

# Appendix B

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## Biological Resources Assessment

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# **DRAFT**

## **Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California**

*Prepared for:*

### **Cloverdale Unified School District**

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# **JANUARY 2020**





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## 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                         |
| CNDDDB               | California Natural Diversity Database      |
| CWA                  | Clean Water Act                            |
| District             | Cloverdale Unified School District         |
| FESA                 | federal Endangered Species Act             |
| ID                   | intermittent drainage                      |
| OHWM                 | Ordinary High Water Mark                   |
| MBTA                 | Migratory Bird Treaty Act                  |
| NRPW                 | non-relatively permanent water             |
| RWQCB                | Regional Water Quality Control Board       |
| SAA                  | Streambed Alteration Agreement             |
| TNW                  | Traditionally Navigable Water              |
| USFWS                | U.S. Fish and Wildlife Service             |
| WEAT                 | worker environmental awareness training    |

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## SUMMARY OF FINDINGS

On June 24, 2019, Dudek Biologist Allie Sennett conducted a biological field survey and preliminary jurisdictional delineation of potential waters of the U.S. or state at the Cloverdale High School Stadium Improvement 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 constraints to the project. This document describes the methods and results of the biological survey and provides recommendations to avoid and minimize constraints.

There is one natural vegetation community type present in the project site: riparian woodland. There are two non-natural land cover types mapped in the project site: ruderal and developed. In addition, there are four aquatic habitat or stormwater control features, mapped onsite: one drainage swale, four ditches, and one unnamed, intermittent drainage. Of the six features, two 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, Jurisdictional Aquatic Resources, and Section 4.3, Non-Jurisdictional Aquatic Resources.

No special-status plant species were documented onsite. There are eight special-status plant species with low potential to occur in the project site: small-flowered calycadenia (*Calycadenia micrantha*), swamp harebell (*Campanula californica*), bristly sedge (*Carex comosa*), congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*), thin-lobed horkelia (*Horkelia tenuiloba*), Jepson's leptosiphon (*Leptosiphon jepsonii*), beaked tracyina (*Tracyina rostrata*), and Napa bluecurls (*Trichostema ruygtii*).

No special-status wildlife species were documented onsite. The project site provides potential habitat for grasshopper sparrow (*Ammodramus savannarum*) and other migratory birds and birds of prey protected by Fish and Game Code Sections 3503 and 3513 and/or the federal Migratory Bird Treaty Act, western pond turtle (*Emys marmorata*), Townsend's big-ear bat (*Corynorhinus townsendii*), and pallid bat (*Antrozous pallidus*). 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.

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## **1 PROJECT SITE AND DESCRIPTION**

The approximately 6.3-acre Cloverdale High School Stadium Improvement Project (project) site is located at 509 North Cloverdale Boulevard in the City of Cloverdale, Sonoma County, California (Figure 1, Project Location). The project site is located in Township 11 North, Range 10 West, and Sections 7 and 18 within the Cloverdale U.S. Geological Survey 7.5-minute quadrangle (Figure 2, Project Site). The approximate center of the site corresponds to 38°48'32.21" north latitude and 123°1'7.77" west longitude.

Topography of the project site is mostly flat, with elevations ranging from approximately 354 feet above mean sea level to 367 feet above mean sea level. The project site includes multiple non-natural land types and structures, including a dirt track, grass football field, two bleachers, shed, and ticket kiosk. The remainder of the site contains mowed lawns and sparsely vegetated, ruderal areas. The site is bounded by urban development, including homes and school buildings and related facilities.

The project site, located at Cloverdale High School, is owned and operated by the Cloverdale Unified School District (District). The proposed project involves replacement of the dirt track with a seven-lane all weather surface; replacement of the existing turf at the football field with synthetic turf; installation of subdrains under the football field, a storm drain system along the perimeter of the field, an irrigation system for the synthetic turf field for wash down purposes, and main irrigation lines to accommodate future sod field; replacement of light fixtures on four of the existing field light poles with new LED fixtures and removal of two existing light poles; removal of two small bleacher sections located on the east side of the track, replacement of approximately 500 square feet of asphalt concrete paving between the field and School Street; and fencing installation.

Construction of the proposed project would involve clearing and grubbing, grading, and trenching for underground drainage improvements. The project will also include implementation of a Stormwater Pollution Prevention Plan to protect water quality during and after construction, in compliance with the National Pollutant Discharge Elimination System under the federal Clean Water Act.

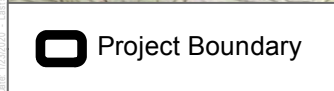
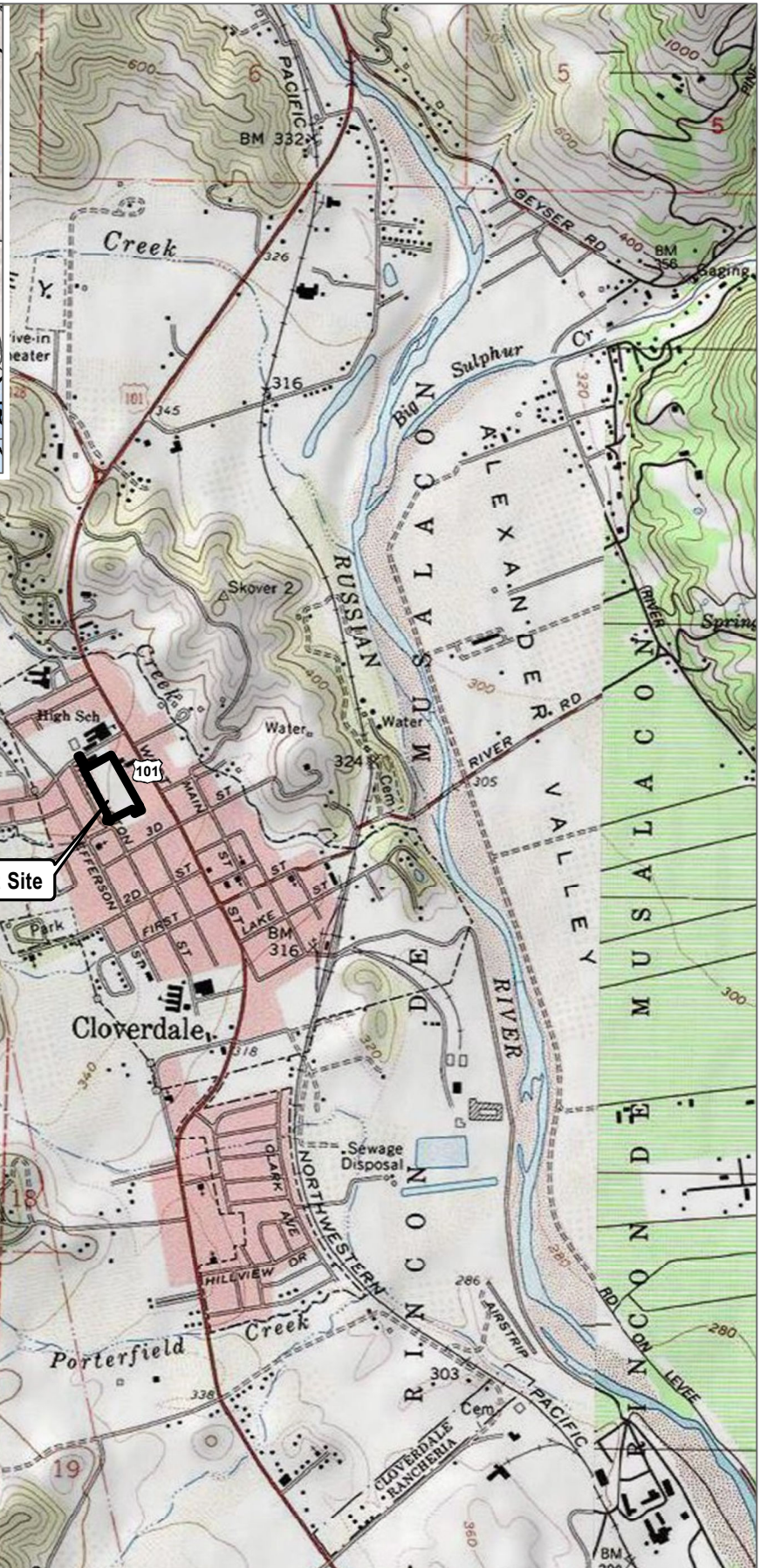
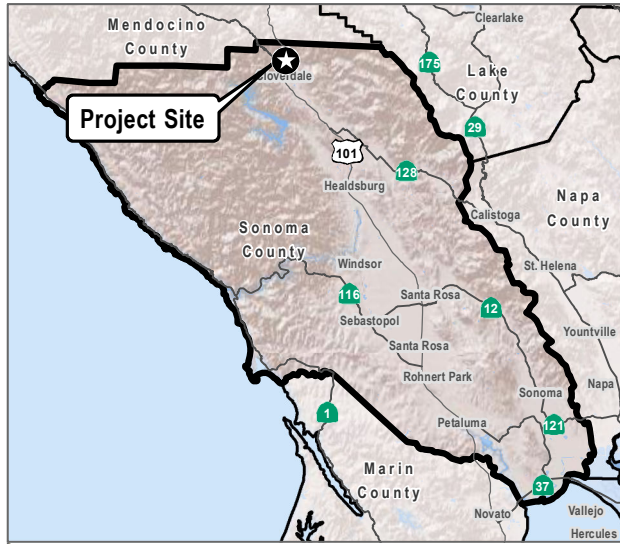
Construction of the proposed project is anticipated to occur in summer 2020.

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SOURCE: USGS 7.5 Minute Series Cloverdale Quadrangle

**FIGURE 1**  
Project Location



# **Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California**

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**FIGURE 2**  
Project Site

Cloverdale High School Stadium Improvement Project

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## 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 354 feet above mean sea level in the southeast corner of the project site to 367 feet above mean sea level in the northwest corner of the site. Topography in the project site is mostly flat with slopes gently descending toward the middle and northern segments of the site.

#### 2.1.1 Soils

One soil type occurs in the project site: Pajaro clay loam, overwash, 2 to 5 percent slopes (Figure 3, Soils). The Pajaro clay loam series consist of somewhat poorly-drained soils derived from alluvium from sedimentary rock. They are typically located on terraces and footslopes (USDA 2019a). Pajaro clay loam, overwash, 2 to 5 percent slopes is not considered a hydric soil (USDA 2019b).

#### 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).

Hydrology within the project site and vicinity has been altered over the years by urban development, including the construction of roads, homes, and Cloverdale High School. Surface run-off in the project site is directed to constructed ditches along the general perimeter of the site, a swale near the northwest corner of the site, and into multiple drainage inlets located throughout the football field at the center of the site. The majority of surface run-off enters an intermittent drainage located in the southeast corner of the project site, which eventually drains into the Russian River via Cloverdale Creek.

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. As a result, these datasets do not capture the drainages that flow adjacent to or in the vicinity of the project site, such as the drainage in the southeast corner of the site.

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SOURCE: USDA 2017

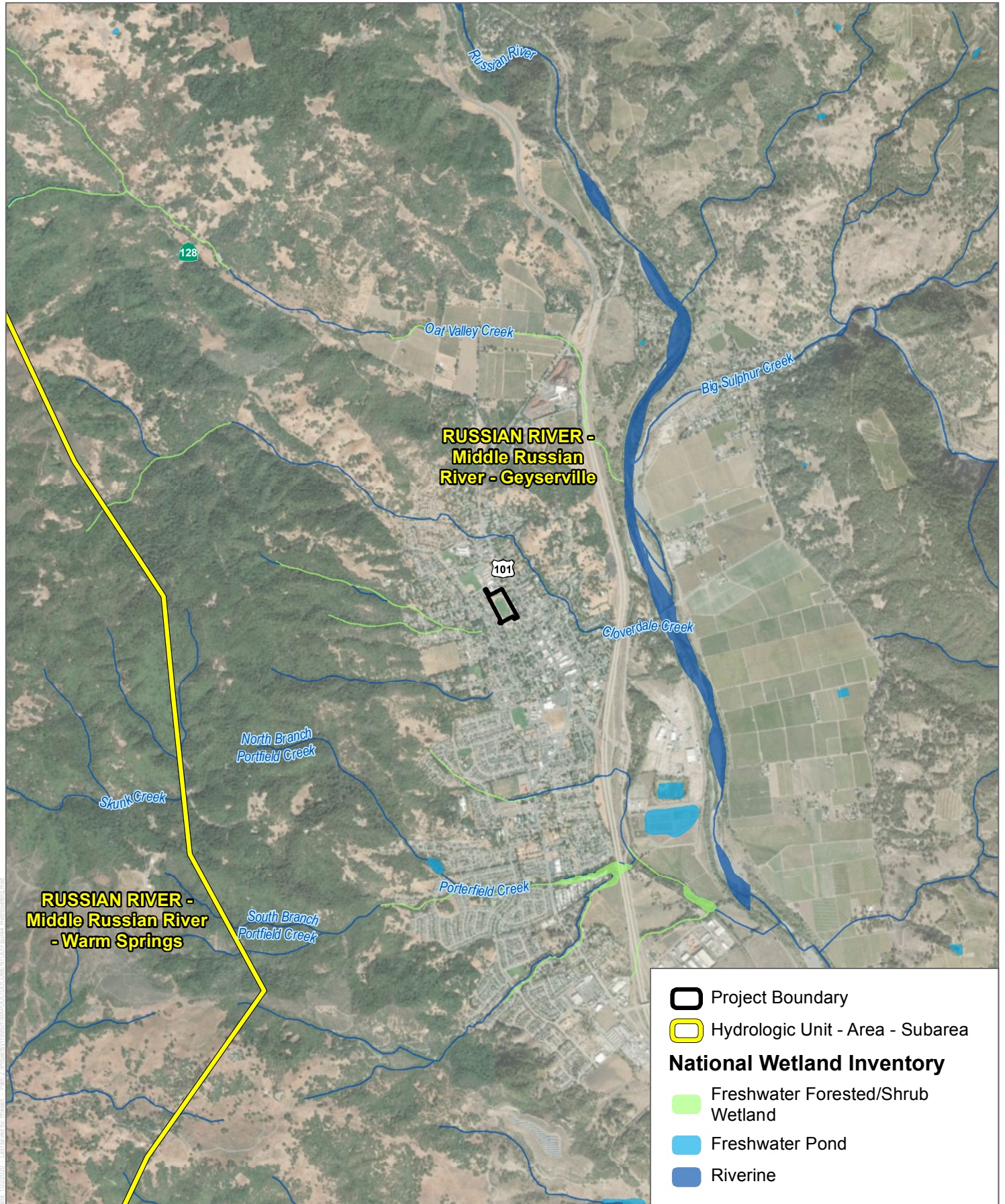
**FIGURE 3**  
**Soils Map**

**Biological Resources Assessment for the Cloverdale High School  
Stadium Improvement Project, Sonoma County, California**

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SOURCE: ESRI 2019, USFWS 2019

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Stadium Improvement Project, Sonoma County, California**

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## **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



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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.

### **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

## **Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California**

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- 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

## **Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California**

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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).

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## 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*

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*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.



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## **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 (CNDDB); 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).

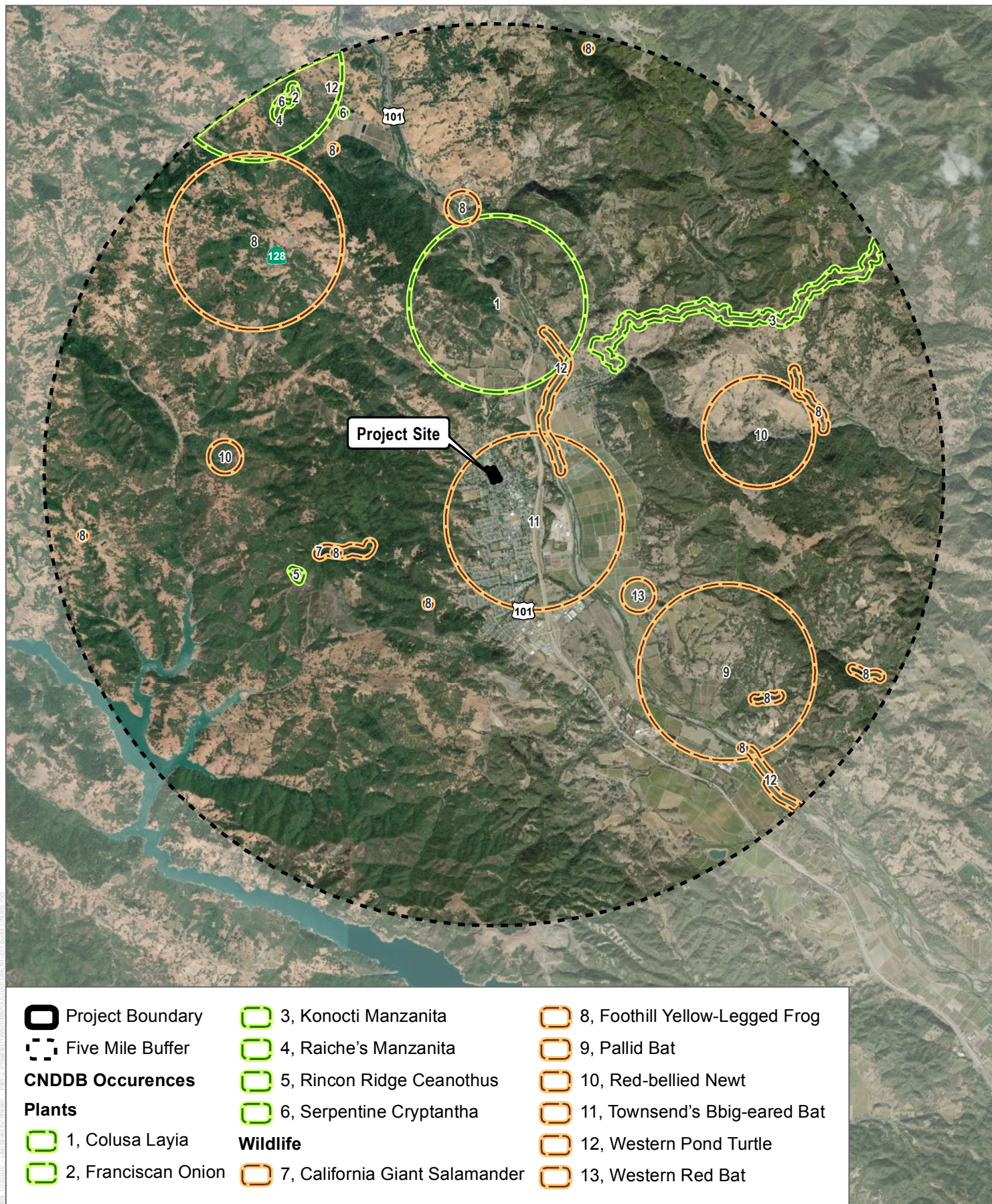
The above-referenced databases were searched for the Cloverdale and eight surrounding USGS 7.5-minute quadrangles: Yorkville, Hopland, Highland Springs, Big Foot Mountain, Asti, Tombs Creek, Warm Springs Dam, and Geyserville. CNDDB search results within 5 miles of the project site were overlain on aerial imagery to assess proximity of known occurrences to the project site (Figure 5, CNDDB Map). The IPaC search included the project site and a 5-mile buffer surrounding the site. 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.

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SOURCE: ESRI 2018

**DUDEK**



0 3,850 7,700 Feet

**FIGURE 5**

**CNDDDB Occurrences**

Cloverdale High School Stadium Improvement Project

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# Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California

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## 3.2 Field Assessment

### 3.2.1 Biological and Botanical Survey

On June 24, 2019, Dudek Biologist Allie Sennett 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, and potential for, existing habitats 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.

Following the June 2019 fieldwork, an approximately 0.36-acre area was added to the project site. This area includes an additional 340 feet of ditch 4 (segment outside of the fenced school property), a 95-foot-long segment of an unnamed intermittent drainage, and a riparian woodland surrounding the drainage (see Figures 6 and 7 in Section 4, Results). The intermittent drainage was visibly observed with binoculars from the school parcel during the June 2019 fieldwork; however, the full extent of the drainage in the revised project site boundary was not surveyed by the Dudek biologist. Within the extended project boundary, the lateral extent of ditch 4 and the intermittent drainage (i.e., top of bank to top of bank) was determined through a review of topographic data provided by the project surveyor (BFK Engineers; October 1, 2019), aerial imagery, and site photos, including photos taken by a Dudek archaeologist who surveyed ditch 4 and the intermittent drainage in August 2019.

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. No focused or protocol-level surveys for special-status plants or wildlife species were conducted. A list of plant and wildlife species identified during the June 2019 fieldwork is included in Attachment A. Representative photographs of the project site are in Attachment B.

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## 3.2.2 Delineation of Wetlands and Other Waters

Concurrent with the biological reconnaissance survey described above, Ms. Sennett 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 2019), 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). Ms. Sennett took four sample points to assess the potential for hydric soils, hydrophytic vegetation, and hydrology within the project site. Wetland 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 at five channel transects were collected to assess channel hydrology and geomorphology. Sample point data sheets and channel transects are included in this report as Attachment C. The extent of potentially jurisdictional or non-jurisdictional wetlands or other waters within the project site are depicted on Figure 7, Preliminary Jurisdictional Delineation of Wetlands and Other Waters.

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## 4 RESULTS

### 4.1 Vegetation Communities and Land Cover Types

The land cover within the project area consists of a combination of terrestrial non-vegetative land covers and natural vegetation communities (Figure 6, Project Vegetation Communities and Land Cover Types), as well as aquatic land cover types (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, ruderal, disturbed/developed, drainage swale, ditch, and intermittent drainages (see Table 1). Refer to Attachment B 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/<br>Land Cover Type | Acres       | Linear Feet     |
|------------------------------|--|-------------|-----------------|
| <i>Terrestrial</i>           |  |             |                 |
| Natural Land Cover           | Riparian Woodland                        | 0.46        | NA              |
| Non-Natural Land Cover       | Ruderal                                  | 4.24        | NA              |
|                              | Disturbed/Developed                      | 1.60        | NA              |
| <b>Total</b>                 |  | <b>6.30</b> | <b>NA</b>       |
| <i>Aquatic</i>               |  |             |                 |
| Seasonal Wetlands and Swales | Drainage Swale                           | 0.03        | NA              |
| Other Waters                 | Ditch 1-4                                | 0.11        | 1,490           |
|                              | Intermittent Drainage 1                  | 0.04        | 95.54           |
| <b>Total</b>                 |  | <b>0.18</b> | <b>1,585.24</b> |

#### 4.1.2 Natural Land Cover Types

**Riparian Woodland.** There is a narrow riparian corridor present along both banks of the unnamed drainage in the southern extent of the project site. This community type was mapped to include the tree canopy, some of which overhangs ruderal areas on the campus. Willow (*Salix* spp.) and alder (*Alnus* sp.) saplings and Himalayan blackberry (*Rubus armeniacus*) dominate the understory, below an overstory generally dominated by interior live oak (*Quercus wislizeni*), valley oak (*Quercus lobata*), and ornamental trees.

**Biological Resources Assessment for the Cloverdale High School  
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SOURCE: ESRI 2019

**DUDEK**



0 100 200 Feet

**FIGURE 6**

**Vegetation Communities and Land Cover Types**

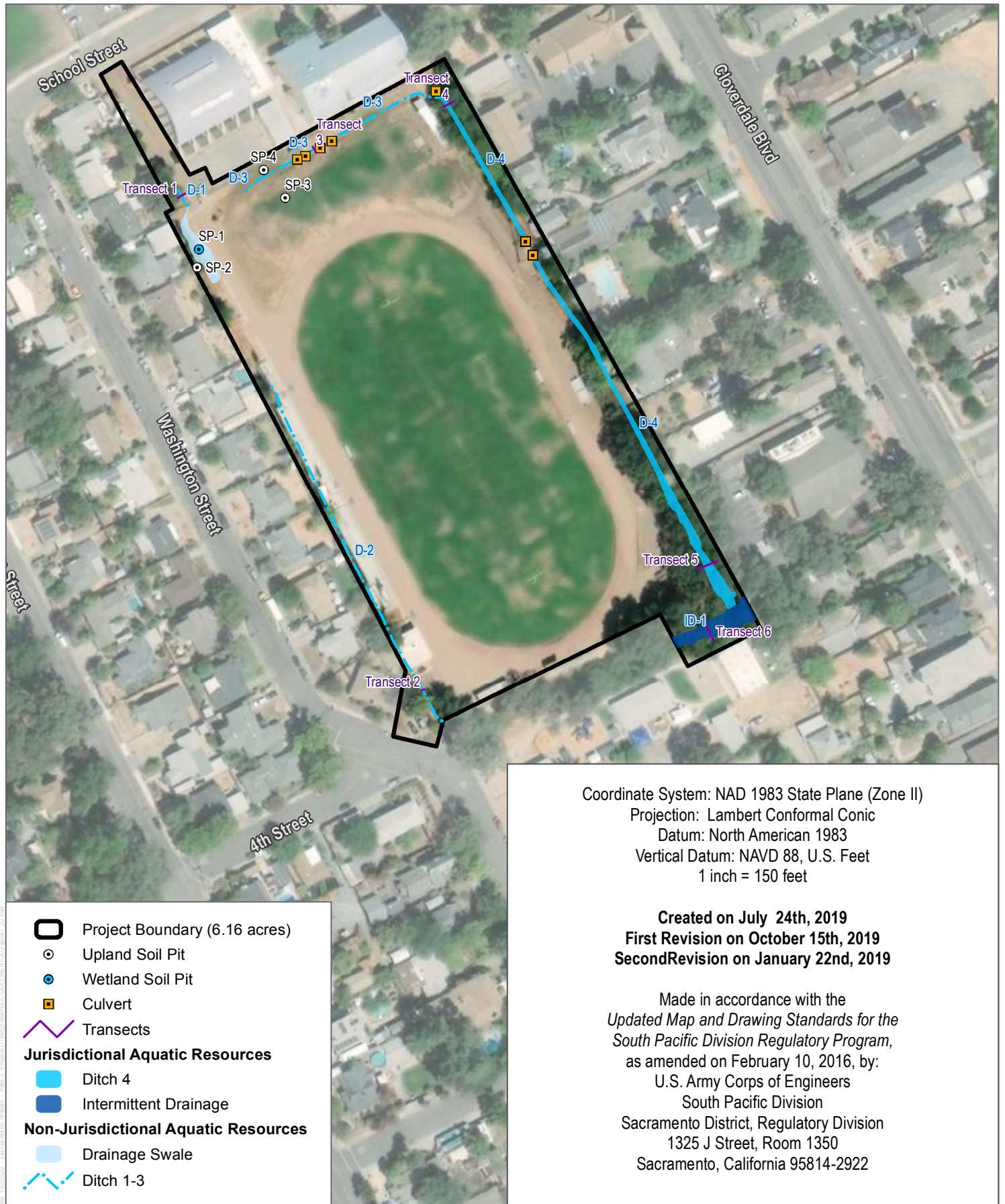
Cloverdale High School Stadium Improvement Project

## **Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California**

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SOURCE: USDA 2017

**FIGURE 7**  
 Preliminary Jurisdictional Delineation of Wetlands and Other Waters  
 Cloverdale High School Stadium Improvement Project

## **Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California**

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## 4.1.3 Non-Natural Land Cover Types

**Ruderal.** Ruderal non-natural land cover type includes areas disturbed by anthropogenic activities that still retain a pervious surface without vegetation or that support an assortment of weedy, non-native vegetation. Ruderal land cover within the project site includes vegetated portions of the school campus that are generally planted with turf grass, such as the football field and adjacent vegetated area to the north. Within this land cover type is one unvegetated ditch that runs north-south along the west edge of the project site, including a segment below the bleachers. These areas do not support native vegetation and are managed on a regular basis by school district maintenance staff.

**Disturbed/Developed.** Developed non-natural land cover type refers to areas that have been generally graded and cleared of natural vegetation, which are then constructed upon with impermeable or nearly impermeable surfaces such as concrete or compacted soil. Also included in this land cover type are human-made structures, the track present along the perimeter of the football field, and a paved parking lot in the northwestern extent of the project site.

## 4.1.3 Aquatic Habitat Types

### Artificial/Constructed Wetlands

Drainage Swale. One human-made drainage swale is present in the northwestern portion of the project site. The swale was constructed to filter and convey stormwater run-off into an unvegetated ditch that generally parallels the western edge of the property, including a segment that occurs below the bleachers. In addition, there is an unvegetated ditch originating in the school parking lot to the north that directs run-off from the parking lot into the swale. The swale contains a dominance of Italian rye grass (*Festuca perennis*; FAC) and English plantain (*Plantago lanceolata*; FAC), both hydrophytic species. Tall flatsedge (*Cyperus eragrostis*; FACW), curly dock (*Rumex pulchar*; FAC), and bird's foot trefoil (*Lotus corniculatus*; FAC) are also present, but in lower abundance. Hydric soils are present as indicated by redox dark surface (Hydric Soil Indicator F6), and wetland hydrology is evident by the presence of oxidized rhizospheres along living roots (Hydrology Indicator C3). No surface water or saturation was present in the swale during the June 2019 fieldwork. The swale does not have evidence of an OHWM.

Ditches. There are four ditches present in the project site. These ditches are human-made features constructed to filter and convey run-off to existing stormwater infrastructure outside of the project site. The ditches are regularly maintained as indicated by the District.

*Ditch 1.* Ditch 1 runs roughly north-south along the paved parking lot that intersects the northwest corner of the project site and empties surface run-off into the drainage swale

## Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California

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onsite. The ditch is ephemeral and moderately vegetated with non-native grasses and forbs. No wetland plants or evidence of sediment sorting were identified in the ditch. This ditch was excavated in an upland and serves as a stormwater control feature. Ditch 1 was dry during the June 2019 fieldwork.

*Ditch 2.* Ditch 2 runs north-south along the western perimeter of the project site, beginning approximately 130 feet south of the drainage swale (discussed above). Similar to ditch 1, ditch 2 contains ephemeral hydrology and primarily serves to redirect surface run-off onsite. No wetland plants or evidence of sediment sorting were identified in the ditch. Ditch 2 was dry during the June 2019 fieldwork.

*Ditch 3.* Within the project site, ditch 3 runs roughly northeast-southwest, paralleling the northern extent of the site. The ditch flows through two approximately 10 to 15-foot-long culverts, which allow for foot or vehicle traffic across the ditch. The ditch was saturated during the June 2019 fieldwork. Some ponding water, up to approximately 1 inch deep, was present intermittently along the ditch. Flows in ditch 3 appear to be unidirectional, draining to low points east and southwest of the ditch. When flowing west, the ditch transitions into sheet flow where it empties at the dirt track southwest of the ditch. When flowing east, ditch 3 empties into ditch 4 (discussed below). Evidence of an OHWM is present in the form of a break in slope, change in vegetation cover or destruction of vegetation, and vegetation bent in the direction of flow. Areas immediately surrounding the ditch are dominated by grasses and forbs common to the football field and other maintained lawns in the project site. Where present, vegetation below the OHWM of the ditch includes water speedwell (*Veronica anagallis-aquatica*; OBL) and tall flatsedge.

*Ditch 4.* Ditch 4 originates at a culvert outfall in the northeast corner of the project site and when inundated, flows southeast along the east edge of the site, within then eventually outside of the school property. Within the school property, the ditch flows through an approximately 20-foot-long culvert, which allows for pedestrian or equipment traffic across the ditch. Ponded water, approximately 2-inches deep, was present intermittently within the ditch during the June 2019 fieldwork. Evidence of an OHWM is present in the form of a break in slope, change in vegetation community, and vegetation bent in the direction of flow. Vegetation along the west side of ditch 4 is similar to the football field and other maintained lawns in the project site. Himalayan blackberry (FAC) and California rose (*Rosa californica*; FAC) generally dominate the east side of the ditch. Where present, vegetation below the OHWM of the ditch includes water speedwell and annual rabbit's-foot grass (*Polypogon monspeliensis*; FACW). Much of the ditch is located below a dense tree canopy present on the site or in adjacent residential parcels. The tree canopy consists of native and ornamental/horticultural trees, such as interior live oak (NL),

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brown dogwood (*Cornus glabrata*; FACW), Canary Island date palm (*Phoenix canariensis*; NL), and cultivated plum (*Prunus* sp.). Sierran tree frog (*Pseudacris sierra*) metamorphs and tadpoles were observed in the northern extent of the ditch during the June 2019 fieldwork.

Ditch 4 transitions into a more natural drainage after it exits the property fence line near the middle of the east boundary, just south of a culvert outlet that empties school run-off into the drainage. Outside of the school property, the drainage widens and contains a more defined bed and bank. Channel scour is evident in the form of undercut banks and exposed roots. The bed substrate contains a mix of soil, small gravel, and miscellaneous trash and debris, including broken glass and woody debris. This segment of ditch 4 is surrounded by a narrow riparian corridor similar to the one discussed above. When inundated, the ditch empties into an unnamed intermittent drainage in the southeast corner of the project site (discussed below). Ditch 4 appears to contain intermittent hydrology based on conditions observed in the field.

### Other Waters

Intermittent Drainage. There is one unnamed drainage that flows east through the south end of the project site. The drainage is not identified on the Cloverdale USGS quad map, but appears to contain intermittent hydrology based on conditions observed in the field. Ponded water, approximately 2 inches deep, was present intermittently in the drainage during the June 2019 fieldwork. Evidence of an OHWM includes bed and bank, wracking, sediment sorting, and destruction of vegetation. The drainage bed contains a mix of soil and small to large gravel and sparse vegetation, with the exception of areas dominated by Himalayan blackberry, which creep across the bed. Where present, vegetation in the drainage bed also includes tall flatsedge, curly dock, and cut leaved geranium (*Geranium dissectum*; NL). A narrow riparian corridor is present along both banks of the drainage (discussed above).

## 4.2 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. Sennett, Dudek biologist, on June 24, 2019, and are discussed in detail below.

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**Table 2. Jurisdictional Aquatic Resources in the Project Site**

| Feature               | Cowardin Code | Rapanos Classification | Potential Jurisdiction | Acres       | Linear Feet   |
|-----------------------|---------------|------------------------|------------------------|-------------|---------------|
| Ditch 4               | R4            | NRPW                   | CDFW                   | 0.10        | 676.02        |
| Intermittent Drainage | R4            | NRPW                   | ACOE/RWQCB/CDFW        | 0.04        | 95.54         |
| <i>Total</i>          |               |                        |                        | <b>0.14</b> | <b>771.56</b> |

**Notes:** PEM = Palustrine, emergent, nonpersistent; NRPW = Non-Relatively Permanent Water; ACOE = Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; ID = intermittent drainage; R4 = Riverine, intermittent; CDFW = California Department of Fish and Wildlife.

## Waters of the U.S.

The project site supports 0.04 acre (95.54 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 drainage in the project site conveys water indirectly into the Russian River via Cloverdale Creek, 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 0.5 air 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 2019).

## Waters of the State

The project site supports 0.14 acre (771.56 linear feet) of waters that Dudek anticipates meet the criteria for jurisdictional waters of the state. Specifically, ditch 4 is a potential waters of the state under the jurisdiction of CDFW, and the unnamed intermittent drainage is a 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 RWCQB'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). Ditch 4 supports riparian plants and aquatic wildlife, including Sierran tree frogs and tadpoles, and the intermittent drainage meets both RWQCB and CDFW definitions of a waters of the state.



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## 4.3 Non-Jurisdictional Aquatic Resources

### Non-Waters of the U.S.

#### *Stormwater Control Features*

The drainage swale and ditches 1 through 3 in the project site are human-made stormwater control features constructed in uplands to treat and convey stormwater, and therefore, may not be considered a waters of the U.S. subject to Section 404 of the CWA. These features meet the definition of an “irrigation ditch” per Regulatory Guidance Letter 2007-02 because each are a “man-made feature and/or an upland swale that either conveys water to an ultimate irrigation use or place of use, or that moves and/or conveys irrigation water (e.g., “run-off” from irrigation) away from irrigated lands.” The football field is artificially irrigated land.

In accordance with *Regulatory Guidance Letter No. 07-02 - Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches under Section 404 of Clean Water Act*, fill-related impacts to the drainage swale, or unvegetated or vegetated ditches would be exempt from regulation under Section 404 of the Clean Water Act.

### Non Waters of the State

#### *Artificial Wetlands*

The drainage swale and ditches in the project site meet the definition of an artificial wetland. According to the SWRCB (2019), artificial wetlands may include those constructed for the primarily purposes of treating and distributing stormwater or irrigation run-off. The drainage swale and ditches onsite were originally constructed to function as stormwater control features. School maintenance staff currently maintain these features to redistribute stormwater run-off into existing stormwater infrastructure offsite. Therefore, the drainage swale and four ditches in the project site are non-waters of the state, and fill-related impacts to these features would be exempt from regulation under Section 401 of the Clean Water Act.

## 4.4 Plant and Wildlife Species Observed

A total of 29 species of vascular plants—21 native (72%) and 8 non-native (28%)—and 5 wildlife species were recorded during the June 24, 2019 field survey (see Attachment A). The lack of species diversity and presence of non-native species reflect the disturbed nature of the site.

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## 4.5 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 preliminary review discussed above and on the field assessment of existing habitats. Tables summarizing the potential occurrence of special-status plant and wildlife species are included in Attachment D and E, 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.

### 4.5.1 Special-Status Plants

Results of the CNDDDB and CNPS searches revealed 31 special-status plant species that have potential to occur in the database search area (see Attachment D). 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.

Eight special-status plant species have a low potential to occur in the project site: small-flowered calycadenia (*Calycadenia micrantha*), swamp harebell (*Campanula californica*), bristly sedge (*Carex comosa*), congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*), thin-lobed horkelia (*Horkelia tenuiloba*), Jepson's leptosiphon (*Leptosiphon jepsonii*), beaked tracyina (*Tracyina rostrata*), and Napa bluecurls (*Trichostema ruygtii*). The project site provides poor to marginal habitat for these species due to the disturbed 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 site visit conducted on June 24, 2019, which occurred during the evident and identifiable period for these species, with the exception of Jepson's leptosiphon, which blooms March through May. No species in the genus *Leptosiphon* were observed in the project site during the site survey.

### 4.5.2 Special-Status Wildlife

Results of the CNDDDB and USFWS searches revealed 18 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, 15 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 E).

The project site provides potential habitat for grasshopper sparrow, western pond turtle, Townsend's big-ear bat and pallid bat. In addition, the project site provides potential habitat for

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migratory birds and birds of prey and other native bats. 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. None of these species were detected during the field survey conducted on June 24, 2019, with the exception of 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.** Trees, shrubs, and human-made structures in and adjacent to the project site provide potential nesting habitat for a number of local and migratory bird and bird of prey species. 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).

**Grasshopper Sparrow.** Grasshopper sparrow is a CDFW Species of Special Concern (CDFW 2018b) that nest and forage in moderately open grassland with tall forbs or scattered shrubs used for perches. Nests are normally located in a slight depression, hidden at the base of an overhanging clump of grasses or forbs (CDFW 2019c).

Grasshopper sparrow has a low potential to occur in the project site. There are no moderately open grasslands with perching options present onsite. In addition, grassy areas onsite experience regular disturbance from mowing and high school sport activities.

**Western Pond Turtle.** Western pond turtle is a CDFW Species of Special Concern (CDFW 2018b) that utilizes ponds, small lakes, slow-moving permanent or intermittent streams, and reservoirs with emergent basking sites and adjacent uplands for nesting and overwintering (CDFW 2019b).

Western pond turtle has a low potential to occur in the project site. The intermittent drainage and two vegetated ditches onsite provide only marginal habitat for western pond turtle. The intermittent drainage and two vegetated ditches are generally isolated from other natural aquatic features by underground culverts, which act as barriers to species dispersal. In addition, the onsite drainages generally lack aquatic refugia and aquatic structures for basking. Dense canopy cover above the unnamed drainage onsite greatly reduces the availability of basking habitat, which western pond turtle need for thermoregulation. Uplands of the project site are heavily disturbed and primarily consist of very compacted soils or regularly mowed grassy areas not suitable for nesting. Thus, there is no suitable aquatic, basking, or nesting habitat for this species, and it is unlikely that western pond turtle would disperse to the project site.

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**Townsend's Big-Eared Bat.** Townsend's big-eared bat is a CDFW Species of Special Concern (CDFW 2018b) that occupies xeric areas, as well as mesic coniferous and deciduous forests and riparian habitat (CDFW 2019b). In California, Townsend's big-eared bat typically roost in limestone caves, lava tubes, and human-made structures. Maternity and hibernation roosts are normally limited to caves and mine tunnels. This species appears to select relatively cold places for hibernation, often near entrances and in well-ventilated areas. They prefer foraging in riparian edge habitats and have been documented avoiding grasslands when travelling between roost and foraging sites (NatureServe 2019).

Townsend's big-eared bat has a low potential to occur in the project site. There are no limestone caves, lava tubes, or tunnels in the project site. It is unlikely that this species would utilize onsite structures for roosting, as they are located in an area of regular human disturbance. No evidence of roosting (e.g., guano, urine stains, and insect prey remains) was noted in project site during the June 2019 field survey.

**Pallid Bat.** Pallid bat is a CDFW Species of Special Concern (CDFW 2018b) that occupies a variety of habitats including grassland, shrubland, woodland, and forests from sea level up through mixed conifer forest. They utilize crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live or dead trees for day roosting. Maternity roosts are usually located in rock crevices or buildings, and hibernation may occur in caves and mines (NatureServe 2019). They are very sensitive to disturbance of their roosting sites. Pallid bat prefer foraging in open areas, such as grasslands, adjacent to suitable roosting sites (CDFW 2019b).

Pallid bat has a low potential to occur on the project site. There are no caves, mines, or hollow trees on the project site. In addition, the project site is generally surrounded by urban development, including residential dwellings, commercial buildings, and roadways. It is unlikely that this species would utilize trees or structures onsite for roosting as they are located in an area of regular human disturbance. No evidence of roosting was noted in project site during the June 2019 field survey.

### 4.6 Sensitive Natural Communities

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

### 4.7 Wildlife Corridors and Habitat Linkages

The project site is bounded by dense urban development in each direction. While mature trees and shrubs along a portion of ditch 4 and the intermittent drainage provide cover and a potential link between habitats, the project site itself does not function as a wildlife movement corridor due to the surrounding development and lack of connectivity with other undeveloped areas. In addition,

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a majority of the project site itself is fenced, which further reduces habitat connectivity in the immediate vicinity.

## **5 IMPACTS AND MITIGATION**

This section addresses potential impacts to special-status species or sensitive resources that could result from construction of the proposed project and provides recommendations to avoid and minimize potential impacts to sensitive biological resources.

### **5.1 Definition of Impacts**

This section defines the types of impacts that would occur as a result of the proposed project's implementation, including direct, permanent impacts; direct, temporary impacts; and indirect impacts.

#### **5.1.1 Direct Impacts**

Direct, permanent impacts refer to the permanent physical loss of a biological resource due to clearing and grading associated with implementation of the proposed project. Direct, permanent impacts are analyzed in four ways: (1) permanent loss of vegetation communities and natural land cover types (excluding anthropogenic/disturbed land covers), as well as general wildlife and their habitat; (2) permanent loss of or harm to individuals of special-status plant and wildlife species; (3) permanent loss of suitable habitat for special-status species; or (4) permanent loss of wildlife movement and habitat connectivity in the project vicinity.

Direct, temporary impacts refer to a temporal loss of vegetation communities and land covers resulting from vegetation and land cover clearing and grading associated with implementation of the proposed project. The main criterion for direct, temporary impacts is that impacts would occur for a short period of time (i.e., approximately one year) and would be reversible.

#### **5.1.2 Indirect Impacts**

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct disturbance zone that may occur during grading or maintenance activities (i.e., short-term construction-related indirect impacts) or later in time as a result of the program (i.e., long-term, or operational, indirect impacts). Short-term indirect impacts can include dust, human activity, pollutants (including potential erosion), and noise that extend beyond the identified construction area. Long-term indirect impacts can include changes to hydrology, introduction of invasive species, dust, and noise that are operations-related or persist after construction is complete.

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For each of the following impact sections, direct and indirect impacts for biological resources are identified and a significance determination is made for each impact. For each significant impact, mitigation measures that would reduce the impact to less than significant are proposed.

## 5.2 Impacts to Vegetation Communities

Construction of the proposed project would result in direct impacts to vegetation communities present in the project site. Temporary direct impacts to vegetation may be necessary to facilitate access during construction. Permanent direct impacts to vegetation may result from construction associated with the new sports facilities (e.g., all-weather track and synthetic turf football field) and onsite drainage improvements; however, most if not all of these impacts would be to developed or highly disturbed land covers. Installation of the retention pond and two outfall structures directed into the intermittent drainage may result in direct impacts to the riparian woodland in and overhanging the project site. The riparian woodland is likely protected under Section 1602 of the California Fish and Game Code.

Direct, temporary impacts to the riparian woodland community would be considered potentially significant without implementation of mitigation measures. Implementation of MM-BIO-1 through MM-BIO-3 would reduce potential direct impacts to less than significant.

**MM-BIO-1 Avoided Habitat Fencing and Best Management Practice Installation.** Prior to the initiation of ground disturbance activities, the limits of disturbance shall be fenced and sediment and erosion control measures shall be utilized, which could include, but not be limited to: biodegradable straw wattles free of weed seeds, silt fencing, or biodegradable erosion control mats/blankets. No construction, staging, or other ground disturbance activities shall be permitted beyond the fencing.

**MM-BIO-2 Mitigation for Riparian Vegetation Impacts.** If riparian vegetation removal and/or disturbance to the bed, bank, or channel of the intermittent drainage is necessary for project implementation, a Streambed Alteration Agreement (SAA), pursuant to Section 1602 of the California Fish and Game Code, shall be procured from the California Department of Fish and Wildlife (CDFW) prior to any disturbances to these areas. As part of the SAA, compensatory mitigation may be required to offset the loss of riparian habitat. If so, a mitigation plan shall be drafted by a qualified biologist to address implementation and monitoring requirements under the SAA to ensure that the project would result in no net loss of habitat functions and values. The plan shall contain, at a minimum, mitigation goals and objectives, mitigation location, a discussion of actions to be implemented to mitigate the impact, performance criteria, monitoring methods, and actions to be taken in the event that the mitigation is not successful. The plan shall be approved by the District and CDFW

## Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California

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and any required compensatory mitigation shall take place either onsite or at an appropriate off-site location as approved by the CDFW and the District at a ratio directed by the SAA.

Regardless of the requirements of the SAA, if riparian vegetation removal is necessary, a qualified botanist shall conduct a pre-construction survey to identify and quantify the plants that could be potentially removed or disturbed. The botanist shall prepare a propagation and planting plan to offset the loss of any vegetation/plants to be removed or disturbed at a 1:1 ratio to ensure no net loss of the riparian vegetation community. The plan shall contain, at a minimum the following components: goals and objectives; a description of the extent of plants/vegetation to be removed or disturbed; plant collection, propagation, and planting methods; locations on the project site in which the plants will be transplanted; monitoring methods, timing, and performance criteria; measures to be taken in the event that the propagation and planting is not successful; and reporting requirements. The plan shall be approved by the District.

**MM-BIO-3 Restoration of Temporary Impacts.** Natural land cover types temporarily impacted by project construction shall be restored with appropriate native vegetation. Areas to be restored shall be identified by a qualified biologist as being able to feasibly support the proposed native revegetation. Feasibility of native revegetation is primarily based on suitable soils, slopes, and aspect, as well as the presence of similar native vegetation adjacent to the proposed mitigation areas.

The project proponent shall be responsible for developing and implementing a conceptual restoration plan for the temporarily impacted areas. The plan shall, at a minimum, include an implementation schedule, planting/seeding plan, invasive species eradication methods, interim and final success criteria/performance standards, estimated costs, and identification of responsible entities. The conceptual restoration plan shall be approved by the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board prior to construction of the proposed project.

### 5.3 Impacts to Jurisdictional Aquatic Resources

A formal jurisdictional delineation of the project site was conducted during the site visit on June 24, 2019. The intermittent drainage onsite may be under the joint regulation of the ACOE, RWQCB, and CDFW, and the riparian woodland may be under the regulation of CDFW. These potentially jurisdictional features have not been verified by the appropriate regulatory agencies

## Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California

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(e.g., ACOE and CDFW) and a field verification will be necessary before final plans for the project are prepared.

Construction of the proposed project may result in direct impacts to the intermittent drainage in the project site. Temporary direct impacts to the drainage may be necessary to install the two outfall structures. Permanent direct impacts to the drainage would result from placement of rip-rap below the two proposed outfall structures. Direct, temporary impacts to the intermittent drainage would be considered potentially significant without implementation of mitigation measures. It is expected that implementation of a Stormwater Pollution Prevention Plan would control erosion and protect water quality during and following construction, in compliance with the National Pollutant Discharge Elimination System under the federal Clean Water Act. In addition, MM-BIO-4 would reduce potential direct and indirect impacts to jurisdictional aquatic resources to less than significant.

**MM-BIO-4** If any wetlands or other waters of the U.S. in the project site shall be directly impacted by the placement of fill material, the District shall obtain an individual or nationwide permit from the Army Corps of Engineers (ACOE) prior to such activity. As part of the ACOE permit, compensatory mitigation may be required, at a ratio to be determined by the ACOE, to offset the loss of wetland/waters habitat. If so, and as part of the permit application process, a qualified biologist shall draft a mitigation and monitoring plan to address implementation and monitoring requirements under the permit to ensure that the project would result in no net loss of habitat functions and values. The plan shall contain, at a minimum, mitigation goals and objectives, mitigation location, a discussion of actions to be implemented to mitigate the impact, monitoring methods and performance criteria, extent of monitoring to be conducted, actions to be taken in the event that the mitigation is not successful, and reporting requirements. The plan shall be approved by ACOE and compensatory mitigation shall take place either on site or at an appropriate off-site location as approved by the ACOE.

Concurrent with the ACOE permit, the District shall also obtain a Water Quality Certification from the RWQCB, subject to the same mitigation plan requirements stated above. Any work within the bed or bank of the intermittent drainage, ditch 4, or within the abutting riparian woodland, would require authorization from CDFW under a California Fish and Game Code Section 1600 Streambed Alteration Agreement. Trimming or removal of riparian vegetation may also require compensatory mitigation, as directed by MM BIO-2 and BIO-3.



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## 5.4 Impacts to Special-Status Plants

Eight special-status plant species have low potential to occur in the project site (see Attachment D). The project site provides poor to marginal habitat for these species due to the disturbed nature of the site and overall dominance of non-natural land cover types and non-native plants. None of these special-status plant species were observed during the site visit conducted on June 24, 2019, which occurred during the evident and identifiable period for these species, with the exception of Jepson's leptosiphon, which blooms March through May. No species in the genus *Leptosiphon* were observed in the project site during the site survey.

Based on a review of photographs and familiarity of the project site and area, the intermittent drainage onsite does not provide habitat for special-status plants. The drainage is well-shaded, heavily incised and does not provide the appropriate hydrology for special-status plants that prefer wet substrates and/or open canopy (see Attachment D, Special-Status Plants with Potential to Occur). Thus, no special-status plant species are expected to occur onsite and no impacts to special-status plant species are anticipated as a result of the proposed project.

## 5.5 Impacts to Special-Status Wildlife

Special-status wildlife species with a low potential to occur in or near the project site include grasshopper sparrow, western pond turtle, Townsend's big-ear bat, pallid bat, and other nesting birds or native bats (see Attachment E). No special-status species or their sign were observed during the June 2019 field survey.

The project site lacks nesting habitat for grasshopper sparrow, but could support other native or migratory birds. Western pond turtle is not expected to occur onsite as there is no suitable aquatic, basking, or nesting habitat present. Townsend's big-ear bat and pallid bat are not expected to roost onsite due to regular human disturbance, as well as a limited roost sites, such as expansive riparian areas and rocky outcrops. Other native bats less sensitive to disturbance could roost in trees onsite with sufficient foliage or crevices, but roosting opportunities are generally limited, especially for maternity or overwintering colonies. No evidence of roosting (e.g., guano, urine staining, prey remains) was noted in the project site during the June 2019 field survey. The proposed project does not involve tree removal; however, if any tree trimming is necessary, tree-roosting bats, if present, could be impacted by the activity.

Construction of the proposed project, especially involving vegetation removal, could result in direct, temporary impacts to native and migratory birds, should any nest onsite during construction. Direct impacts could include mortality or injury or destruction of nests if birds are nesting in or adjacent to the project site where vegetation removal or ground-disturbing activities are occurring. In addition, loud construction activities could cause an adult bird to abandon an active nest that is

## Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California

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in close proximity to construction, which could lead to nest failure. Potential impacts to active bird nests would be considered potentially significant without implementation of mitigation measures. With implementation of MM-BIO-5 and MM-BIO-6, potential impacts to special-status wildlife would be less than significant.

**MM-BIO-5** A qualified biologist shall conduct a survey for nesting birds approximately two days prior to vegetation removal or ground-disturbing activities during the nesting season (March through August). The survey shall cover the limits of construction and suitable nesting habitat within 500 feet for raptors and 100 feet for other nesting birds, as feasible.

If any active nests are observed during surveys, a qualified biologist shall establish a suitable avoidance buffer from the active nest. The buffer distance will typically range from 50 to 300 feet, and shall be determined based on factors such as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active nests shall be established in the field with flagging, fencing, or other appropriate barriers and shall be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.

If vegetation removal activities are delayed, additional nest surveys shall be conducted such that no more than 7 days elapse between the survey and vegetation removal activities. Dudek also recommends disturbing potential nesting habitat (i.e., trimming and/or vegetation removal) outside of the nesting season (September through February) to avoid impacts to nesting birds.

If an active nest is identified in or adjacent to the construction zone after construction has started, work in the vicinity of the nest shall be halted until the project biologist can provide appropriate avoidance and minimization measures to ensure that the nest is not disturbed by construction. Appropriate measures may include a no-disturbance buffer until the nest has fledged and/or full-time monitoring by a qualified biologist during construction activities conducted in close proximity to the nest.

**MM-BIO-6** A qualified biologist shall conduct a survey for tree-roosting bats within two weeks prior to tree trimming on the project site, if conducted during the anticipated bat maternity season for the region (March 15 – September 1). The survey shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the project site and 50 feet around these areas, as feasible. Potential roosting sites identified during the survey shall be flagged or marked. If bats (individuals or colonies) are detected, CDFW shall be notified immediately. If a bat roosting or maternity colony

## **Biological Resources Assessment for the Cloverdale High School Stadium Improvement Project, Sonoma County, California**

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cannot be avoided, permittee and qualified biologist shall prepare a bat mitigation and monitoring plan for CDFW review and approval. If feasible, tree trimming activities shall be conducted outside of the bat maternity season to avoid potential impacts to maternity colonies. If no tree trimming is necessary, no survey is needed.

### **5.6 Impacts to Wildlife Migration Corridors**

As discussed in Section 4.7, Wildlife Corridors and Habitat Linkages, the project site is bounded by urban development and does not provide connectivity between similar habitat patches (CDFW 2019b). No substantial direct impacts to local or regional wildlife movements is expected to occur as a result of project implementation.

**Biological Resources Assessment for the Cloverdale High School  
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**ATTACHMENT A**  
*Plant and Wildlife Species  
Observed on the Project Site*





## Plant Species

### Eudicots

#### *Vascular Species*

**APIACEAE—Carrot Family**

*Foeniculum vulgare*—fennel\*

**ARALIACEAE—Ginseng Family**

*Hedera helix*—English ivy\*

**ASTERACEAE—Sunflower Family**

*Helminthotheca echinoides*—bristly oxtongue\*

**BRASSICACEAE—Mustard Family**

*Brassica nigra*—black mustard\*

**CONVOLVULACEAE—Morning-glory Family**

*Convolvulus arvensis*—field bindweed\*

**CORNACEAE—Dogwood Family**

*Cornus glabrata*—brown dogwood

**FABACEAE—Legume Family**

*Trifolium hirtum*—rose clover\*

**FAGACEAE—Oak Family**

*Quercus lobata*—valley oak

*Quercus wislizeni*—interior live oak

**JUGLANDACEAE—Walnut Family**

*Juglans hindsii*—Northern California black walnut

**MYRSINACEAE—Myrsine Family**

*Lysimachia arvensis*—scarlet pimpernel\*

**OLEACEAE—Olive Family**

*Ligustrum japonicum*—Japanese privet\*

**PLANTAGINACEAE—Plantain Family**

*Plantago lanceolata*—narrowleaf plantain\*

**POLYGONACEAE—Buckwheat Family**

*Polygonum aviculare*—prostrate knotweed\*

*Rumex crispus*—curly dock\*

*Rumex pulcher*—fiddle dock\*

**ROSACEAE—Rose Family**

*Rosa californica*—California rose

*Prunus* sp.—unknown plum

**SALICACEAE—Willow Family**

*Salix* sp. —unknown willow

Monocots

*Vascular Species*

**ARECACEAE—Palm Family**

*Phoenix canariensis*—Canary Island date palm\*

*Washingtonia robusta*—Washington fan palm\*

**CYPERACEAE—Sedge Family**

*Cyperus eragrostis*—tall flatsedge

**POACEAE—Grass Family**

*Arundo donax*—giant reed\*

*Avena barbata*—slender oat\*

*Cynodon dactylon*—Bermudagrass\*

*Festuca perennis*—perennial rye grass\*

*Paspalum dilatatum*—dallisgrass\*

Wildlife Species – Vertebrates

Amphibian

**FROGS**

**HYLIDAE—TREEFROGS**

*Pseudacris sierra*—Sierran treefrog

Bird

**NEW WORLD VULTURES**

**CATHARTIDAE—NEW WORLD VULTURES**

*Cathartes aura*—turkey vulture

**PIGEONS & DOVES**

**COLUMBIDAE—PIGEONS & DOVES**

*Streptopelia decaocto*—Eurasian collared-dove\*

**STARLINGS & ALLIES**

STURNIDAE—STARLINGS

*Sturnus vulgaris*—European starling\*

**THRUSHES**

TURDIDAE—THRUSHES

*Turdus migratorius*—American robin

\* signifies introduced (non-native) species

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**ATTACHMENT B**  
*Representative Site Photographs*



ATTACHMENT B  
REPRESENTATIVE SITE PHOTOS  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

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**Photo 1.** View of ditch 1 (indicated by red line). Facing south. June 24, 2019.



**Photo 2.** View of ditch 2 (indicated by red line). Facing northwest. June 24, 2019.



ATTACHMENT B  
REPRESENTATIVE SITE PHOTOS  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

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**Photo 3.** View of ditch 3 (indicated by red arrow). Facing northeast. June 24, 2019.



**Photo 4.** View of the drainage swale. Facing southwest. June 24, 2019.



ATTACHMENT B  
REPRESENTATIVE SITE PHOTOS  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

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**Photo 5.** View of ditch 4 (indicated by red arrow). Facing north. June 24, 2019.



**Photo 6.** View of the football field in the center of the site. Facing north. June 24, 2019.





**Photo 7.** View of the southeast corner of the site. Facing south. June 24, 2019.

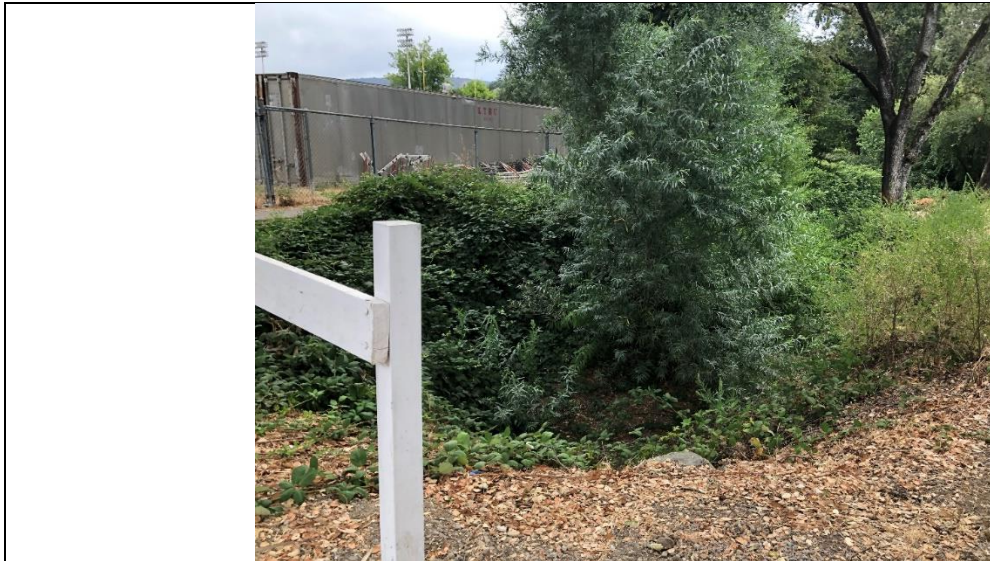


**Photo 8.** View of the field in the northern extent of the site. Facing west. June 24, 2019.



ATTACHMENT B  
REPRESENTATIVE SITE PHOTOS  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

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**Photo 9.** View of intermittent drainage. Facing northeast. August 9, 2019 (photo taken by Dudek archeologist).



**Photo 10.** View of the intermittent drainage and adjacent riparian corridor. August 9, 2019 (photo taken by Dudek archeologist).



**Photo 11.** View of culvert outfall into ditch 4 where it occurs east of the school fence line. August 9, 2019 (photo by Dudek archeologist).

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**ATTACHMENT C**  
*Wetland and OHWM*  
*Data Sheets*



# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cloverdale High School City/County: Cloverdale/Sonoma Sampling Date: 6/24/2019  
 Applicant/Owner: Cloverdale Unified School District State: CA Sampling Point: 1  
 Investigator(s): A. Sennett Section, Township, Range: see report  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): C Lat: 38.809385 Long: -123.022603 Datum: WGS84  
 Soil Map Unit Name: see report NWI classification: see report

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☒, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|  |   |  |   |
|--|---|--|---|
| Hydrophytic Vegetation Present?  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area<br>within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present?   | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  |   |
| Wetland Hydrology Present?   | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  |   |
| Remarks:<br><br>Vegetative swale-like feature in NW portion of study area. |   |  |   |

## VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: _____)  | Absolute<br>% Cover | Dominant<br>Species? | Indicator<br>Status | Dominance Test worksheet:   |   |
|--|---------------------|----------------------|---------------------|---|---|
| 1. _____   | _____               | _____                | _____               | Number of Dominant Species<br>That Are OBL, FACW, or FAC:   | <u>2</u> (A)                            |
| 2. _____   | _____               | _____                | _____               | Total Number of Dominant<br>Species Across All Strata:  | <u>2</u> (B)                            |
| 3. _____   | _____               | _____                | _____               | Percent of Dominant Species<br>That Are OBL, FACW, or FAC:  | <u>100</u> (A/B)                        |
| 4. _____   | _____               | _____                | _____               |   |   |
| _____ = Total Cover  |                     |                      |                     |   |   |
| Sapling/Shrub Stratum (Plot size: _____)                                 |                     |                      |                     | Prevalence Index worksheet:   |   |
| 1. _____   | _____               | _____                | _____               | Total % Cover of:   | Multiply by:                            |
| 2. _____   | _____               | _____                | _____               | OBL species _____   | x 1 = _____                             |
| 3. _____   | _____               | _____                | _____               | FACW species _____  | x 2 = _____                             |
| 4. _____   | _____               | _____                | _____               | FAC species _____   | x 3 = _____                             |
| 5. _____   | _____               | _____                | _____               | FACU species _____  | x 4 = _____                             |
| _____ = Total Cover  |                     |                      |                     | UPL species _____   | x 5 = _____                             |
| Herb Stratum (Plot size: <u>2 x 2 ft</u> )                               |                     |                      |                     | Column Totals:  | <u>        </u> (A) <u>        </u> (B) |
| 1. <u>Festuca perennis</u>   | <u>35</u>           | <u>Y</u>             | <u>FAC</u>          | Prevalence Index = B/A = _____  |   |
| 2. <u>Plantago lanceolata</u>  | <u>20</u>           | <u>Y</u>             | <u>FAC</u>          |   |   |
| 3. <u>Cyperus eragrostis</u>   | <u>5</u>            | <u>N</u>             | <u>FACW</u>         |   |   |
| 4. <u>Rumex pulchar</u>  | <u>2</u>            | <u>N</u>             | <u>FAC</u>          |   |   |
| 5. <u>Lotus corniculatus</u>   | <u>2</u>            | <u>N</u>             | <u>FAC</u>          |   |   |
| 6. _____   | _____               | _____                | _____               |   |   |
| 7. _____   | _____               | _____                | _____               |   |   |
| 8. _____   | _____               | _____                | _____               |   |   |
| _____ = Total Cover  |                     |                      |                     |   |   |
| Woody Vine Stratum (Plot size: _____)                                    |                     |                      |                     | Hydrophytic Vegetation Indicators:  |   |
| 1. _____   | _____               | _____                | _____               | <input checked="" type="checkbox"/> Dominance Test is >50%  |   |
| 2. _____   | _____               | _____                | _____               | <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>  |   |
|  |                     |                      |                     | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |   |
|  |                     |                      |                     | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  |   |
|  |                     |                      |                     | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.              |   |
|  |                     |                      |                     | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                         |   |
| % Bare Ground in Herb Stratum <u>36</u> % Cover of Biotic Crust <u>0</u> |                     |                      |                     |   |   |

Remarks:

Area is regularly mowed, which may influence the dominance of upland and wetland plant species.



# SOIL

Sampling Point: 1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix        |    | Redox Features |   |                   |                  | Texture   | Remarks         |
|-------------------|---------------|----|----------------|---|-------------------|------------------|-----------|-----------------|
|                   | Color (moist) | %  | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |           |                 |
| 0-6               | 7.5YR 3/2     | 95 | 5YR 5/6        | 5 | C                 | M                | clay loam | prominent redox |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: gravel  
Depth (inches): >6

**Hydric Soil Present? Yes ☒ No ☐**

Remarks:

# HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches):             
Water Table Present? Yes ☐ No ☒ Depth (inches):             
Saturation Present? Yes ☐ No ☒ Depth (inches):             
(includes capillary fringe)

**Wetland Hydrology Present? Yes ☒ No ☐**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cloverdale High School City/County: Cloverdale/Sonoma Sampling Date: 6/24/2019  
 Applicant/Owner: Cloverdale Unified School District State: CA Sampling Point: 2  
 Investigator(s): A. Sennett Section, Township, Range: see report  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR): C Lat: 38.809327 Long: -123.022628 Datum: WG584  
 Soil Map Unit Name: see report NWI classification: see report

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|   |   |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>            |   |
| Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>      |   |
| Remarks:<br>Upland adjacent to seasonal wetland swale in NW portion of study area.                  |   |

## VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: _____)  | Absolute % Cover | Dominant Species? | Indicator Status | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  |
|--|------------------|-------------------|------------------|--|
| 1. _____   | _____            | _____             | _____            |  |
| 2. _____   | _____            | _____             | _____            |  |
| 3. _____   | _____            | _____             | _____            |  |
| 4. _____   | _____            | _____             | _____            |  |
| _____ = Total Cover  |                  |                   |                  | <b>Prevalence Index worksheet:</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br>Column Totals: _____ (A) _____ (B)<br><br>Prevalence Index = B/A = _____  |
| <b>Sapling/Shrub Stratum</b> (Plot size: _____)                          |                  |                   |                  |  |
| 1. _____   | _____            | _____             | _____            |  |
| 2. _____   | _____            | _____             | _____            |  |
| 3. _____   | _____            | _____             | _____            |  |
| 4. _____   | _____            | _____             | _____            | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.<br><br><b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 5. _____   | _____            | _____             | _____            |  |
| _____ = Total Cover  |                  |                   |                  |  |
| <b>Herb Stratum</b> (Plot size: <u>2 x 2 ft</u> )                        |                  |                   |                  |  |
| 1. <u>Plantago lanceolata</u>  | <u>15</u>        | <u>Y</u>          | <u>FAC</u>       |  |
| 2. <u>Festuca perennis</u>   | <u>10</u>        | <u>Y</u>          | <u>FAC</u>       |  |
| 3. _____   | _____            | _____             | _____            |  |
| 4. _____   | _____            | _____             | _____            |  |
| 5. _____   | _____            | _____             | _____            |  |
| 6. _____   | _____            | _____             | _____            |  |
| 7. _____   | _____            | _____             | _____            |  |
| 8. _____   | _____            | _____             | _____            | <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| _____ = Total Cover  |                  |                   |                  |  |
| <b>Woody Vine Stratum</b> (Plot size: _____)                             |                  |                   |                  |  |
| 1. _____   | _____            | _____             | _____            |  |
| 2. _____   | _____            | _____             | _____            |  |
| _____ = Total Cover  |                  |                   |                  |  |
| % Bare Ground in Herb Stratum <u>75</u> % Cover of Biotic Crust <u>0</u> |                  |                   |                  |  |
| Remarks:<br>Thatch present from mowing                                   |                  |                   |                  |  |

## SOIL

Sampling Point: 2**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix        |    | Redox Features |   |                   |                  | Texture | Remarks |
|-------------------|---------------|----|----------------|---|-------------------|------------------|---------|---------|
|                   | Color (moist) | %  | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |         |         |
| 0-6               | 7.5YR 4/2     | 93 | 5YR 5/6        | 7 | C                 | M                | loam    |         |
|                   |               |    |                |   |                   |                  |         |         |
|                   |               |    |                |   |                   |                  |         |         |
|                   |               |    |                |   |                   |                  |         |         |
|                   |               |    |                |   |                   |                  |         |         |
|                   |               |    |                |   |                   |                  |         |         |
|                   |               |    |                |   |                   |                  |         |         |
|                   |               |    |                |   |                   |                  |         |         |
|                   |               |    |                |   |                   |                  |         |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) (**LRR C**)  
☐ 1 cm Muck (A9) (**LRR D**)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**Type: GravelDepth (inches): >6**Hydric Soil Present?** Yes ☒ No ☐

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1) (**Nonriverine**)  
☐ Sediment Deposits (B2) (**Nonriverine**)  
☐ Drift Deposits (B3) (**Nonriverine**)  
☐ Surface Soil Cracks (B6)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)  
☐ Biotic Crust (B12)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Oxidized Rhizospheres along Living Roots (C3)  
☐ Presence of Reduced Iron (C4)  
☐ Recent Iron Reduction in Tilled Soils (C6)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches):           Water Table Present? Yes ☐ No ☒ Depth (inches):           Saturation Present? Yes ☐ No ☒ Depth (inches):             
(includes capillary fringe)**Wetland Hydrology Present?** Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface run-off north of swale conveyed into upland ditch, which feeds into swale.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cloverdale High School City/County: Cloverdale/Sonoma Sampling Date: 6/24/2019  
 Applicant/Owner: Cloverdale Unified School District State: CA Sampling Point: 3  
 Investigator(s): A. Sennett Section, Township, Range: see report  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C Lat: 38.809553 Long: -123.022252 Datum: WG584  
 Soil Map Unit Name: see report NWI classification: see report

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☒, Soil ☐, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|   |   |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>            |   |
| Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>      |   |
| Remarks:<br>Potential floodplain wetland associated with drainage at north portion of study area.   |   |

## VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: _____)  | Absolute % Cover | Dominant Species? | Indicator Status | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)   |
|--|------------------|-------------------|------------------|--|
| 1. _____   | _____            | _____             | _____            |  |
| 2. _____   | _____            | _____             | _____            |  |
| 3. _____   | _____            | _____             | _____            |  |
| 4. _____   | _____            | _____             | _____            |  |
| _____ = Total Cover  |                  |                   |                  | <b>Prevalence Index worksheet:</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>5</u> x 2 = <u>10</u><br>FAC species <u>37</u> x 3 = <u>111</u><br>FACU species <u>15</u> x 4 = <u>60</u><br>UPL species <u>50</u> x 5 = <u>250</u><br>Column Totals: <u>107</u> (A) <u>431</u> (B)<br><br>Prevalence Index = B/A = <u>4.03</u> |
| <b>Sapling/Shrub Stratum</b> (Plot size: _____)<br>1. _____<br>2. _____<br>3. _____<br>4. _____<br>5. _____<br>_____ = Total Cover   |                  |                   |                  |  |
| <b>Herb Stratum</b> (Plot size: <u>2 x 2 ft</u> )<br>1. <u>Trifolium hirtum</u> <u>50</u> <u>Y</u> <u>NL</u><br>2. <u>Paspalum dilatatum</u> <u>35</u> <u>Y</u> <u>FAC</u><br>3. <u>Cynodon dactylon</u> <u>15</u> <u>N</u> <u>FACU</u><br>4. <u>Cyperus eragros</u> <u>5</u> <u>N</u> <u>FACW</u><br>5. <u>Lotus corniculatus</u> <u>2</u> <u>N</u> <u>FAC</u><br>6. _____<br>7. _____<br>8. _____<br>_____ = Total Cover |                  |                   |                  |  |
| <b>Woody Vine Stratum</b> (Plot size: _____)<br>1. _____<br>2. _____<br>_____ = Total Cover  |                  |                   |                  |  |
| % Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>  |                  |                   |                  |  |

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ Dominance Test is >50%  
 \_\_\_ Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☒ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks:  
Vegetation is regularly mowed, which appears to favor upland vegetation over wetland vegetation. Trifolium hirtum, which is generally adapted to mowing, has dominated the area. Conversely, Cyperus eragros is a wetland plant present that is not adapted to mowing.

# SOIL

Sampling Point: 3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix        |    | Redox Features |   |                   |                  | Texture   | Remarks         |
|-------------------|---------------|----|----------------|---|-------------------|------------------|-----------|-----------------|
|                   | Color (moist) | %  | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |           |                 |
| 0-7               | 10YR 3/1      | 96 | 7.5YR 4/6      | 4 | C                 | M                | clay loam | prominent redox |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histic Sol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: gravel  
Depth (inches): >7

**Hydric Soil Present? Yes ☒ No ☐**

Remarks:

# HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches):             
Water Table Present? Yes ☐ No ☒ Depth (inches):             
Saturation Present? Yes ☐ No ☒ Depth (inches):             
(includes capillary fringe)

**Wetland Hydrology Present? Yes ☒ No ☐**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology is influenced by a north-south drainage dug between the potential wetland and drainage immediately north.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cloverdale High School City/County: Cloverdale/Sonoma Sampling Date: 6/24/2019  
 Applicant/Owner: Cloverdale Unified School District State: CA Sampling Point: 4  
 Investigator(s): A. Sennett Section, Township, Range: see report  
 Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): none Slope (%): 0  
 Subregion (LRR): C Lat: 38.809629 Long: -123.022372 Datum: WG584  
 Soil Map Unit Name: see report NWI classification: see report

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☒, Soil ☐, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|   |   |  |   |
|---|---|--|---|
| Hydrophytic Vegetation Present?   | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area<br>within a Wetland? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Hydric Soil Present?  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  |   |
| Wetland Hydrology Present?  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  |   |
| Remarks:<br><br>Potential floodplain wetland associated with drainage at north portion of study area. |   |  |   |

## VEGETATION – Use scientific names of plants.

|  |   |
|--|---|
| <b>Tree Stratum</b> (Plot size: _____)<br>1. _____<br>2. _____<br>3. _____<br>4. _____<br>_____ = Total Cover<br><b>Sapling/Shrub Stratum</b> (Plot size: _____)<br>1. _____<br>2. _____<br>3. _____<br>4. _____<br>5. _____<br>_____ = Total Cover<br><b>Herb Stratum</b> (Plot size: <u>2 x 2 ft</u> )<br>1. <u>Trifolium hirtum</u> <u>50</u> <u>Y</u> <u>NL</u><br>2. <u>Paspalum dilatatum</u> <u>35</u> <u>Y</u> <u>FAC</u><br>3. <u>Cynodon dactylon</u> <u>15</u> <u>N</u> <u>FACU</u><br>4. <u>Cyperus eragros</u> <u>5</u> <u>N</u> <u>FACW</u><br>5. _____<br>6. _____<br>7. _____<br>8. _____<br>_____ = Total Cover<br><b>Woody Vine Stratum</b> (Plot size: _____)<br>1. _____<br>2. _____<br>_____ = Total Cover<br>% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u> | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)<br><b>Prevalence Index worksheet:</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>5</u> x 2 = <u>10</u><br>FAC species <u>35</u> x 3 = <u>105</u><br>FACU species <u>15</u> x 4 = <u>60</u><br>UPL species <u>50</u> x 5 = <u>250</u><br>Column Totals: <u>105</u> (A) <u>425</u> (B)<br>Prevalence Index = B/A = <u>4.05</u><br><b>Hydrophytic Vegetation Indicators:</b><br>___ Dominance Test is >50%<br>___ Prevalence Index is ≤3.0 <sup>1</sup><br>___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br>___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.<br><b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Remarks:  
 Vegetation is regularly mowed; however, sample site is taken on a slope where water is unlikely to collect long enough to support a dominance of wetland plants.

# SOIL

Sampling Point: 4

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix        |    | Redox Features |   |                   |                  | Texture   | Remarks         |
|-------------------|---------------|----|----------------|---|-------------------|------------------|-----------|-----------------|
|                   | Color (moist) | %  | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |           |                 |
| 0-8               | 10YR 3/1      | 97 | 7.5YR 4/6      | 3 | C                 | M                | clay loam | prominent redox |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |
|                   |               |    |                |   |                   |                  |           |                 |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: gravel  
Depth (inches): >8

**Hydric Soil Present? Yes ☒ No ☐**

Remarks:

Soil indicator may be a result of ground water seeping through hillside.

# HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches):             
Water Table Present? Yes ☐ No ☒ Depth (inches):             
Saturation Present? Yes ☐ No ☒ Depth (inches):             
(includes capillary fringe)

**Wetland Hydrology Present? Yes ☒ No ☐**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicator may be a result of ground water seeping through hillside.



Project: Cloverdale HsDate: 6/24/19Location: Cloverdale HsInvestigator(s): A. Sennett

## Project Description:

see report

Ditch - 1

transect # 1

## Describe the river or stream's condition (disturbances, in-stream structures, etc.):

unvegetated ditch adjacent to asphalt  
parking lot in northwest portion of project site.

Off-site Information

Remotely sensed image(s) acquired? ☐ Yes ☒ No [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

Hydrologic/hydraulic information acquired? ☒ Yes ☐ No [If yes, attach information to datasheet(s) and describe below.] Description:

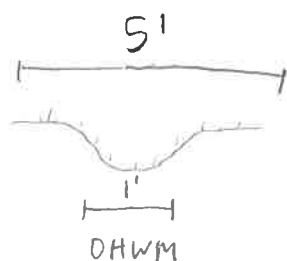
climate/rainfall data

## List and describe any other supporting information received/acquired:

NA

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

**Transect (cross-section) drawing:** (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Ditch - 1

W ← → E  
looking north

**Break in Slope at OHWM:** ☐ Sharp ( $> 60^\circ$ ) | ☐ Moderate ( $30-60^\circ$ ) | ☒ Gentle ( $< 30^\circ$ ) | ☐ None

Notes/Description:

**Sediment Texture:** Estimate percentages to describe the general sediment texture above and below the OHWM

|            | Clay/Silt<br><0.05mm | Sand<br>0.05 – 2mm | Gravel<br>2mm – 1cm | Cobbles<br>1 – 10cm | Boulders<br>>10cm | Developed Soil<br>Horizons (Y/N) |
|------------|----------------------|--------------------|---------------------|---------------------|-------------------|----------------------------------|
| Above OHWM | 100                  | 0                  | 0                   | 0                   | 0                 | Y                                |
| Below OHWM | 100                  | 0                  | 0                   | 0                   | 0                 | Y                                |

Notes/Description:

no change

**Vegetation:** Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

|            | Tree (%) | Shrub (%) | Herb (%) | Bare (%) |
|------------|----------|-----------|----------|----------|
| Above OHWM | 0        | 0         | 30       | 70       |
| Below OHWM | 0        | 0         | 30       | 70       |

Notes/Description:

no change

non-native annual grasses  
are dominant herbs present.

**Other Evidence:** List/describe any additional field evidence and/or lines of reasoning used to support your delineation

break in slope

Project: Clowerdale HS Date: 6/24/19  
Location: Clowerdale HS Investigator(s): A. Sennett

## Project Description:

See report

Ditch - 2  
transect #2

## Describe the river or stream's condition (disturbances, in-stream structures, etc.):

ditch directs run-off from irrigated football field &amp; surrounding area to ID-1 outside of project site.

Off-site Information

Remotely sensed image(s) acquired? ☐ Yes ☒ No [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

Hydrologic/hydraulic information acquired? ☒ Yes ☐ No [If yes, attach information to datasheet(s) and describe below.] Description:

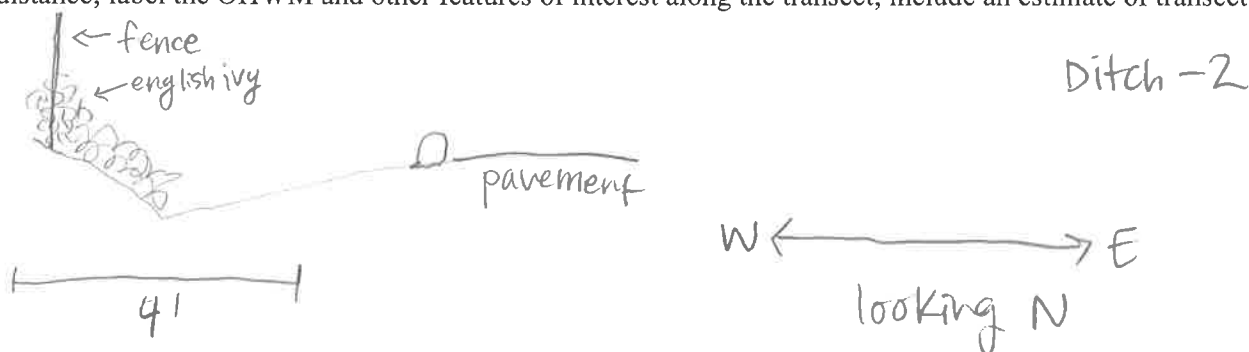
climate / rainfall data

## List and describe any other supporting information received/acquired:

NA

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

**Transect (cross-section) drawing:** (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



**Break in Slope at OHWM:** ☐ Sharp ( $> 60^\circ$ ) | ☐ Moderate ( $30-60^\circ$ ) | ☒ Gentle ( $< 30^\circ$ ) | ☐ None  
Notes/Description:

**Sediment Texture:** Estimate percentages to describe the general sediment texture above and below the OHWM

|            | Clay/Silt<br><0.05mm | Sand<br>0.05 – 2mm | Gravel<br>2mm – 1cm | Cobbles<br>1 – 10cm | Boulders<br>>10cm | Developed Soil<br>Horizons (Y/N) |
|------------|----------------------|--------------------|---------------------|---------------------|-------------------|----------------------------------|
| Above OHWM | 100                  | 0                  | 0                   | 0                   | 0                 | Y                                |
| Below OHWM | 100                  | 0                  | 0                   | 0                   | 0                 | Y                                |

Notes/Description:

no change

**Vegetation:** Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

|            | Tree (%) | Shrub (%) | Herb (%) | Bare (%) |
|------------|----------|-----------|----------|----------|
| Above OHWM | 0        | 30        | 0        | 70       |
| Below OHWM | 0        | 30        | 2        | 68       |

Notes/Description:

no change

**Other Evidence:** List/describe any additional field evidence and/or lines of reasoning used to support your delineation

break in slope

Project: Clowerdale HSDate: 6/24/19Location: Clowerdale HSInvestigator(s): A. Sennett

## Project Description:

See report

Ditch-3  
Transect #3

## Describe the river or stream's condition (disturbances, in-stream structures, etc.):

The ditch, when innundated, flows through two culverts.  
Evidence of mowing & manipulation of the ditch observed.  
Likely constructed to direct run-off, including football field  
irrigation, to ditches that flow off site

## Off-site Information

Remotely sensed image(s) acquired? ☐ Yes ☒ No [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

Hydrologic/hydraulic information acquired? ☒ Yes ☐ No [If yes, attach information to datasheet(s) and describe below.] Description:

rainfall / climate data

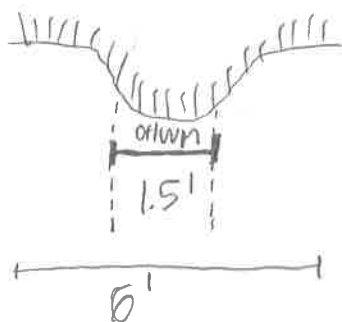
## List and describe any other supporting information received/acquired:

Discussed use of ditch w/ maintenance staff.

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

**Transect (cross-section) drawing:** (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)

Ditch - 3



N ← → S  
looking E

**Break in Slope at OHWM:** ☐ Sharp ( $> 60^\circ$ ) | ☐ Moderate ( $30-60^\circ$ ) | ☒ Gentle ( $< 30^\circ$ ) | ☐ None

Notes/Description:

**Sediment Texture:** Estimate percentages to describe the general sediment texture above and below the OHWM

|            | Clay/Silt<br><0.05mm | Sand<br>0.05 – 2mm | Gravel<br>2mm – 1cm | Cobbles<br>1 – 10cm | Boulders<br>>10cm | Developed Soil<br>Horizons (Y/N) |
|------------|----------------------|--------------------|---------------------|---------------------|-------------------|----------------------------------|
| Above OHWM | 75                   | 25                 | 0                   | 0                   | 0                 | Y                                |
| Below OHWM | 90                   | 10                 | 0                   | 0                   | 0                 | Y                                |

Notes/Description:

no major change in sediment

**Vegetation:** Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

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

Notes/Description:

→ variable along length of drainage

**Other Evidence:** List/describe any additional field evidence and/or lines of reasoning used to support your delineation

Break in slope  
vegetation bent in direction of flow  
change in vegetation cover & type

Project: Clowerdale HS Date: 6/24/19  
Location: Clowerdale HS Investigator(s): A. Sennett

**Project Description:**

See report

Ditch - 4  
transect #4

**Describe the river or stream's condition (disturbances, in-stream structures, etc.):**

The ditch flows through one culvert.  
The segment of ditch within the school property is regularly maintained (e.g. mowing & manual manipulation).

**Off-site Information**

Remotely sensed image(s) acquired? ☐ Yes ☒ No [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

Hydrologic/hydraulic information acquired? ☒ Yes ☐ No [If yes, attach information to datasheet(s) and describe below.] Description:

rainfall/climate data

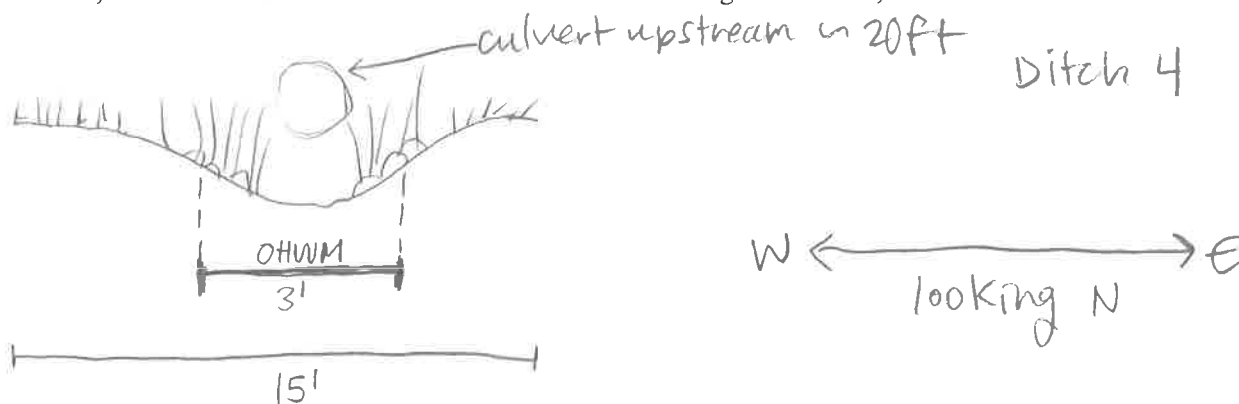
**List and describe any other supporting information received/acquired:**

Discussed use of ditch w/ maintenance staff.

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.



**Transect (cross-section) drawing:** (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



**Break in Slope at OHWM:** ☐ Sharp ( $> 60^\circ$ ) | ☐ Moderate ( $30-60^\circ$ ) | ☒ Gentle ( $< 30^\circ$ ) | ☐ None

Notes/Description:

**Sediment Texture:** Estimate percentages to describe the general sediment texture above and below the OHWM

|            | Clay/Silt<br><0.05mm | Sand<br>0.05 – 2mm | Gravel<br>2mm – 1cm | Cobbles<br>1 – 10cm | Boulders<br>>10cm | Developed Soil<br>Horizons (Y/N) |
|------------|----------------------|--------------------|---------------------|---------------------|-------------------|----------------------------------|
| Above OHWM | 75                   | 25                 | 0                   | 0                   | 5                 | Y                                |
| Below OHWM | 90                   | 10                 | 0                   | 0                   | 5                 | Y                                |

Notes/Description:

no major change in sediment

**Vegetation:** Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

|            | Tree (%) | Shrub (%) | Herb (%) | Bare (%) |
|------------|----------|-----------|----------|----------|
| Above OHWM | 20       | 0         | 25-100   | 0-75     |
| Below OHWM | 0        | 0         | 0-25     | 75-100   |

Notes/Description:

(whether rooted above/below OHWM)

→ variable along length of ditch

**Other Evidence:** List/describe any additional field evidence and/or lines of reasoning used to support your delineation

break in slope  
change in vegetation cover + community  
vegetation bent in direction of flow

Project: Clowerdale HHSDate: 10/1/19Location: Clowerdale HHSInvestigator(s): A. Sennett

## Project Description:

See report

Ditch-4  
transect #5

## Describe the river or stream's condition (disturbances, in-stream structures, etc.):

There is a pedestrian bridge above feature 3  
lots of trash/debris in bed of ditch.Off-site InformationRemotely sensed image(s) acquired? ☐ Yes ☒ No [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:Hydrologic/hydraulic information acquired? ☒ Yes ☐ No [If yes, attach information to datasheet(s) and describe below.] Description:

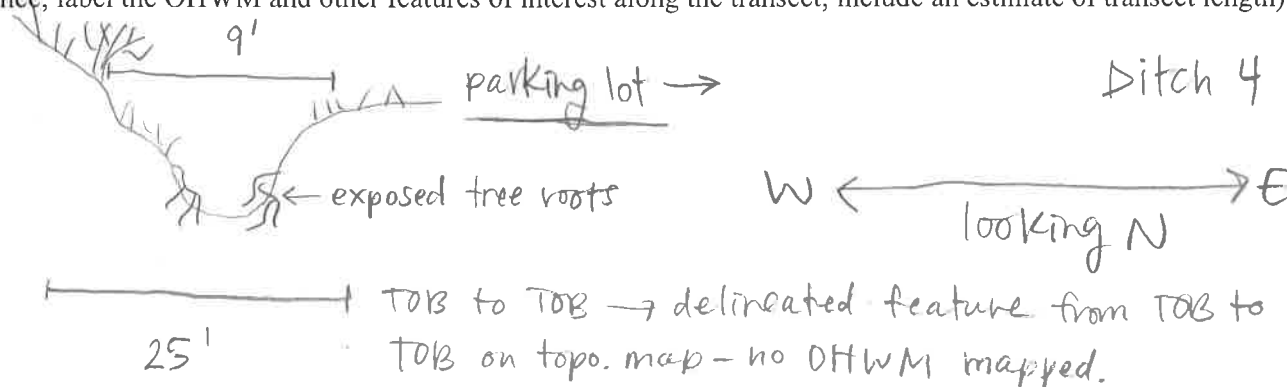
rainfall/climate data

## List and describe any other supporting information received/acquired:

photos + topography data

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

**Transect (cross-section) drawing:** (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



**Break in Slope at OHWM:** ☐ Sharp ( $> 60^\circ$ ) | ☒ Moderate ( $30-60^\circ$ ) | ☐ Gentle ( $< 30^\circ$ ) | ☐ None

Notes/Description:

**Sediment Texture:** Estimate percentages to describe the general sediment texture above and below the OHWM

|            | Clay/Silt<br><0.05mm | Sand<br>0.05 – 2mm | Gravel<br>2mm – 1cm | Cobbles<br>1 – 10cm | Boulders<br>>10cm | Developed Soil<br>Horizons (Y/N) |
|------------|----------------------|--------------------|---------------------|---------------------|-------------------|----------------------------------|
| Above OHWM | 95                   | 0                  | 5                   | 0                   | 0                 | Y                                |
| Below OHWM | 90                   | 5                  | 5                   | 5                   | 0                 | Y                                |

Notes/Description:

little change

**Vegetation:** Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

|            | Tree (%) | Shrub (%) | Herb (%) | Bare (%) |
|------------|----------|-----------|----------|----------|
| Above OHWM | 20       | 30        | 15       | 35       |
| Below OHWM | 0        | 0         | 5        | 95       |

Notes/Description:

**Other Evidence:** List/describe any additional field evidence and/or lines of reasoning used to support your delineation

change in vegetation cover  
bed + bank

Project: Clowerdale HSDate: 10/1/19Location: Clowerdale HSInvestigator(s): A. Sennett

## Project Description:

See report

ID-1

transect #6

## Describe the river or stream's condition (disturbances, in-stream structures, etc.):

See Datasheet #2

Off-site InformationRemotely sensed image(s) acquired? ☐ Yes ☒ No [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:Hydrologic/hydraulic information acquired? ☒ Yes ☐ No [If yes, attach information to datasheet(s) and describe below.] Description:

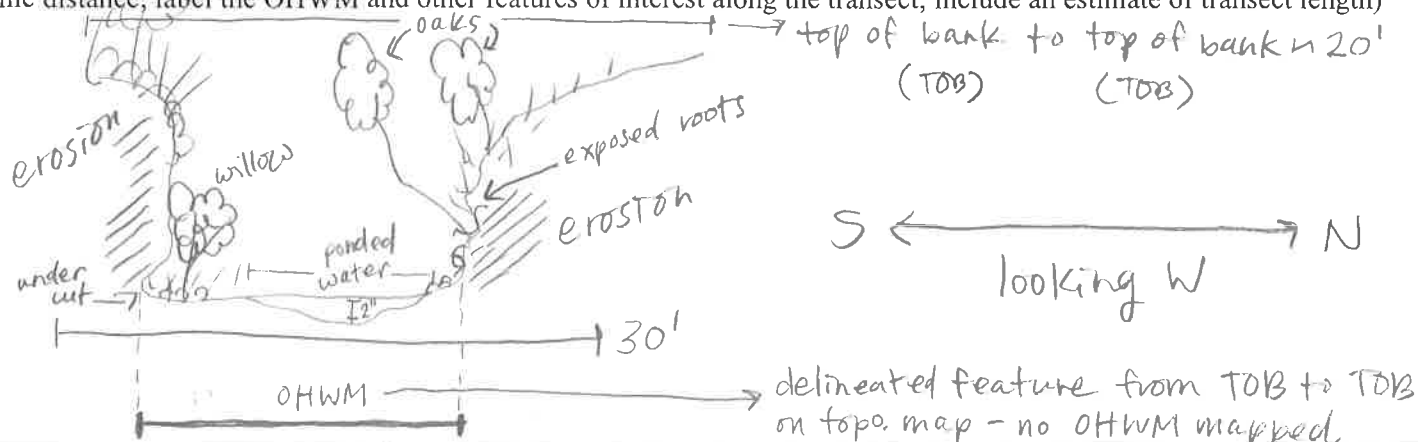
rainfall/climate data

## List and describe any other supporting information received/acquired:

used topographic surveyor data &amp; photos of feature to delineate extent (from top of bank to top of bank)

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

**Transect (cross-section) drawing:** (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



**Break in Slope at OHWM:** ☒ Sharp ( $> 60^\circ$ ) | ☐ Moderate ( $30-60^\circ$ ) | ☐ Gentle ( $< 30^\circ$ ) | ☐ None

Notes/Description:

erosion evident on both banks

**Sediment Texture:** Estimate percentages to describe the general sediment texture above and below the OHWM

|            | Clay/Silt<br><0.05mm | Sand<br>0.05 – 2mm | Gravel<br>2mm – 1cm | Cobbles<br>1 – 10cm | Boulders<br>>10cm | Developed Soil<br>Horizons (Y/N) |
|------------|----------------------|--------------------|---------------------|---------------------|-------------------|----------------------------------|
| Above OHWM | 50                   | 50                 | 0                   | 0                   | 0                 | Y                                |
| Below OHWM | 40                   | 10                 | 35                  | 15                  | 0                 | Y                                |

Notes/Description:

woody debris & trash present in drainage bed

**Vegetation:** Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

|            | Tree (%) | Shrub (%) | Herb (%) | Bare (%) |
|------------|----------|-----------|----------|----------|
| Above OHWM | 100      | 25        | 10       | 0        |
| Below OHWM | 100      | 20        | 2        | 0        |

Notes/Description:

**Other Evidence:** List/describe any additional field evidence and/or lines of reasoning used to support your delineation

bed + bank  
change in vegetation cover  
sediment sorting

# **ATTACHMENT D**

*Special-Status Plants with Potential to Occur*





ATTACHMENT D  
SPECIAL-STATUS PLANTS POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

| Scientific Name  | Common Name              | Status (Federal/State/CRPR) <sup>1</sup> | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) <sup>2</sup>  | Potential to Occur <sup>2</sup>   |
|--|--------------------------|--|--|---|
| <i>Allium peninsulare</i> var. <i>franciscanum</i>       | Franciscan onion         | None/None/1B.2                           | Cismontane woodland, Valley and foothill grassland; clay, volcanic, often serpentinite/perennial bulbiferous herb/(Apr)May–June/170–1000                     | <b>Not expected to occur.</b> No suitable soils present. The nearest documented occurrence is for plants growing in serpentine barrens in chaparral habitat, approximately 4.6 miles north-northwest of the project site (CDFW 2019b).                  |
| <i>Amsinckia lunaris</i>                                 | bent-flowered fiddleneck | None/None/1B.2                           | Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland; gravelly slopes, openings in woodland, often serpentine/annual herb/Mar–June/5–1640 | <b>Not expected to occur.</b> No suitable substrate present. The nearest documented occurrence, from 1952, for plants growing in shallow rocky soils, approximately 9.8 miles northeast of the project site (CDFW 2019b).                               |
| <i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i>       | The Cedars manzanita     | None/SR/1B.2                             | Closed-cone coniferous forest, Chaparral; serpentinite seeps/perennial evergreen shrub/Feb, Apr, May/605–2495  | <b>Not expected to occur.</b> The site is outside of the species' known elevation range and there is no suitable habitat present. The nearest documented occurrence, from 1983, is approximately 12.4 miles southwest of the project site (CDFW 2019b). |
| <i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>      | Konocti manzanita        | None/None/1B.3                           | Chaparral, Cismontane woodland, Lower montane coniferous forest; volcanic/perennial evergreen shrub/(Jan)Mar–May(July)/1295–5300                             | <b>Not expected to occur.</b> The site is outside of the species' known elevation range and there is no suitable habitat present. The nearest documented occurrence, from 1975, is approximately 9.6 miles northeast of the project site (CCH 2019).    |
| <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> | Rincon Ridge manzanita   | None/None/1B.1                           | Chaparral (rhyolitic), Cismontane woodland/perennial evergreen shrub/Feb–Apr(May)/245–1215   | <b>Not expected to occur.</b> There is no suitable habitat present. The nearest documented occurrence, from 1985, is approximately 7.5 miles south of the project site (CCH 2019).  |
| <i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>   | Raiche's manzanita       | None/None/1B.1                           | Chaparral, Lower montane coniferous forest (openings); rocky, often serpentinite/perennial evergreen shrub/Feb–Apr/1475–3395                                 | <b>Not expected to occur.</b> The site is outside of the species' known elevation range and there are no suitable habitat present. The nearest documented   |

ATTACHMENT D  
SPECIAL-STATUS PLANTS POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

|                              |                            |                |  |  |
|------------------------------|----------------------------|----------------|--|--|
|                              |                            |                |  | occurrence, from 2013, is approximately 20.9 miles south-southwest of the project site (CDFW 2019b).   |
| <i>Brodiaea leptandra</i>    | narrow-anthered brodiaea   | None/None/1B.2 | Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; volcanic/perennial bulbiferous herb/May–July/360–3000                   | <b>Not expected to occur.</b> Grassy areas onsite provide poor habitat due to a lack of suitable soils and regular human disturbance. The nearest documented occurrence, from 1993, is approximately 10.8 miles south-southeast of the project site (CDFW 2019b).  |
| <i>Calochortus raichei</i>   | The Cedars fairy-lantern   | None/None/1B.2 | Closed-cone coniferous forest, Chaparral; serpentinite/perennial bulbiferous herb/May–Aug/655–1610   | <b>Not expected to occur.</b> The site is outside of the species' known elevation range and there is no habitat present. The nearest documented occurrence, from 2010, is approximately 13 miles southwest of the project site (CDFW 2019b).   |
| <i>Calycadenia micrantha</i> | small-flowered calycadenia | 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/15–4920              | <b>Low potential to occur.</b> The site provides marginal habitat due to regular human disturbance onsite. This species is not known to occur in Sonoma County (CNPS 2019). The nearest documented occurrence, based on a 1994 collection, is approximately 26.3 miles southwest of the project site (CDFW 2019b). |
| <i>Campanula californica</i> | swamp harebell             | None/None/1B.2 | Bogs and fens, Closed-cone coniferous forest, Coastal prairie, Meadows and seeps, Marshes and swamps (freshwater), North Coast coniferous forest; mesic/perennial rhizomatous herb/June–Oct/0–1330 | <b>Low potential to occur.</b> There are no bogs, marshes or swamps present. Mesic areas of the project site are frequently disturbed and therefore provide poor quality habitat. The nearest documented occurrence, from 2012, is approximately 19.9 miles southwest of the project site (CCH 2019).              |
| <i>Carex comosa</i>          | bristly sedge              | None/None/2B.1 | Coastal prairie, Marshes and swamps (lake margins), Valley and foothill grassland/perennial rhizomatous herb/May–Sep/0–2050  | <b>Low potential to occur.</b> Grassy areas onsite provide poor habitat due to regular mowing and other human disturbances. The nearest documented   |

ATTACHMENT D  
SPECIAL-STATUS PLANTS POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

|   |                        |                |   |   |
|---|------------------------|----------------|---|---|
|   |                        |                |   | occurrence, from July 2019, is approximately 9.5 miles north of the project site (CDFW 2019b).  |
| <i>Ceanothus confusus</i>                         | Rincon Ridge ceanothus | None/None/1B.1 | Closed-cone coniferous forest, Chaparral, Cismontane woodland; volcanic or serpentinite/perennial evergreen shrub/Feb–June/245–3495 | <b>Not expected to occur.</b> There are no serpentine or volcanic soils present. The nearest documented observation, from 1985, is approximately 2.4 miles southwest of the project site (CDFW 2019b).  |
| <i>Cordylanthus tenuis</i> ssp. <i>capillaris</i> | Pennell's bird's-beak  | FE/SR/1B.2     | Closed-cone coniferous forest, Chaparral; serpentinite/annual herb (hemiparasitic)/June–Sep/145–1000                                | <b>Not expected to occur.</b> There is no habitat present. The nearest documented occurrence is approximately 20.5 miles south-southeast of the project site (CDFW 2019b).  |
| <i>Cryptantha dissita</i>                         | serpentine cryptantha  | None/None/1B.2 | Chaparral (serpentinite)/annual herb/Apr–June/1295–1905   | <b>Not expected to occur.</b> The site is outside of the species' known elevation range, and there is no habitat present. The nearest documented occurrence, from 2019, is approximately 2.2 miles east of the project site (CCH 2019).   |
| <i>Entosthodon kochii</i>                         | Koch's cord moss       | None/None/1B.3 | Cismontane woodland (soil)/moss/N.A./590–3280   | <b>Not expected to occur.</b> The site is outside of the species' known elevation range, and there is no habitat present. The species is not known to occur in Sonoma County (CNPS 2019). The nearest documented occurrence is approximately 55 miles south-southeast of the project site (CCH 2019). |
| <i>Eriogonum cedrorum</i>                         | The Cedars buckwheat   | None/None/1B.3 | Closed-cone coniferous forest; serpentinite/perennial herb/June–Sep/1195–1805   | <b>Not expected to occur.</b> The site is outside of the species' known elevation range, and there is no habitat present. The nearest documented occurrence, from 2008, is approximately 14.8 miles southwest of the project site (CCH 2019).   |

ATTACHMENT D  
SPECIAL-STATUS PLANTS POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

|  |                                    |                |  |  |
|--|------------------------------------|----------------|--|--|
| <i>Harmonia guggolziorum</i>                   | Guggolz' harmonia                  | None/None/1B.1 | Chaparral (open areas, serpentinite)/annual herb/Apr–May/520–640   | <b>Not expected to occur.</b> The site is outside of the species' known elevation range, and there is no habitat present. The species is not known to occur in Sonoma County (CNPS 2019). The nearest documented occurrence is approximately 13.5 miles southwest of the project site (CDFW 2019b).  |
| <i>Hemizonia congesta</i> ssp. <i>congesta</i> | congested-headed hayfield tarplant | None/None/1B.2 | Valley and foothill grassland; sometimes roadsides/annual herb/Apr–Nov/65–1835   | <b>Low potential to occur.</b> The project site provides poor quality habitat due to regular human disturbance onsite. The nearest documented occurrence is approximately 1.9 miles north-northeast of the project site (CCH 2019).  |
| <i>Hesperolinon adenophyllum</i>               | glandular western flax             | None/None/1B.2 | Chaparral, Cismontane woodland, Valley and foothill grassland; usually serpentinite/annual herb/May–Aug/490–4315   | <b>Not expected to occur.</b> The site is outside of the species' known elevation range. No serpentine soils are present, and the grassy areas onsite provide poor habitat due to regular mowing and other human disturbances. The species is not known to occur in Sonoma County (CNPS 2019). The nearest documented occurrence, from 1986, is approximately 8.3 miles northeast the project site (CDFW 2019b). |
| <i>Horkelia bolanderi</i>                      | Bolander's horkelia                | 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/1475–3610 | <b>Not expected to occur.</b> The site is outside of the species' known elevation range, and the species is not known to occur in Sonoma County (CNPS 2019). The nearest documented occurrence, based on a 1950 collection, is approximately 9.6 miles northeast of the project site (CDFW 2019b).   |
| <i>Horkelia tenuiloba</i>                      | thin-lobed horkelia                | None/None/1B.2 | Broadleafed upland forest, Chaparral, Valley and foothill grassland; mesic openings, sandy/perennial herb/May–July(Aug)/160–1640                               | <b>Low potential to occur.</b> There are no sandy openings present. Grassy areas onsite provide poor habitat due to regular mowing and other human disturbances. The nearest documented  |

ATTACHMENT D  
SPECIAL-STATUS PLANTS POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

|                              |                            |                |   |   |
|------------------------------|----------------------------|----------------|---|---|
|                              |                            |                |   | occurrence, from July 2019, is approximately 9 miles southeast of the project site (CCH 2019).  |
| <i>Kopsiopsis hookeri</i>    | small groundcone           | None/None/2B.3 | North Coast coniferous forest/perennial rhizomatous herb (parasitic)/Apr–Aug/295–2905   | <b>Not expected to occur.</b> The site is outside the elevation range, and there is no coniferous forest habitat present. The nearest documented occurrence, from 2019, is for plants growing in Austin Creek State Recreational Area, approximately 15.5 miles south of the project site (CCH 2019). |
| <i>Layia septentrionalis</i> | Colusa layia               | None/None/1B.2 | Chaparral, Cismontane woodland, Valley and foothill grassland; sandy, serpentinite/annual herb/Apr–May/325–3595                                       | <b>Not expected to occur.</b> There are no suitable soils present. The nearest documented occurrence, based on a 1949 collection near the Russian River, is approximately 0.9 miles north of the project site (CDFW 2019b).   |
| <i>Leptosiphon jepsonii</i>  | Jepson's leptosiphon       | None/None/1B.2 | Chaparral, Cismontane woodland, Valley and foothill grassland; usually volcanic/annual herb/Mar–May/325–1640  | <b>Low potential to occur.</b> Grassy areas on site provide poor habitat due to regular mowing and other human disturbances. The nearest documented occurrence, from 2004, is approximately 12.8 miles southeast of the project site (CDFW 2019b).  |
| <i>Lupinus sericatus</i>     | Cobb Mountain lupine       | None/None/1B.2 | Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest/perennial herb/Mar–June/900–5005                           | <b>Not expected to occur.</b> The site is outside of the species' known elevation range and there is no habitat present. The nearest documented occurrence, from 2010, is for plants growing in coniferous forest openings approximately 8.1 miles west-southwest of the project site (CDFW 2019b).   |
| <i>Piperia candida</i>       | white-flowered rein orchid | None/None/1B.2 | Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest; sometimes serpentinite/perennial herb/(Mar)May–Sep/95–4300 | <b>Not expected to occur.</b> There is no suitable habitat present. The nearest documented occurrence, from July  |



ATTACHMENT D  
SPECIAL-STATUS PLANTS POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

|   |                               |                |   |  |
|---|-------------------------------|----------------|---|--|
|   |                               |                |   | 2019, is approximately 9 miles east of the project site (CCH 2019).  |
| <i>Streptanthus glandulosus</i> ssp. <i>hoffmanii</i> | Hoffman's bristly jewelflower | None/None/1B.3 | Chaparral, Cismontane woodland, Valley and foothill grassland (often serpentinite); rocky/annual herb/Mar–July/390–1560                   | <b>Not expected to occur.</b> The site is outside of the known elevation range, and there are no suitable soils present. The nearest documented occurrence, based on a 1978 collection, is approximately 6.5 miles northwest of the project site (CCH 2019).   |
| <i>Streptanthus morrisonii</i> ssp. <i>morrisonii</i> | Morrison's jewelflower        | None/None/1B.2 | Chaparral (serpentinite, rocky, talus)/perennial herb/May, Aug, Sep/390–1920  | <b>Not expected to occur.</b> The site is outside of the known elevation range, and no habitat is present. The nearest documented occurrence, from 1981, is for plants growing on a serpentine knoll, approximately 8.8 miles east of the project site (CCH 2019).   |
| <i>Tracyina rostrata</i>                              | beaked tracyina               | None/None/1B.2 | Chaparral, Cismontane woodland, Valley and foothill grassland/annual herb/May–June/295–2590   | <b>Low potential to occur.</b> Grassy areas onsite provide poor quality habitat due to regular human disturbance. The nearest documented occurrence, from 1998, is approximately 7.7 miles west of the project site (CDFW 2019b).  |
| <i>Trichostema ruygtii</i>                            | Napa bluecurls                | None/None/1B.2 | Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland, Vernal pools/annual herb/June–Oct/95–2230 | <b>Low potential to occur.</b> Grassy areas onsite provide poor quality habitat due to regular human disturbance. This species is not known to occur in Sonoma County (CNPS 2019). The nearest documented occurrence, from 2006, is approximately 12.8 miles northeast of the project site; the occurrence is presumed extirpated from development (CDFW 2019b). |
| <i>Trifolium buckwestiorum</i>                        | Santa Cruz clover             | None/None/1B.1 | Broadleafed upland forest, Cismontane woodland, Coastal prairie; gravelly, margins/annual herb/Apr–Oct/340–2000                           | <b>Not expected to occur.</b> There is no habitat present. The nearest documented occurrence, from 2013, is  |

ATTACHMENT D  
SPECIAL-STATUS PLANTS POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

|                            |                      |                |   |  |
|----------------------------|----------------------|----------------|---|--|
|                            |                      |                |   | approximately 12.6 miles east-northeast of the project site (CDFW 2019).   |
| <i>Viburnum ellipticum</i> | oval-leaved viburnum | None/None/2B.3 | Chaparral, Cismontane woodland, Lower montane coniferous forest/perennial deciduous shrub/May-June/705-4595 | <b>Not expected to occur.</b> The site is outside of the species' known elevation range and there is no habitat present. The nearest documented occurrence, from 1953, is approximately 13.3 miles southeast of the project site (CCH 2019). |

**Notes:**

<sup>1</sup> **Status Legend:**

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

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

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

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

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

<sup>2</sup> **Sources:**

CCH (Consortium of California Herbaria). Last Updated November 2018. Database. Assessed June 2019. <http://ucjeps.berkeley.edu/consortium/>

CDFW. 2019a. Natural Diversity Database. Special Animals List (November 2018), Endangered and Threatened Animals List (April 2019), and Special Vascular Plants, Bryophytes and Lichens List (March 2019). Periodic publications. Accessed June 2019. <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

CDFW. 2019b. RareFind 5. California Natural Diversity Database. CDFW, Biogeographic Data Branch. Accessed June 2019.

<https://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>.

CNPS (California Native Plant Society), Rare Plant Program. 2019. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> (accessed June 2019).

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# **ATTACHMENT E**

*Special-Status Wildlife with Potential to Occur*



ATTACHMENT E  
SPECIAL-STATUS WILDLIFE POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

| Row Labels                 | Common Name                  | Status<br>(Federal/State) <sup>1</sup> | Habitat  | Potential to Occur <sup>2</sup>   |
|----------------------------|------------------------------|--|--|---|
| <i>Crustaceans</i>         |                              |  |  |   |
| <i>Syncaris paci</i>       | California freshwater shrimp | FE/SE                                  | Known to occur in low elevation, low-gradient, perennial, freshwater streams in Marin, Napa, and Sonoma counties. Winter habitat includes shallow margins of stream pools with undercut banks and aquatic refugia. Often associated with submerged leafy branches during the summer.       | <b>Not expected to occur.</b><br>There are no perennial streams or suitable upland habitat present. The CDFW (2019b) does not track occurrences for this species. There are six occurrences documented on a citizen science database, approximately 50-55 miles south-southeast of the project site (iNaturalist 2019). |
| <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. | <b>Not expected to occur.</b><br>There are no wet coastal forest or chaparral habitats present. The nearest documented occurrence, from 1988, is approximately 1.5 miles east of the project site (CDFW 2019b).   |
| <i>Rana boylei</i>         | foothill yellow-legged frog  | None/SSC, PST                          | Rocky streams and rivers with open banks in forest, chaparral, and woodland  | <b>Not expected to occur.</b><br>There is no suitable aquatic habitat present. The nearest documented occurrence is approximately 1.9 miles west-southwest of the project site (CDFW 2019b).  |
| <i>Rana draytonii</i>      | California red-legged frog   | FT/SSC                                 | Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands  | <b>Not expected to occur.</b><br>There is no suitable aquatic habitat present. The nearest documented occurrence is approximately 20.7 miles west of the project site. There are no known populations within dispersal  |

ATTACHMENT E  
SPECIAL-STATUS WILDLIFE POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

|   |                      |             |  |   |
|---|----------------------|-------------|--|---|
|   |                      |             |  | distance ( $\pm 1.5$ miles) of the project site (CDFW 2019b).   |
| <i>Taricha rivularis</i>                  | red-bellied newt     | None/SSC    | Forest habitats (primarily redwood) along coastal drainages from Humboldt Co. south to Sonoma Co., inland to Lake Co. Lives in terrestrial habitats, either underground or at surface in moist environments. Typically breed in streams with moderate flow and clean rocky substrate | <b>Not expected to occur.</b><br>There is no suitable forest or aquatic habitats present. The nearest documented occurrence is approximately 2.4 miles east of the project site (CDFW 2019b).   |
| <i>Reptiles</i>                           |                      |             |  |   |
| <i>Actinemys marmorata</i>                | western 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   | <b>Low potential to occur.</b><br>Aquatic habitat onsite lacks suitable basking and refugia options preferred by this species. The nearest documented occurrence is along the Russian River, approximately 0.7 miles east of the project site (CDFW 2019b). |
| <i>Chelonia mydas</i>                     | green sea turtle     | FT/None     | Shallow waters of lagoons, bays, estuaries, mangroves, eelgrass, and seaweed beds  | <b>Not expected to occur.</b> This species is limited to marine habitats, and the project site is approximately 30 miles inland from the coast.   |
| <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   | <b>Not expected to occur.</b><br>There is no suitable nesting habitat present. The nearest documented occurrence is approximately 8.6 miles north-northwest of the project site (CDFW 2019b).   |
| <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  | <b>Low potential to occur.</b><br>Potential nesting habitat onsite is poor quality due to a lack of perching habitat. The nearest documented  |



ATTACHMENT E  
SPECIAL-STATUS WILDLIFE POTENTIAL TO OCCUR  
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|---|--|------------|--|---|
|   |  |            |  | occurrence is approximately 12.5 miles north of the project site (CDFW 2019b).  |
| <i>Brachyramphus marmoratus</i> (nesting) | marbled murrelet                           | FT/SE      | Nests in old-growth coastal forests, forages in subtidal and pelagic habitats  | <b>Not expected to occur.</b> The site is outside of the species' known geological range and there is no suitable habitat present. The nearest documented occurrence is approximately 20 miles east-southeast of the project site (CDFW 2019b). |
| <i>Strix occidentalis caurina</i>         | northern spotted owl                       | FT/SSC, ST | Nests and forages in dense, old-growth, multi-layered mixed-conifer, redwood, and Douglas-fir habitats   | <b>Not expected to occur.</b> There is no old-growth forest present. The nearest documented occurrence is approximately 8.7 miles southwest of the project site (CDFW 2019b).   |
| <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   | <b>Not expected to occur.</b> This species is only known to occur in the vicinity of Clear Lake, approximately 18 miles northeast of the project site.  |
| <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. | <b>Not expected to occur.</b> There is no suitable aquatic habitat present. The nearest documented occurrence is approximately 6.3 miles south of the project site (CDFW 2019b).  |

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SPECIAL-STATUS WILDLIFE POTENTIAL TO OCCUR  
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| <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  | <b>Not expected to occur.</b><br>There is no suitable aquatic habitat present. The nearest documented occurrence is approximately 7.9 miles east of the project site (CDFW 2019b).  |
| <b>Mammals</b>                            |  |          |   |   |
| <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. Extremely sensitive to disturbance of roosting sites                        | <b>Low potential to occur.</b><br>Trees along the perimeter of the site provide poor quality habitat due to regular human disturbance. The nearest documented occurrence is for a 1976 specimen collected from an old barn, approximately 2.7 miles southeast of the project site (CDFW 2019b).   |
| <i>Arborimus pomo</i>                     | Sonoma tree vole                         | None/SSC | Old-growth and other forests including Douglas-fir, redwood, and montane hardwood-conifer forests   | <b>Not expected to occur.</b><br>There are no forest habitats present. The nearest documented occurrence is approximately 8.9 miles southwest of the project site (CDFW 2019b).   |
| <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. Extremely sensitive to disturbance of roosting sites | <b>Low potential to occur.</b><br>Structures in the vicinity of the site provide poor quality habitat due to regular human disturbance. There is one occurrence that intersects the project site; however, this occurrence lacks a date and locational details, and is mapped to be in the general vicinity of Cloverdale (CDFW 2019b). |

ATTACHMENT E  
SPECIAL-STATUS WILDLIFE POTENTIAL TO OCCUR  
CLOVERDALE HIGH SCHOOL FIELD IMPROVEMENT PROJECT

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|                                  |                 |          |  |   |
|----------------------------------|-----------------|----------|--|---|
| <i>Lasiurus<br/>blossevillii</i> | western red bat | None/SSC | Forest, woodland, riparian, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging | <b>Not expected to occur.</b><br>There are no natural forests, woodlands, or orchards containing appropriate microfeatures and/or foraging habitat present. The nearest documented occurrence is from a winery, approximately 2 miles southeast of the project site (CDFW 2019b). |
|----------------------------------|-----------------|----------|--|---|

<sup>1</sup> **Status Abbreviations**

FE: Federally Endangered

FT: Federally Threatened

BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern

SSC: California Species of Special Concern

SE: State Endangered

ST: State Threatened

PST: Proposed State Threatened

<sup>2</sup> **Sources**

CDFW (California Department of Fish and Wildlife). 2019. California Natural Diversity Database (CNDDB). RareFind, Version 5. (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>.

iNaturalist. Observations of California Freshwater Shrimp (*Syncares pacifica*) in California. Accessed July 2019. <https://www.inaturalist.org/observations>

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**ATTACHMENT F**  
*Aquatic Resources Spreadsheet*



| Waters_Name | State      | Cowardin_Code | Meas_Type | Amount     | Units | Waters_Type | Latitude    | Longitude    | Local_Waterway |
|-------------|------------|---------------|-----------|------------|-------|-------------|-------------|--------------|----------------|
| RD-1        | CALIFORNIA | U             | Linear    | 58.4152056 | FOOT  | UPLAND      | 38.93410532 | -121.0562306 | Rock Creek     |
| RD-2        | CALIFORNIA | U             | Linear    | 30.3663937 | FOOT  | UPLAND      | 38.93398422 | -121.0567933 | Rock Creek     |
| ED-1        | CALIFORNIA | R6            | Linear    | 125.095007 | FOOT  | NRPW        | 38.93432565 | -121.0572858 | Rock Creek     |
| ED-2        | CALIFORNIA | R6            | Linear    | 43.9365696 | FOOT  | NRPW        | 38.93394732 | -121.0571895 | Rock Creek     |
| PD-1        | CALIFORNIA | R5            | Area      | 0.13865918 | ACRE  | RPW         | 38.93371426 | -121.0572866 | Rock Creek     |
| FEW-1       | CALIFORNIA | PEM           | Area      | 0.01785645 | ACRE  | NRPWW       | 38.93389132 | -121.0566127 | Rock Creek     |
| SW-1        | CALIFORNIA | PEM           | Area      | 0.01125475 | ACRE  | RPWWN       | 38.93405537 | -121.0569157 | Rock Creek     |
| SWS-1       | CALIFORNIA | PEM           | Area      | 0.0004859  | ACRE  | RPWWN       | 38.93402542 | -121.0569677 | Rock Creek     |
| RW-1        | CALIFORNIA | RP1EM         | Area      | 0.01257992 | ACRE  | NRPWW       | 38.93378552 | -121.0572853 | Rock Creek     |