☒ Sharp ($>60^\circ$) ☐ Moderate ($30-60^\circ$) ☐ Gentle ($<30^\circ$)

☐ Natural line impressed on the bank ☒ Shelving ☐ Changes in the character of soil ☐ Destruction of terrestrial vegetation ☒ Presence of litter and debris ☐ Wracking ☒ Vegetation matted down, bent, or absent	☒ Sediment sorting ☐ Leaf litter disturbed or washed away ☒ Scour ☐ Deposition ☒ Bed and banks ☐ Water staining ☐ Change in plant community and/or cover
---	--

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	100	0	0	0	0
Below OHWM	25	0	75	0	0

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	25	25	50	0
Below OHWM	0	0	50	50

Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☒ Late (herbs, shrubs, mature trees)

Upland Species:	Bank Species:	Emergent Species:
<u>Avena fatua</u>	<u>Toyon / coffeeberry</u> <u>Salix spp.</u> <u>Quercus lobata</u> <u>Rubus ursinus</u>	<u>Cyperus sp.</u>

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

heavy grazing

Hydrology:

- ☐ Flowing water
- ☒ Standing water
- ☐ Saturated
- ☐ Dry

Avg. depth: 3"

Temp:

Min. depth: 0"

Max. depth: 6"

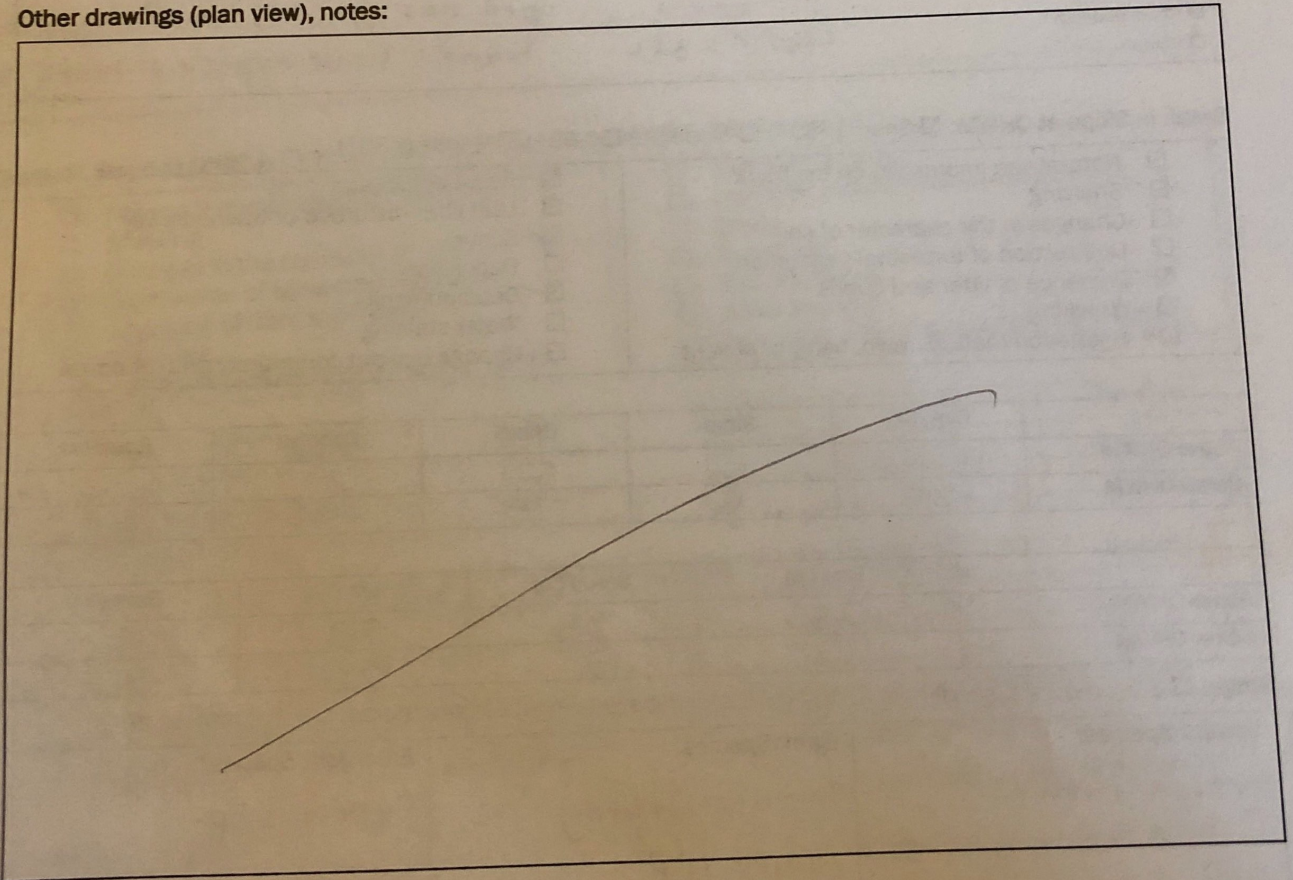
Checklist of resources (if available):

- ☒ Aerial photography
- ☐ Remotely-sensed images
- ☒ Topographic maps
- ☐ Geologic maps

- ☐ Vegetation maps
- ☒ Soil maps
- ☐ Rainfall/precipitation data
- ☐ Existing delineation(s) for site

- ☒ GPS unit
- ☐ Stream gage data
- ☐ Other studies:

Other drawings (plan view), notes:



Other forms related to this feature: ☒ Yes ☐ No tributaries: SWS-01, ED-02, ID-0

- ☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
- ☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: 11995

Date: 11/24/20

Transect: T-02

Investigator(s): AG+PK

Feature Name: SWS-01

Site Location:

cloverdale

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: W

xheavily grazed

tarweed + n grasses

some horse hoof punches

3 ft wide

- ☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

Break in Slope at OHWM: ☐ Sharp ($>60^\circ$) ☐ Moderate ($30-60^\circ$) ☒ Gentle ($<30^\circ$)

- ☐ Natural line impressed on the bank
☐ Shelving
☐ Changes in the character of soil
☐ Destruction of terrestrial vegetation
☐ Presence of litter and debris
☐ Wracking
☐ Vegetation matted down, bent, or absent

- ☐ Sediment sorting
☐ Leaf litter disturbed or washed away
☐ Scour
☐ Deposition
☐ Bed and banks
☐ Water staining
☒ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM	100	0	0	0	0

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM	0	0	100	0

Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:

tarweeds
 cynodon dactylon
 Avena fatua

Bank Species:

Emergent Species:

Hordeum maritimum
 Rumex pulchur

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

heavy grazing

Hydrology:

- ☐ Flowing water
- ☐ Standing water
- ☐ Saturated
- ☒ Dry

Avg. depth:

Min. depth:

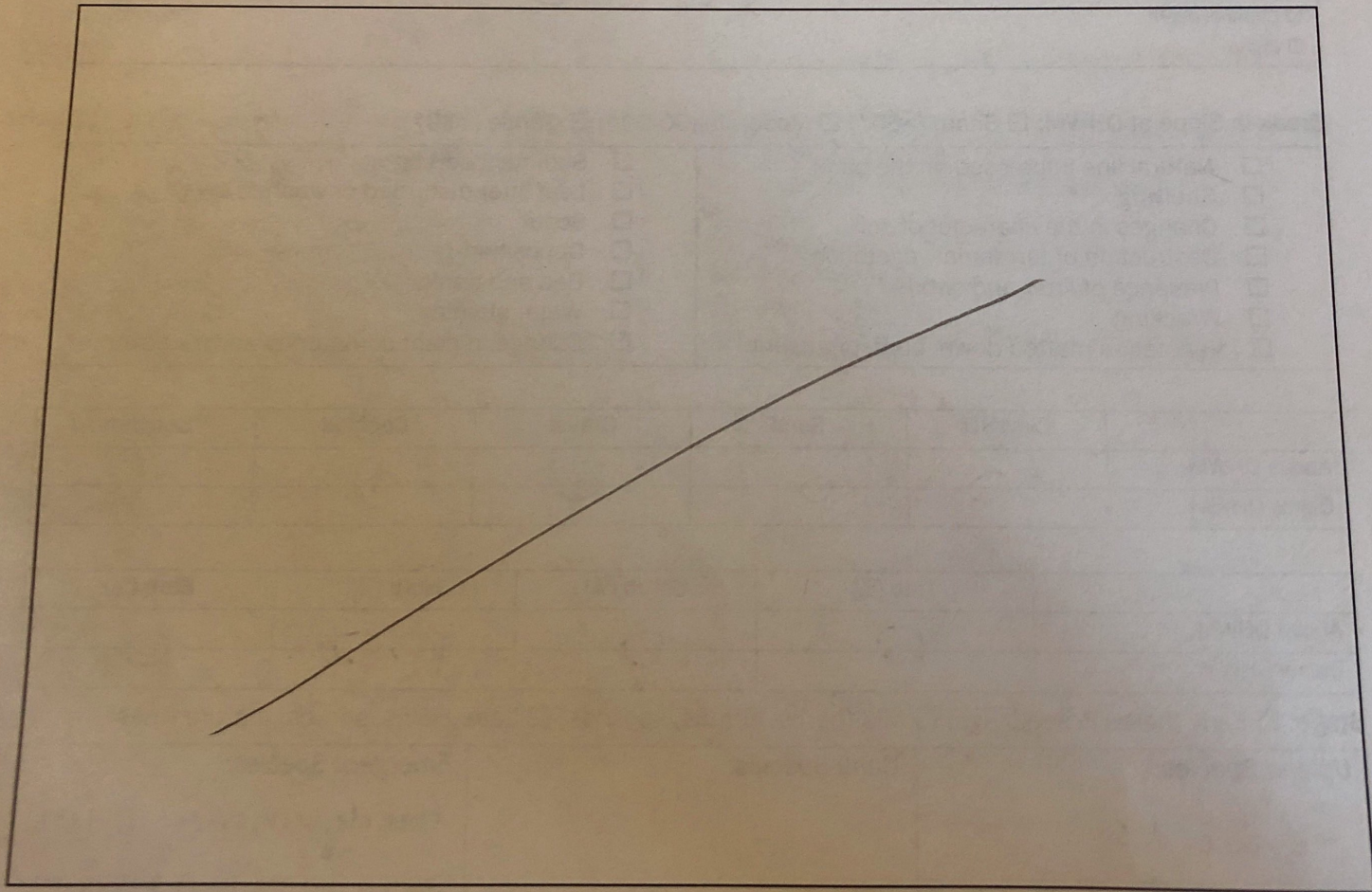
Temp:

Max. depth:

Checklist of resources (if available):

- | | | |
|--|---|--|
| ☒ Aerial photography | ☐ Vegetation maps | ☒ GPS unit |
| ☐ Remotely-sensed images | ☒ Soil maps | ☐ Stream gage data |
| ☒ Topographic maps | ☐ Rainfall/precipitation data | ☐ Other studies: |
| ☐ Geologic maps | ☐ Existing delineation(s) for site | |

Other drawings (plan view), notes:



Other forms related to this feature: ☒ Yes ☐ No flows into 1D-01,

receives water from SW5,

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: 11995 Date: 11/24/20

Transect: T-03

Investigator(s): AG + PK

Feature Name: ED-01

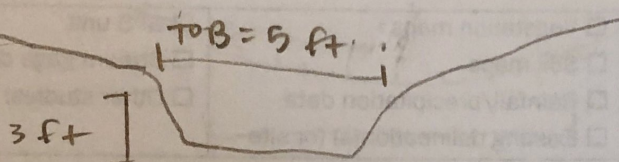
Site Location: Cloverdale

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: W

grazed pastureland



- ☐ Transect length
☒ OHWM width
☐ Channel depth
☐ Photo

OHWM = 3 ft

Break in Slope at OHWM: ☒ Sharp ($>60^\circ$) ☐ Moderate ($30-60^\circ$) ☐ Gentle ($<30^\circ$)

- ☐ Natural line impressed on the bank
☒ Shelving
☐ Changes in the character of soil
☐ Destruction of terrestrial vegetation
☐ Presence of litter and debris
☐ Wracking
☐ Vegetation matted down, bent, or absent

- ☐ Sediment sorting
☐ Leaf litter disturbed or washed away
☐ Scour
☐ Deposition
☒ Bed and banks
☐ Water staining
☒ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM	100	0	0	0	0

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM	0	0	100	0

Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:

Tanweeds
 n-n grasses

Bank Species:

Emergent Species:

Hordeum marinum

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

heavy grazing

Hydrology:

- ☐ Flowing water
- ☐ Standing water
- ☐ Saturated
- ☒ Dry

Avg. depth:

Temp:

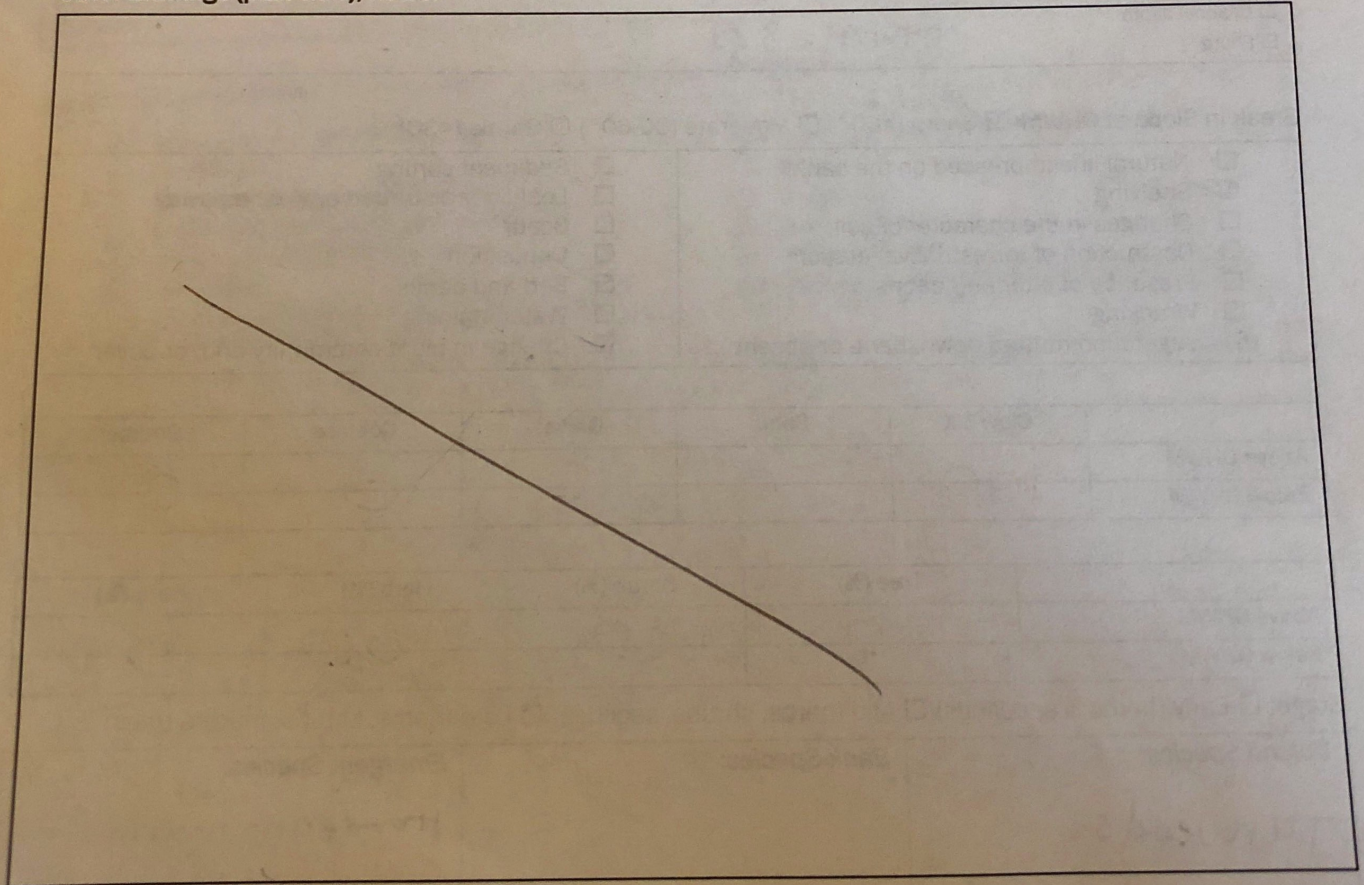
Min. depth:

Max. depth:

Checklist of resources (if available):

- | | | |
|--|---|--|
| ☒ Aerial photography | ☐ Vegetation maps | ☒ GPS unit |
| ☐ Remotely-sensed images | ☒ Soil maps | ☐ Stream gage data |
| ☒ Topographic maps | ☐ Rainfall/precipitation data | ☐ Other studies: |
| ☐ Geologic maps | ☐ Existing delineation(s) for site | |

Other drawings (plan view), notes:



Other forms related to this feature: ☒ Yes ☐ No Turns into SWS-01

- ☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
- ☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: 11995 Date: 11/24/20 Transect: T-06
 Investigator(s): AB+PK Feature Name: SWS-02

Site Location:

CloverdaleFeature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: Wheavily grazed5 ft wideloses bed + bankFrom ED-01 into SWS-01

- ☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

Break in Slope at OHWM: ☐ Sharp ($>60^\circ$) ☐ Moderate (30-60°) ☒ Gentle ($<30^\circ$)

- ☐ Natural line impressed on the bank
☐ Shelving
☐ Changes in the character of soil
☐ Destruction of terrestrial vegetation
☐ Presence of litter and debris
☐ Wracking
☐ Vegetation matted down, bent, or absent

- ☐ Sediment sorting
☐ Leaf litter disturbed or washed away
☐ Scour
☐ Deposition
☐ Bed and banks
☐ Water staining
☒ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	<u>100</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Below OHWM					

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	<u>0</u>	<u>0</u>	<u>100</u>	<u>0</u>
Below OHWM				

Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:

same as
SWS-01 +
ED-01

Bank Species:

Emergent Species:

Hordeum marinum

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

heavy grazing, tire tracks

Hydrology:

- ☐ Flowing water
- ☐ Standing water
- ☐ Saturated
- ☒ Dry

Avg. depth:

Min. depth:

Temp:

Max. depth:

Checklist of resources (if available):

☒ Aerial photography

☐ Remotely-sensed images

☒ Topographic maps

☐ Geologic maps

☐ Vegetation maps

☒ Soil maps

☐ Rainfall/precipitation data

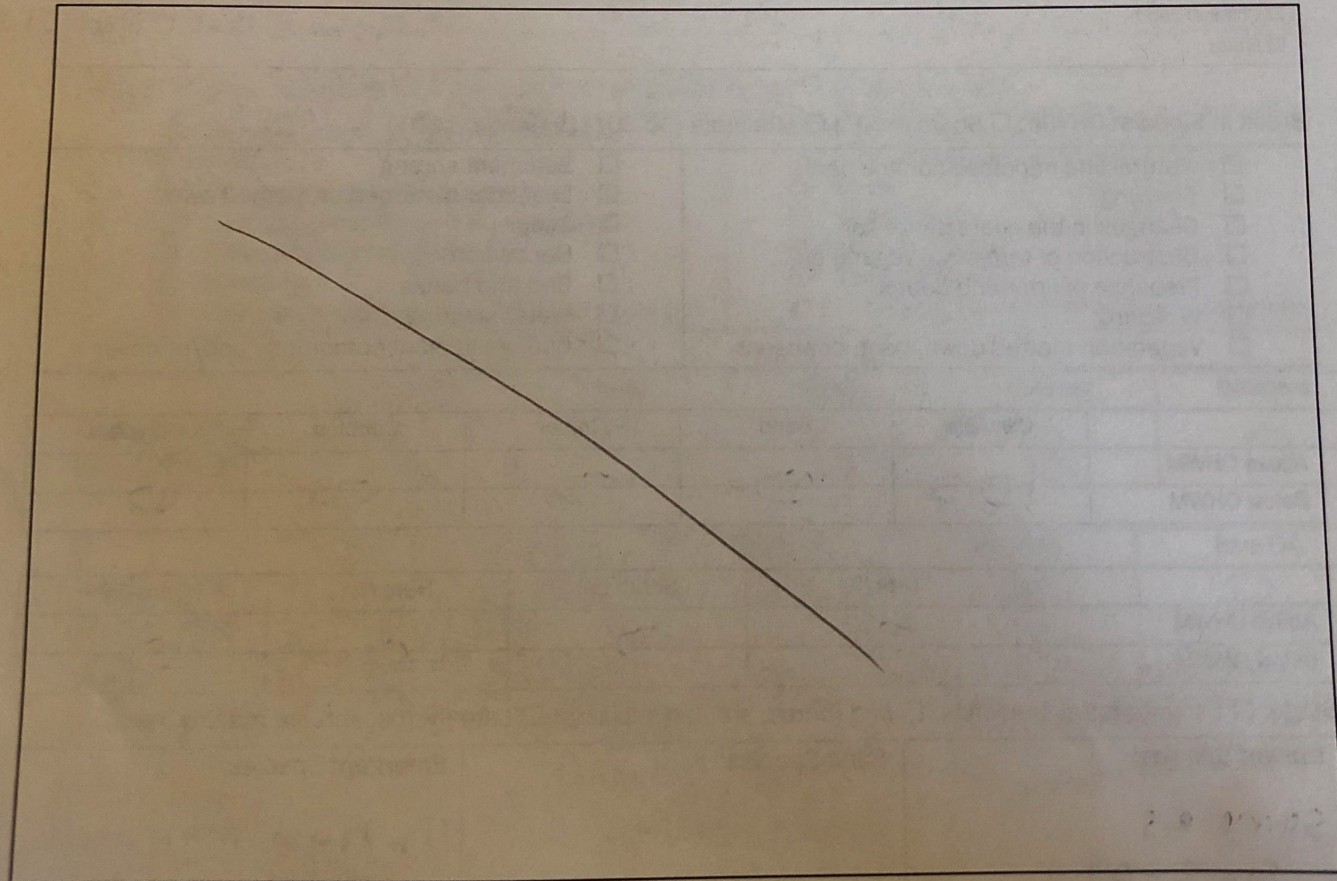
☐ Existing delineation(s) for site

☒ GPS unit

☐ Stream gage data

☐ Other studies:

Other drawings (plan view), notes:



Other forms related to this feature: ☒ Yes ☐ No

flows into SWS-01

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: 11995

Date: 11/24/20

Transect: T-04

Investigator(s): AG+PK

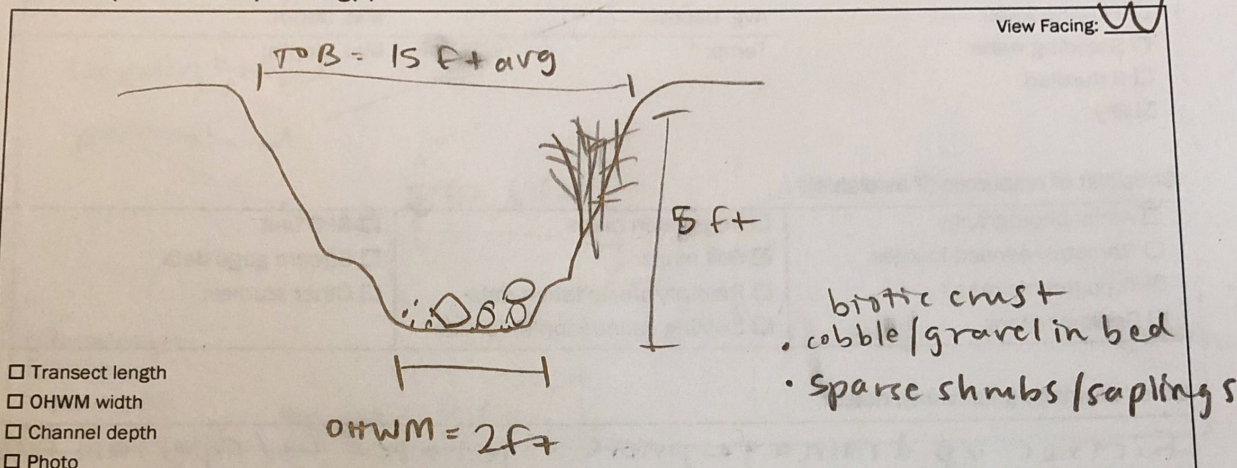
Feature Name: 1D-02

Site Location:

Cloverdale

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

Break in Slope at OHWM: ☒ Sharp ($>60^\circ$) ☐ Moderate ($30-60^\circ$) ☐ Gentle ($<30^\circ$)

- ☐ Natural line impressed on the bank
☒ Shelving
☐ Changes in the character of soil
☐ Destruction of terrestrial vegetation
☐ Presence of litter and debris
☐ Wracking
☐ Vegetation matted down, bent, or absent

- ☒ Sediment sorting
☐ Leaf litter disturbed or washed away
☐ Scour
☐ Deposition
☒ Bed and banks
☒ Water staining
☒ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	100	0	0	0	0
Below OHWM	50	0	25	25	0

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	25	75	0
Below OHWM	0			25

Stage: ☐ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:

tanweeds
Gastidium nitridum
Baccharis pilularis
Bay laurel

Bank Species:

Bromus hordeaceus
marubium vulgare
Willow
Rubus ursinus
toyon
Populus fremontii

Emergent Species:

Hordeum marinum

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

grazing, stock/game trails

Hydrology:

- ☐ Flowing water
- ☐ Standing water
- ☐ Saturated
- ☒ Dry

Avg. depth:

Temp:

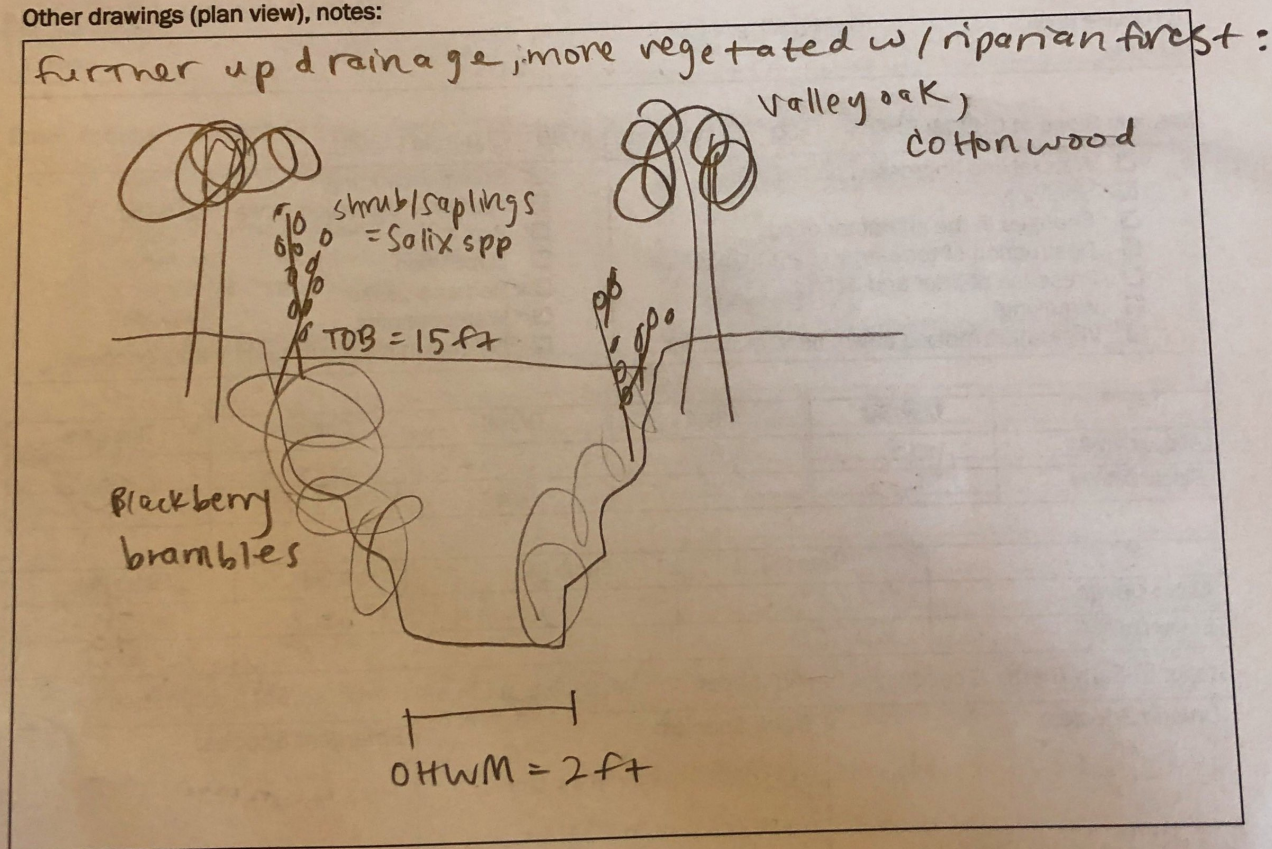
Min. depth:

Max. depth:

Checklist of resources (if available):

- | | | |
|--|---|---|
| ☒ Aerial photography | ☐ Vegetation maps | ☐ GPS unit |
| ☐ Remotely-sensed images | ☒ Soil maps | ☐ Stream gage data |
| ☒ Topographic maps | ☐ Rainfall/precipitation data | ☐ Other studies: |
| ☐ Geologic maps | ☐ Existing delineation(s) for site | |

Other drawings (plan view), notes:



Other forms related to this feature: ☐ Yes ☐ No flows into 10-01

- ☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
- ☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: 11995

Date: 11/24/20

Transect: T-05

Investigator(s): AG + PK

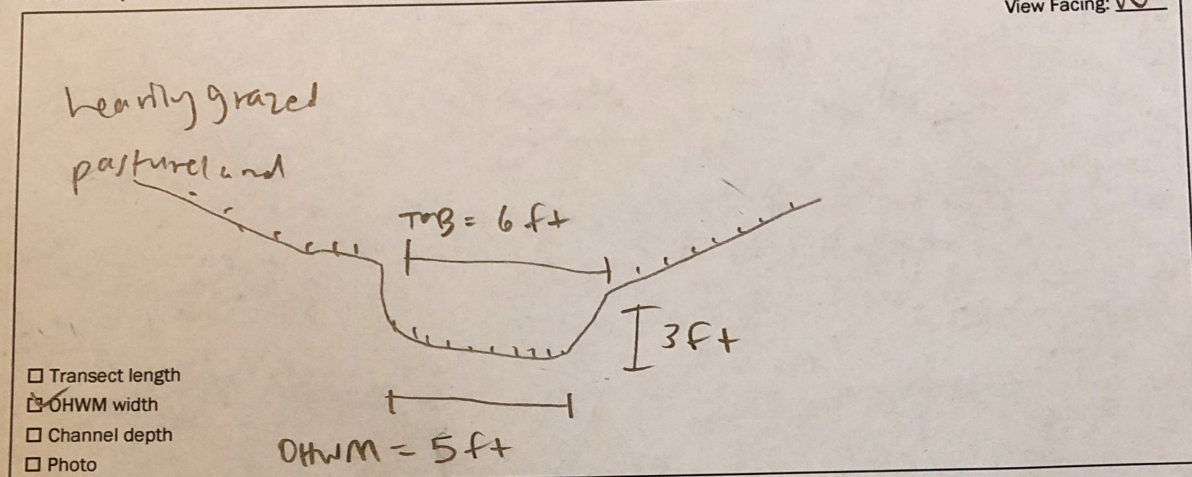
Feature Name: ED-02

Site Location: cloverdale

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: W

Break in Slope at OHWM: ☐ Sharp ($>60^\circ$) ☐ Moderate ($30-60^\circ$) ☐ Gentle ($<30^\circ$)

☐ Natural line impressed on the bank	☐ Sediment sorting
☒ Shelving	☐ Leaf litter disturbed or washed away
☐ Changes in the character of soil	☒ Scour
☐ Destruction of terrestrial vegetation	☐ Deposition
☐ Presence of litter and debris	☒ Bed and banks
☐ Wracking	☐ Water staining
☐ Vegetation matted down, bent, or absent	☒ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM	100	0	0	0	0

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	100	0
Below OHWM	0	0	50	50

Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	Bank Species:	Emergent Species:
tarweeds	Coryza canadensis	Hordeum marinum Rumex pulchur

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

heavy grazing

Hydrology:

- ☐ Flowing water
☐ Standing water
☐ Saturated
☒ Dry

Avg. depth:

Temp:

Min. depth:

Max. depth:

Checklist of resources (if available):

- ☐ Aerial photography
☒ Remotely-sensed images
☐ Topographic maps
☒ Geologic maps

- ☐ Vegetation maps
☒ Soil maps
☐ Rainfall/precipitation data
☐ Existing delineation(s) for site

- ☒ GPS unit
☐ Stream gage data
☐ Other studies:

Other drawings (plan view), notes:

narrows at fence line, OHWM = 1-2 ft

Other forms related to this feature: ☒ Yes ☐ No flows into ID-01

- ☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
☐ Low flow channel or other representative section (OHWM datasheet)