Appendix E Aquatic Resources Delineation Report: Yucaipa Valley Wine Country Specific Plan

Appendices

This page intentionally left blank.

Aquatic Resources Delineation Report

Yucaipa Valley Wine Country Specific Plan

FEBRUARY 2023

Prepared for:

CITY OF YUCAIPA
34272 Yucaipa Boulevard
Yucaipa, California 92399
Contact: Benjamin Matlock

Prepared by:

DUDEK

605 Third Street
Encinitas, California 92024
Contact: Anna Cassady

Anna Cassady
Biologist

Megan Enright
Senior Biologist

Printed on 30% post-consumer recycled material.

Table of Contents

SECTION **PAGE NO.**

TABLES

FIGURES

APPENDICES

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APT	Antecedent Precipitation Tool
ARC	antecedent runoff condition
CDFW	California Department of Fish and Wildlife
NWI	National Wetlands Inventory
NWW	non-wetland water
OHWM	ordinary high-water mark
PDSI	Palmer Drought Severity Index
Project	Yucaipa Valley Wine Country Specific Plan
RIP	riparian
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers

INTENTIONALLY LEFT BLANK

1 Introduction

This Aquatic Resources Delineation Report was prepared in accordance with the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This report and supporting appendices provide the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. This report presents the results of the jurisdictional aquatic resource delineation conducted by Dudek for the proposed Yucaipa Valley Wine Country Specific Plan (Project) located in the City of Yucaipa, San Bernardino County, California. The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the state potentially subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, and stream and riparian habitats potentially subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code (collectively defined as jurisdictional aquatic resources).

1.1 Disclaimer Statement

This report presents Dudek's best effort to quantify the extent of aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified review area using the current regulations, written policies, and guidance from these regulatory agencies. The potential jurisdictional boundaries described in this report are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, and/or CDFW regulation. A request for USACE Jurisdictional Determination is provided in Appendix A.[1]

1.2 Contact Information

Contact information for the Project applicant and agent are provided in Table 1.[2] Access to the review area is not restricted, but if a site visit is requested, the Project applicant or agent will accompany regulatory staff to the review area.[3] The City of Yucaipa is the Project applicant and landowner.

Table 1. Contact Information

Project Applicant	City of Yucaipa	**Agent**	Dudek
Contact Name	Benjamin Matlock	**Contact Name**	Anna Cassady
Address	34272 Yucaipa Boulevard Yucaipa, CA 92399	**Address**	605 Third Street Encinitas, California 92024
Phone	909-797-2489 Ext. 261	**Phone**	951-300-1088
Email	bmatlock@yucaipa.org	**Email**	acassady@dudek.com

1 Minimum Standards Item 1 (Request for Jurisdictional Determination)
2 Minimum Standards Item 2 (Contact Information)
3 Minimum Standards Item 3 (Site Access Statement)

INTENTIONALLY LEFT BLANK

2 Review Area Description and Landscape Setting[4]

The approximately 1,194.76-acre review area for the proposed Project is located within the City of Yucaipa in San Bernadino County. The review area consists of 185 property parcels and a 100-foot survey buffer (Table 2) (Figure 1, Vicinity Map).[5] The approximate center of the Project is at latitude 34.054792, longitude −117.018353. Directions to the review area are as follows: from the intersection of Interstates 10 and 215 in San Bernadino, drive east on Interstate 10 for approximately 11 miles before taking exit 85 towards Oak Glen Road. Drive northeast on Oak Glen Road for 6 miles before arriving at the review area's southern boundary. [6] The northern edge of the review area is 1.75 miles away, near the intersection of Jefferson Street and Liana Street.

Topography in the review area is variable, characterized mainly by flat to gently sloping mesas that are broken up by steep canyons and slopes which contain aquatic features. Generally, the ground elevation increases from south to north within the review area, ranging from 3,225 above mean sea level near Oak Glen Road, to 3,355 feet above mean sea level near Jefferson Street. The review area is mapped on Sections 29 and 30 of Township 1 South, Range 1 West, within the Yucaipa 7.5-minute U.S. Geological Survey topographic quadrangle map.

4 Minimum Standards Item 10 (Description of Existing Field Conditions)
5 Minimum Standard Item 14 (Site Location Map)
6 Minimum Standards Item 4 (Directions)

Table 2. List of Assessor's Parcel Numbers within the Review Area

Accessor's Parcel Numbers within the Wine Country Review Area							
032-019-127	032-023-122	032-025-119	032-025-156	032-103-150	032-108-120	032-119-401	032-144-116
032-019-136	032-023-123	032-025-120	032-025-157	032-103-151	032-108-121	032-124-105	032-148-117
032-019-137	032-023-124	032-025-121	032-025-158	032-103-152	032-108-122	032-124-107	032-148-124
032-019-158	032-023-125	032-025-123	032-026-102	032-103-153	032-108-123	032-124-108	032-148-125
032-021-101	032-023-126	032-025-124	032-102-129	032-104-105	032-108-214	032-124-109	032-148-129
032-021-164	032-023-127	032-025-125	032-103-102	032-104-107	032-109-101	032-124-110	032-148-130
032-021-165	032-023-128	032-025-129	032-103-107	032-104-108	032-109-103	032-124-117	032-148-131
032-021-169	032-023-140	032-025-130	032-103-108	032-104-109	032-109-104	032-124-118	032-148-132
032-021-170	032-024-102	032-025-131	032-103-111	032-104-110	032-109-105	032-124-119	032-149-105
032-021-171	032-024-103	032-025-132	032-103-112	032-104-111	032-109-106	032-124-120	032-149-106
032-021-175	032-024-104	032-025-133	032-103-114	032-104-112	032-110-101	032-124-121	032-149-111
032-021-185	032-024-108	032-025-134	032-103-115	032-104-113	032-110-102	032-124-122	032-149-112
032-022-101	032-024-109	032-025-135	032-103-116	032-104-114	032-110-112	032-135-109	032-149-113
032-023-101	032-024-110	032-025-136	032-103-118	032-104-115	032-110-122	032-135-110	032-149-114
032-023-102	032-024-111	032-025-137	032-103-120	032-107-111	032-110-125	032-135-119	032-149-115
032-023-103	032-024-112	032-025-138	032-103-121	032-107-132	032-110-126	032-139-101	032-149-116
032-023-109	032-024-113	032-025-139	032-103-124	032-108-102	032-111-103	032-139-120	032-149-117
032-023-110	032-024-117	032-025-143	032-103-126	032-108-103	032-112-109	032-141-109	032-150-105
032-023-111	032-024-118	032-025-145	032-103-128	032-108-104	032-112-144	032-141-111	032-150-106
032-023-112	032-024-119	032-025-146	032-103-130	032-108-113	032-118-122	032-141-112	032-150-117
032-023-113	032-025-106	032-025-151	032-103-139	032-108-114	032-118-128	032-143-119	032-144-116
032-023-114	032-025-108	032-025-152	032-103-144	032-108-115	032-119-226	032-143-128	032-148-117
032-023-121	032-025-112	032-025-153	032-103-149	032-108-119	032-119-234	032-143-129	032-148-124

2.1 Soils[7]

Soil types within the review area are shown in Table 3 and on Figure 2, Soils Map. Hydric soils are indicated by shading (USDA 2022a, 2022b).

Table 3. Soils within the Review Area

Mapping Unit Symbol	Soil Name	Hydric Rating	Acreage
Cr	Cienaba-Rock Outcrop Complex	Not Hydric	18.73
GuD	Greenfield Cobbly Sandy Loam, 5 to 15 percent slopes	Not Hydric	65.39
GtC	Greenfield Sandy Loam, 2 to 9 percent slopes	Not Hydric	661.31
HaC	Hanford Coarse Sandy Loam, 2 to 9 percent slopes	Not Hydric	110.23
Ps	Psamments and Fluvents, frequently flooded	Partially Hydric	1.34
RmD	Ramona Sandy Loam, 9 to 15 percent slopes	Not Hydric	9.78
ShF	Saugus Sandy Loam, 30 to 50 percent slopes	Not Hydric	182.09
SoC	Soboba Gravelly Loamy Sand, 0 to 9 percent slopes	Partially Hydric	10.17
SpC	Soboba Sandy Loamy Sand, 2 to 9 percent slopes	Not Hydric	82.42
AbD	Soboba-Hanford families association, 2 to 15 percent slopes	Unknown Hydric	0.28
TvC	Tujunga Gravelly Loamy Sand, 0 to 9 percent slopes	Not Hydric	51.46
W	Water (not a soil type)	N/A	0.15
		Total	**1,193.35**

Note: Shaded rows indicate hydric soils.

2.2 Vegetation

A total of 20 vegetation communities were mapped in the review area within the following six land cover types: disturbed and developed, unvegetated, grass and herb dominated, chaparral, scrub, and woodland. The acreages of the mapped vegetation alliances/associations and other land covers in the study area are presented in Table 4.

Table 4. Vegetation Communities and Land Cover Types within the Review Area

Vegetation Community or Land Cover Type	Alliance	Association	Total Acreage[1]
Grass and Herb Dominated			
Post-fire herbaceous	N/A	*N/A*	437.4
Upland mustards or star-thistle fields	*Hirschfeldia incana* Semi-Natural Alliance	*Hirschfeldia incana* (provisional)	80.9
Non-Native Grassland	N/A	N/A	31.9

[7] Minimum Standards Item 13 (Soil Descriptions)

Table 4. Vegetation Communities and Land Cover Types within the Review Area

Vegetation Community or Land Cover Type	Alliance	Association	Total Acreage[1]
Chaparral			
Chamise chaparral	*Adenostoma fasciculatum* Alliance	*Adenostoma fasciculatum*	52.0
		Adenostoma fasciculatum–Eriogonum fasciculatum	2.3
		Adenostoma fasciculatum–(Lotus scoparius - Eriodictyon spp.*)*	1.1
Scrub oak chaparral	*Quercus berberidifolia* Alliance	*Quercus berberidifolia–Adenostoma fasciculatum*	17.3
		Quercus berberidifolia	64.1
Deerweed–silver lupine–yerba santa scrub	*Lotus scoparius–Lupinus albifrons–Eriodictyon* spp. Alliance	*Eriodictyon californicum*–herbaceous	1.5
Scrub			
California buckwheat scrub	*Eriogonum fasciculatum* Alliance	*Eriogonum fasciculatum*	61.9
Deer weed scrub	*Lotus scoparius* Alliance	*Lotus scoparius*	112.1
Palmer's goldenbush scrub[2]	*Ericameria palmeri* Alliance	*Ericameria palmeri*	0.3
Sand-aster and perennial buckwheat fields	*Corethrogyne filaginifolia–Eriogonum (elongatum, nudum)* Alliance	*Corethrogyne filaginifolia*	0.6
Bush mallow scrub	*Malacothamnus fasciculatus–Malacothamnus* spp. *Alliance*	*Malacothamnus fasciculatus*	1.4
White sage scrub[2]	*Salvia apiana* Alliance	*Salvia apiana*	0.7
—	—	*Salvia apiana–Hesperoyucca whipplei*	0.9
Riparian			
Mulefat thickets	*Baccharis salicifolia* Alliance	*Baccharis salicifolia–Sambucus nigra*	0.5
California sycamore woodlands[2]	*Platanus racemosa–Quercus agrifolia* Alliance	*Platanus racemosa–Baccharis salicifolia*	1.7
Basket bush–river hawthorn–desert olive patches[2]	*Rhus trilobata–Crataegus rivularis–Forestiera pubescens Alliance*	*Sambucus nigra*	0.7
Scale broom scrub[2]	*Lepidospartum squamatum* Alliance	*Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan	2.2
		Lepidospartum squamatum–Amsinckia menziesii	1.6

Table 4. Vegetation Communities and Land Cover Types within the Review Area

Vegetation Community or Land Cover Type	Alliance	Association	Total Acreage[1]
		Lepidospartum squamatum–ephemeral annuals	0.01
Woodland			
Coast live oak woodland and forest	*Quercus agrifolia* Alliance	*Quercus agrifolia*	2
Eucalyptus–tree of heaven–black locust groves	*Ailanthus altissima* Alliance	*Ailanthus altissima*	1
		Eucalyptus (globulus, camaldulensis)	2
Unvegetated			
Unvegetated wash and river bottom	N/A	N/A	13.7
Disturbed and Developed			
Ornamental plantings	N/A	N/A	18.7
Urban/Developed	N/A	N/A	157.8
Disturbed Habitat	N/A	N/A	125.0
		Total[1]	**1,193.4**

Notes:
1 Totals may not sum due to rounding.
2 Communities listed by California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2022).

2.3 Watershed

The review area is in the Yucaipa Creek subwatershed, Hydrologic Unit Code 12-180702030402, which lies within the Santa Ana subbasin (Figure 3, Hydrology Map). The Yucaipa Creek subwatershed is 45.6 square miles (29,266 acres) and contains Yucaipa Creek. Wilson Creek and Oak Glen Creek are also prominent features in the watershed, both flowing into Yucaipa Creek. Yucaipa Creek flows west and north through several downstream features before converging with the Santa Ana River. The Santa Ana River flows south and west, terminating at the Pacific Ocean.

2.4 Review Area Alterations, Current and Past Land Use

The vast majority of the review area is undeveloped open space that has been historically used for agricultural and ranching purposes. Portions of the review area have experienced wildfire events in the past 10 years, the most recent being the El Dorado Fire, which occurred in 2020. Over the last 20 years, the most visible areas of change have occurred near the western section of the review area where some commercial and agriculture facilities have developed or expanded (Google 2022; Historic Aerials 2022). Otherwise, the review area has experienced very little anthropogenic alteration.

INTENTIONALLY LEFT BLANK

3 Precipitation Data and Analysis[8]

The USACE-developed Antecedent Precipitation Tool (APT) was used to assess whether the delineation date occurred in a drier, average, or wetter than normal period (USACE 2022a). To determine what constitutes a "typical year," USACE developed the APT. The information generated from the APT can help to determine whether normal hydrologic and/or climatic conditions were present during the site visit and assist with completing the Wetland Determination Data Form.

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis with PDSI value outputs ranging from −4 (extreme drought) to +4 (very wet) (NOAA 2022) to assess drought conditions (i.e., PDSI Class). The APT determines wet vs. dry season based on related procedures provided in the applicable regional supplement for the review area (in this case, the Arid West Supplement). If the antecedent runoff condition (ARC) score is less than 10, then the antecedent precipitation condition is classified as drier than normal; normal conditions are present with an ARC score of 10 to 14; conditions are wetter than normal when an ARC score is greater than 14 (USACE 2022a).

Table 5 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, ARC score, and antecedent precipitation condition. Based on the APT output provided in Appendix B and summarized in Table 5, the precipitation and climatic conditions for the review area were within the normal range during the time of the delineation.

Table 5. Antecedent Precipitation Tool Data for the Review Area

Main Field Survey Date	PDSI Class	Season	ARC Score	Antecedent Precipitation Condition
06/28/2022	Extreme drought	Dry Season	10	Normal

Notes: PDSI = Palmer Drought Severity Index; ARC = antecedent runoff condition.

Additionally, according to the U.S. Department of Agriculture's Agricultural Applied Climate Information System (USDA 2022c), the area around the review area receives an average of 2.63 inches of precipitation annually.

[8] Minimum Standards Item 11 (Discussion of Hydrology)

INTENTIONALLY LEFT BLANK

4 Investigation Methods[9]

The jurisdictional delineation was conducted by Dudek Biologists Anna Cassady, Britney Schultz, Dylan Ayers, Eileen Salas, and Sarah Greely on four separate occasions (Table 6). Prior to conducting the jurisdictional delineation, the U.S. Fish and Wildlife Service's National Wetland Inventory (NWI) (USFWS 2022) and the U.S. Geological Survey's National Hydrography Dataset were reviewed to determine if the review area contained any features mapped by the U.S. Fish and Wildlife Service or U.S. Geological Survey. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the review area supported hydrophytic vegetation and potential wetlands. Jurisdictional boundaries were mapped in the field using ESRI Collector on a mobile device. Both current and historical imagery was used to supplement field investigation efforts, particularly on private lands or in areas where anthropogenic impacts have obscured aquatic indicators normally found in the field. Small portions of the review area were inaccessible and were delineated via topographical data and available aerial imagery. Remote sensing was not used during this delineation.

Table 6. Schedule of the Aquatic Resources Delineation

Date	Hours	Personnel	Conditions
06/28/2022	9:07 a.m.–4:14 p.m.	AC, DA, BS, ES	83°F–96°F; 0%–10% cloud cover; 0–3 mph wind
06/29/2022	7:04 a.m.–1:53 p.m.	AC, BS, ES	71°F–90°F; 0% cloud cover; 0–3 mph wind
08/18/2022	9:30 a.m.–1:07 p.m.	DA, SG	78°F–87°F; 40%–50% cloud cover; 0–3 mph wind
09/30/2022	10:13 a.m.–11:37 a.m.	ES, SG	76°F–79°F; 0% cloud cover; 1–3 mph wind

Notes: °F = degrees Fahrenheit; mph = miles per hour; AC = Anna Cassady; BS = Britney Schultz; DA = Dylan Ayers; ES = Eileen Salas; SG = Sarah Greely .

4.1 U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters were delineated on topographical maps in conjunction with ESRI Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual.

Wetland Determination Forms were taken at certain points within drainages or vegetation communities where a predominance of hydrophytic vegetation was present; hydrology, vegetation, and soils were assessed to determine whether USACE three-parameter wetlands were present. USACE OHWM Forms were completed at representative cross-sections of non-wetland waters to capture their characteristics and widths. All data forms can be found in Appendix C.

[9] Minimum Standards Item 8 (Dates of Field Work), Item 5 (Use of 1987 Manual, Regional Supplement, and OHWM guide), Item 12 (Statement Regarding Use of Remote Sensing), Item 18 (Data Forms) and Item 19 (Methods)

4.2 Regional Water Quality Control Board

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM based on the procedures defined in USACE's A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b).

4.3 California Department of Fish and Wildlife

CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979). The CDFW also regulates riparian vegetation communities that occur beyond the limits of regulated streambeds.

5 Aquatic Resource Narrative[10]

5.1 Waters of the United States (USACE)

Approximately 5.65 acres of non-wetland waters potentially regulated by USACE are present in the review area (Figure 4-1).[11] Table 7 provides a detailed summary of delineated aquatic resources potentially regulated by USACE. Table 7 also includes information on each feature identified within the review area; its Cowardin type, if available (Cowardin et al. 1979; USACE 2022b); any OHWM indicators present; the location; and the acreage/linear feet. Narrative descriptions of each non-wetland water feature are included below. A copy of the ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is not submitted with this report because Table 7 in this section provides all of the information requested.[12]

Non-Wetland Water-01

Non-Wetland Water (NWW) 01 represents the largest and most prominent aquatic feature in the review area, occurring south of the approximate center of the Project site. NWW-01 includes portions of Wilson Creek, an intermittent stream feature that generally flows east to west across the review area, entering across the Project's eastern border approximately 0.53 miles north of Oak Glen Road (Figures 4-2, 4-3, 4-5, 4-6, 4-9, and 4-10). NWW- 01, which also includes several small tributaries to Wilson Creek, exhibited clear and consistent indicators of an OHWM throughout the length of the feature observed within the review area. The Wilson Creek portions of NWW-01 are well defined with a clear break in slope, change in vegetation cover, and change in soil texture observed throughout. Cross sections T-11, T-12, and T-15 describe conditions observed in Wilson Creek; T-02 describes the smaller tributary portions of NWW-01, which also exhibited similar indicators. Despite the clear signs of recent fluvial action, no flowing water was observed in the feature. NWW-01 leaves the review area's southwestern corner approximately 0.3 miles north of Oak Glen Road.

Non-Wetland Water-02

NWW-02 includes a small aquatic feature near the southwestern corner of the review area. It was observed at the bottom of shallow canyon that occurs between two flat sections of land to the north and south (Figures 4-6 and 4-9). This feature is an unnamed ephemeral stream that originates on site, 0.25 miles east of the intersection of Fir Avenue and Jefferson Street and approximately 0.3 miles northeast of Wilson Creek. NWW-02 showed indicators of an OHWM; cross section T-10 describes a break in slope and change in average sediment texture. No flowing water was observed. NWW-02 terminates on site at Jefferson Street, though flows in the channel may sheet flow south along Jefferson Street, converging with NWW-01 about 500 feet to the south of the apparent termination point. This connection was determined based on observations made during field investigations and during review of current and historical aerials (Google 2022; Historic Aerials 2022).

10 Minimum Standards Item 6 (Aquatic Resource Narrative)
11 Minimum Standards Items 7 and 16 (Delineation Maps)
12 Minimum Standards Item 15 (ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet)

Non-Wetland Water-03

NWW-03 includes a human-made basin and a small section of ephemeral stream channel near the northeastern edge of the review area (Figure 4-2). The basin appears to have been constructed in the path of this unnamed stream in order to accumulate water for agricultural activities. In doing so, flows in the stream that would normally continue southwest remain in the basin; no clear outlet was observed. NWW-03 enters onto the review area via sheet flow across Carter Street from an adjacent private property less than 100 feet to the north. The stream channel portion of NWW-03 exhibited clear indicators of an OHWM as shown in cross section T-18, which describes a break in slope and changes in vegetation cover and soil texture. It flows for approximately 500 feet before reaching the basin. The basin has clear boundaries and is surrounded by sloped earthen walls. No water was observed in this feature during field investigations.

Non-Wetland Water-04

NWW-04 includes several sections of an unnamed ephemeral stream feature and associated tributaries located near the center of the review area (Figures 4-2, 4-7, 4-8, and 4-9). It flows across Carter Street via sheet flow, entering a channel in the review area that exhibited clear indicators of an OHWM; cross section T-01 describes a break in slope and changes in vegetation cover and soil texture. On site, NWW-04 flows southwest in a channel that is surrounded by a mix of flat and undulating undeveloped lands. The stream is relatively wide, with large, transported boulders strewn across portions of the channel. It appears to terminate in the review area approximately 400 feet east of Jefferson Street in an area that is impacted by significant off-highway vehicle use. A review of current and historical aerials suggests that despite this apparent disconnection, waters that reach this part of the NWW-04 channel continue west, flowing overland across Jefferson Street into another section of unnamed ephemeral stream channel (Google 2022; Historic Aerials 2022). NWW-04 continues west after crossing Jefferson Street, accepting flows from two distinct tributaries as it nears the northwestern corner of the review area. The upstream tributary just west of Jefferson Street may have also been disconnected from upstream section by the installation of the street; the downstream tributary accepts flows from a nearby agricultural operation. Indicators of an OHWM are present throughout the feature and its tributaries, though the channel becomes more heavily incised west of Jefferson Street; cross section T-09 describes a sharp break in slope and changes to vegetation cover and soil texture. No water was observed in this feature during field investigations. Upon reaching Fremont Street at the edge of the Project site, NWW-04 appears to flow beneath the roadway, leaving the review area moving west.

Non-Wetland Water-05

NWW-05 is located in the northern portion of the review area and contains two disjointed sections of an unnamed stream feature; the northernmost section originates in the sloped lands off site to the north, the southern section appears to originate on private lands near the review area's northeastern corner (Figures 4-6, 4-8, 4-11, 4-12, and 4-13). After flowing onto the review area, NWW-05 flows south and west in canyons surrounded by sloped lands with private residences in the vicinity; cross section T-03 describes the OHWM in this location. While the two disjointed sections of NWW-05 may converge just outside the review area's northwestern edge in private land, no clear indication of this was recorded in the field, in part due to lack of access to private lands. However, based on current and historical imagery, these two disjointed sections were likely connected in the past. NWW-05 continues southwest after re-entering the review area, flowing through a heavily grazed pasture in a relatively wide section of the stream feature that exhibited an OHWM; cross section T-06 describes a break in slope and changes to soil texture in this area. Despite the heavy compaction of soils in this section of the feature, the high numbers of transported boulders above and below the OHWM of NWW-05 suggest that significant flows have and could occur in the feature. No water was observed in this feature during field investigations.

Based on field investigations, NWI data, and a review of historical imagery, NWW-01, -02, -04, -05, and -06 appear to exhibit a significant nexus with the Pacific Ocean, a traditional navigable water. As such, any impacts to the tributaries observed on site would constitute impacts to USACE jurisdictional waters. This connection is established downstream of the review area via Oak Glen Creek, Wilson Creek, Yucaipa Creek, and the Santa Ana River. NWW-03 does not exhibit a downstream connection to any traditional navigable water; therefore, it is not considered to be a USACE jurisdictional feature.

Besides the non-wetland waters described above, multiple upland swales, drainage ditches, inactive stream channels, and erosional features were also observed within the review area. These features lacked any indicators of an OHWM during field investigations, which excludes them from consideration as potential jurisdictional waters. Additionally, an investigation of historic aerials going back as far as 1938 show many of these non-jurisdictional features to be associated directly with adjacent agricultural or commercial operations. Therefore, they are not depicted in any of the included figures; cross sections T-04, T-05, T-07, T-08, T-13, T-14, T-16, T-17, T-19, and T-20 describe these non-jurisdictional features and were collected to demonstrate the lack of OHWM indicators.

No high-quality hydrophytic vegetation communities typically associated with wetland habitats in this region were observed during the field investigations. Four riparian vegetation communities, *Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan association, *Sambucus nigra* association, *Baccharis salicifolia–Sambucus nigra* association, and *Platanus racemosa–Baccharis salicifolia* association, were recorded in the review area. Though the *Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan association community is supported by flows in NWW-01, scale broom (*Lepidospartum squamatum*) is a facultative upland plant species that does not qualify as hydrophytic. Accordingly, USACE wetlands are not present in this vegetation community. *Baccharis salicifolia–Sambucus nigra* association describes areas are typically co-dominated by elderberry (*Sambucus nigra*) and mulefat (*Baccharis salicifolia*); mulefat is considered hydrophytic and elderberry is not. While these two plant species were present in the community observed on site, they were burnt and observed in very low cover amongst upland plants that do not qualify as hydrophytic. Accordingly, USACE wetlands are not present in this vegetation community. The *Platanus racemosa–Baccharis salicifolia* association on site is dominated by California sycamore (*Platanus racemosa*), a facultative plant that qualifies as hydrophytic. This community is in the review area outside the Project, on inaccessible private property. Accordingly, field investigations did not cover this area.

Based on the lack of high-quality, consistent hydrophytic vegetation cover in any of the observed riparian areas, no Wetland Determination Forms were collected in these communities or near any of the features listed in Table 7. Photos of all observed aquatic features delineated within the review area, as well as additional areas reviewed for the presence of these resources, are provided in Appendix D.[13] The locations of these photos are shown in Figures 4-1 through 4-13.

[13] Minimum Standards Item 17 (Ground Photos)

Table 7. USACE Aquatic Resource Summary for the Review Area[14]

Feature Name	Cowardin[1]	Primary OHWM Indicators	Location (Latitude/ Longitude; Decimal Degrees)	Acres/Linear Feet[2]
Non-Wetland Waters				
NWW-1	R4	BBS, CAST, CVC	−117.0153, 34.05246	3.16/17,970
NWW-2	R6	BBS, CAST	−117.0148, 34.05474	0.09/1,476
NWW-4	R6	BBS, CAST, CVC	−117.0082, 34.06125	1.41/9,037
NWW-5	R6	BBS, CAST, CVC	−117.0182, 34.05801	0.97/8,563
			Grand Total	**5.63/37,046**

Notes: OHWM = ordinary high-water mark; NWW = non-wetland water; CAST = change in average sediment texture; BBS = break in bank slope; CVS = change in vegetation species; CVC = change in vegetation cover

1 Pursuant to Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) and USACE Cowardin Codes for ORM Data Entry (USACE 2022b).

2 Totals may not sum due to rounding.

5.2 Waters of the State (RWQCB)

All of the features described in Section 5.1, Waters of the United States (USACE), have been identified as waters of the state. These features are subject to regulation by the RWQCB under the Porter-Cologne Water Quality Control Act (Figures 4-1 and 4-2). Table 8 lists all features within the review area that are subject to RWQCB regulation.

Table 8. RWQCB Aquatic Resource Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet[1]
Non-Wetland Waters		
NWW-1	34.05246, -117.0153	3.16/17,970
NWW-2	34.05474, -117.0148	0.09/1,476
NWW-3	34.06166, -117.0045	0.23/652
NWW-4	34.06125, -117.0082	1.41/9,037
NWW-5	34.05801, -117.0182	0.97/8,563
	Grand Total	**5.86/37,699**

Notes: RWQCB = Regional Water Quality Control Board; NWW = non-wetland water

1 Totals may not sum due to rounding.

5.3 CDFW Jurisdiction

All of the features described in Section 5.1 have been identified as streambed potentially regulated by CDFW. In addition, the riparian vegetation communities in the review area described in Section 5.1 are also potentially regulated by CDFW; they are labeled Riparian (RIP) 1 thru RIP-5. Because CDFW regulates from bank to bank, certain portions of the review area where the top of a channel bank extended beyond the OHWM are subject to regulation by CDFW as streambed. These areas are displayed in Figures 4-1 through 4-13. The full extent of CDFW jurisdictional areas are described in Table 9.

14 Minimum Standards Item 9 (Table Listing All Aquatic Resources)

Table 9. CDFW Aquatic Resource Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet[1]
CDFW Streambed		
NWW-1	34.05246, -117.0153	8.01/17,970
NWW-2	34.05474, -117.0148	0.41/1,476
NWW-3	34.06166, -117.0045	0.23/652
NWW-4	34.06125, -117.0082	2.46/22,534
NWW-5	34.05801, -117.0182	3.12/24,057
	Streambed Subtotal	*14.22/100,042*
Riparian Habitats		
RIP-1: *Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan association	34.05201, -117.02192	3.8/9,502
RIP-2: *Baccharis salicifolia–Sambucus nigra* association	34.05341, -117.01040	0.47/913
RIP-3: *Sambucus nigra* association	34.059674, -117.02286	0.63/1,014
RIP-4: - *Platanus racemosa–Baccharis salicifolia* association	34.04833, -117.01432	1.74/1,450
	Riparian Subtotal	*6.64 /12,879*
	Grand Total	**20.38/112,921**

Notes: CDFW = California Department of Fish and Wildlife; NWW = non-wetland water; RIP = riparian.
[1] Totals may not sum due to rounding.

5.4 National Wetland Inventory

The review area contains several mapped resources from the U.S. Fish and Wildlife Service's NWI data (USFWS 2022; see Figure 3). Ephemeral riverine (R6 Cowardin classification) habitats are mapped overlapping with all non-wetland water features in the review area, except NWW-01. NWW-01 overlaps with the intermittent (R4 Cowardin classification) features mapped by the NWI in the review area; this includes portions of Wilson Creek. A freshwater pond is mapped near the northeastern corner of the review area; it corresponds with the basin portion of NWW-03. An additional freshwater pond is mapped near the southern border of the review area, 200 feet north of Oak Glen Road, though it does not correspond with any observed aquatic feature (USACE 2022b).

INTENTIONALLY LEFT BLANK

6 Results and Conclusions

Based on the jurisdictional delineation and review of relevant information provided in this Aquatic Resources Delineation Report, 5.63 acres of non-wetland waters potentially regulated by USACE were delineated within the review area. Of the five aquatic features recorded in the review area, NWW-01, NWW-02, NWW-04, and NWW-05 may be regulated by USACE given their downstream connection to a traditional navigable water (the Pacific Ocean). NWW-03 is isolated and would not be regulated by USACE. All non-wetland water features in the review area may also be regulated by the RWQCB and CDFW. In addition, CDFW may regulate streambeds beyond the OHWM (to top of bank) and associated riparian habitat. In total, 5.86 acres of non-wetland waters (below OHWM) fall under RWQCB jurisdiction, and 20.38 acres of CDFW streambed (below and above OHWM, to top of bank) and associated riparian habitat occur in the review area.

This report can be used by those agencies to determine if they would regulate the features described herein. The geographic information system (GIS) data for the delineation are provided digitally.[15]

[15] Minimum Standards Item 20 (Digital Data)

INTENTIONALLY LEFT BLANK

7 References Cited

CDFW. 2022. "California Natural Communities List." Sacramento, California: CDFW, Vegetation Classification and Mapping Program. July 5, 2022. Accessed December 2022. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79/31. Prepared for U.S. Fish and Wildlife Service. December 1979. Reprinted 1992. http://www.fws.gov/wetlands/documents/classification-of-wetlands-and-deepwater-habitats-of-the-united-states.pdf.

Google. 2022. Historical Aerials and Topographic Maps. Accessed November 2021.

Historical Aerials Online. 2022. Historical Aerials by NETRonline. Accessed November 2021. https://www.historicaerials.com/.

NOAA (National Oceanic and Atmospheric Administration). 2022. Climate Division scale Palmer Drought Severity Index (PDSI) dataset.

Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. *A Manual of California Vegetation*. 2nd ed. Sacramento, California: California Native Plant Society.

SWRCB (State Water Resources Control Board). 2019. State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019; revised April 6, 2021. https://www.waterboards.ca.gov/press_room/press_releases/2021/procedures.pdf.

USACE (U.S. Army Corps of Engineers). 1987. Corps of Engineers Wetlands Delineation Manual. Online ed. Environmental Laboratory, Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station. January 1987. http://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf.

USACE. 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Environmental Laboratory, ERDC/EL TR-08-28. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center. September 2008. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046489.pdf.

USACE. 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual. ERDC/CRREL TR-08-12. Prepared by R.W. Lichvar and S.M. McColley. Hanover, New Hampshire: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. August 2008. https://apps.dtic.mil/dtic/tr/fulltext/u2/a486603.pdf.

USACE. 2017. Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. U.S. Army Corps of Engineers, Los Angeles District. March 16, 2017. https://www.spl.usace.army.mil/Portals/17/Users/251/43/2043/Final%20Delin%20report%20standards%203-16-2017.pdf?ver=2017-03-16-170513-523.

USACE. 2022a. Antecedent Precipitation Tool (APT) - v1.0.13. Accessed October 2022. https://github.com/jDeters-USACE/Antecedent-Precipitation-Tool/releases/tag/v1.0.13.

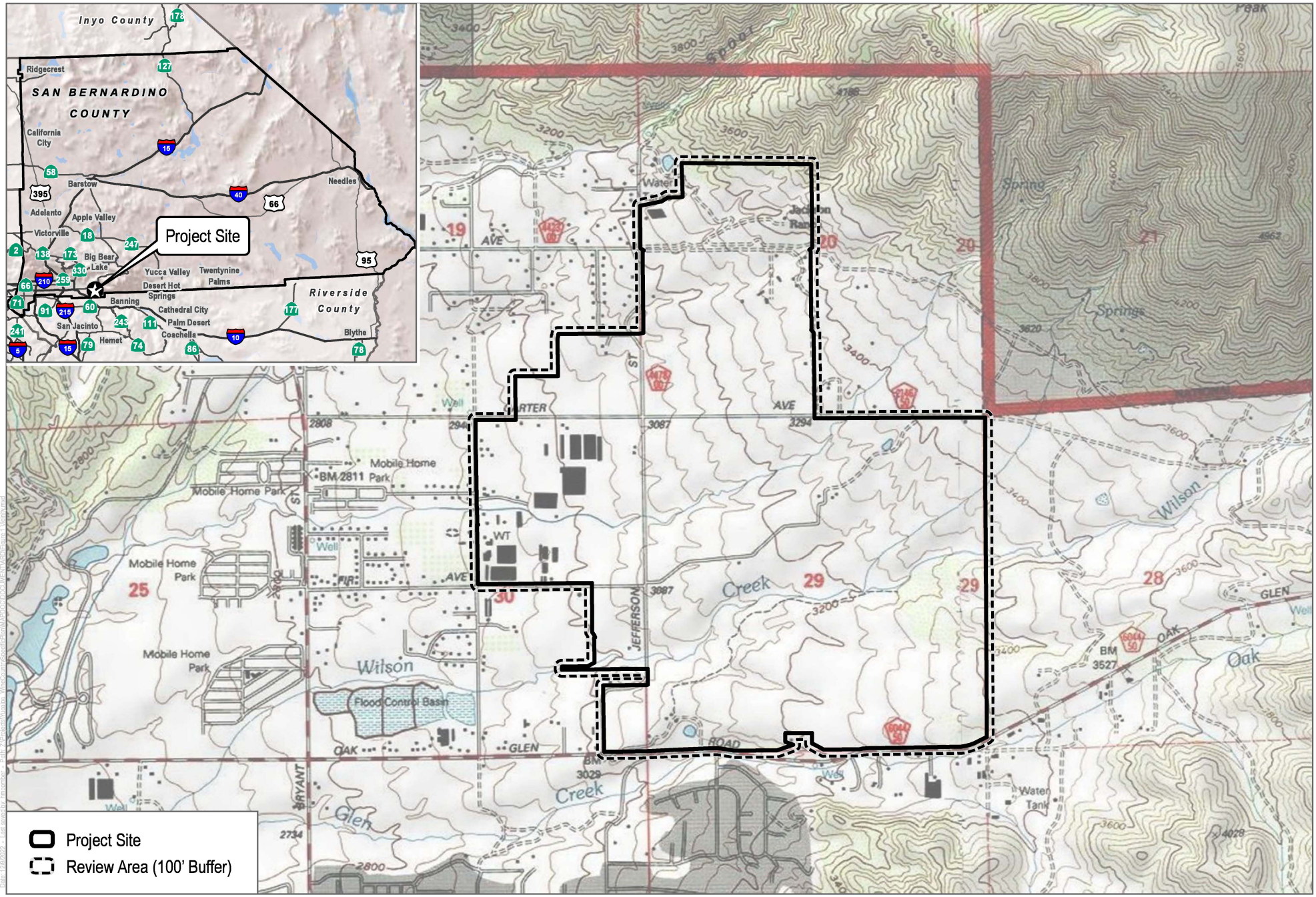
USACE. 2022b. Cowardin Codes for ORM Data Entry. Accessed May 2022. https://www.spa.usace.army.mil/Portals/16/docs/civilworks/regulatory/Bulk%20Upload/Bulk%20Data%20Cowardin.pdf.

USDA (U.S. Department of Agriculture). 2022a. Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed October 2022. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

USDA. 2022b. "State Soil Data Access (SDA) Hydric Soils List." Accessed October 2022. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1389479.html#reportref.

USDA. 2022c. Agricultural Applied Climate Information System (AgACIS). http://agacis.rcc-acis.org/.

USFWS (U.S. Fish and Wildlife Service). 2022. "National Wetland Inventory" [map]. Accessed October 2022. http://www.fws.gov/data.



SOURCE: USA Topo Maps 7.5 Minute Series Yucaipa and Forest Falls Quadrangle
Township 1S; Range 1W; Section 19-21, 28-32

DUDEK

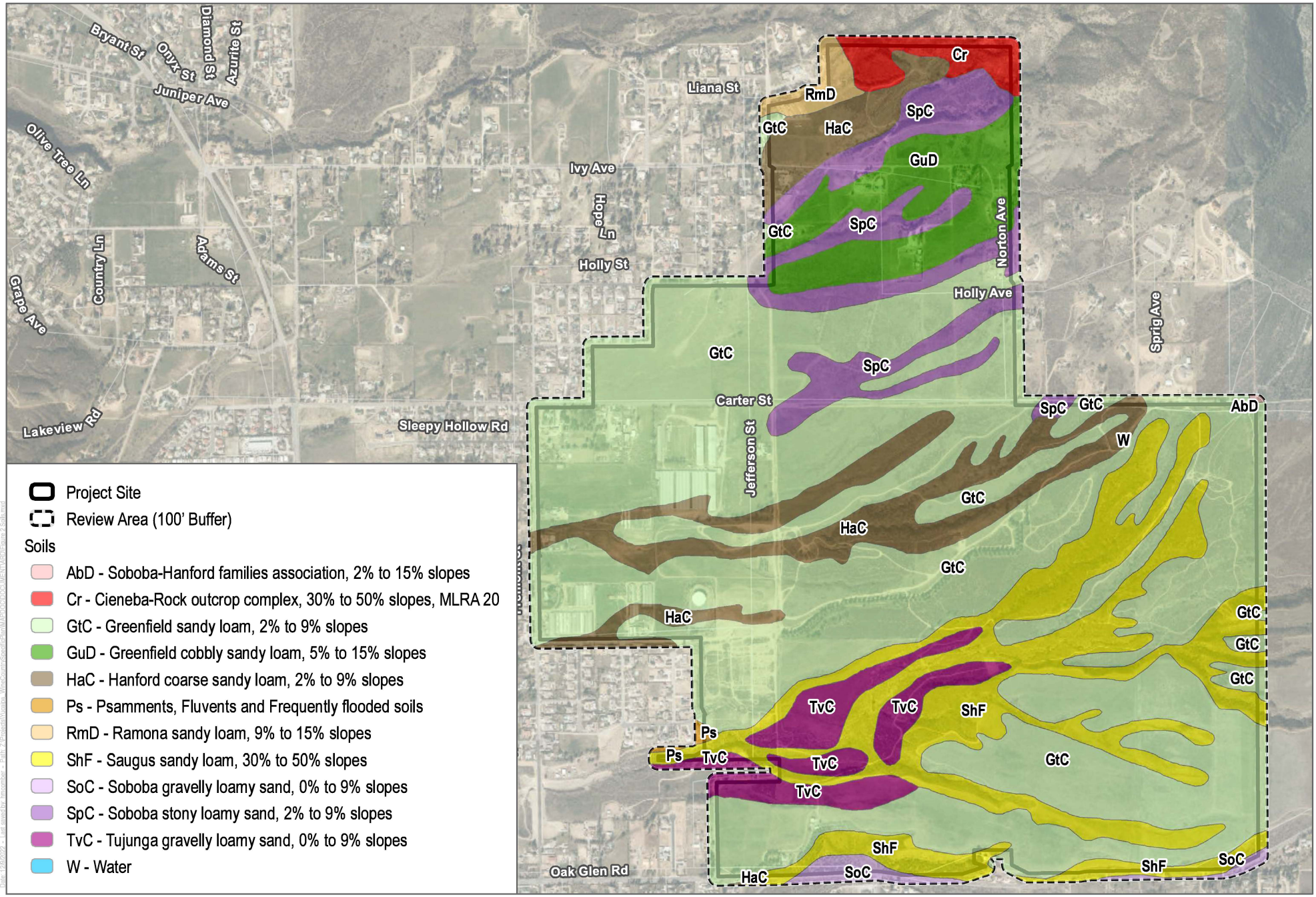
0 1,000 2,000 Feet

FIGURE 1

Vicinity Map

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



SOURCE: Esri World Imagery Basemap (accessed 2022); San Bernadino County 2022; USDA 2022

DUDEK

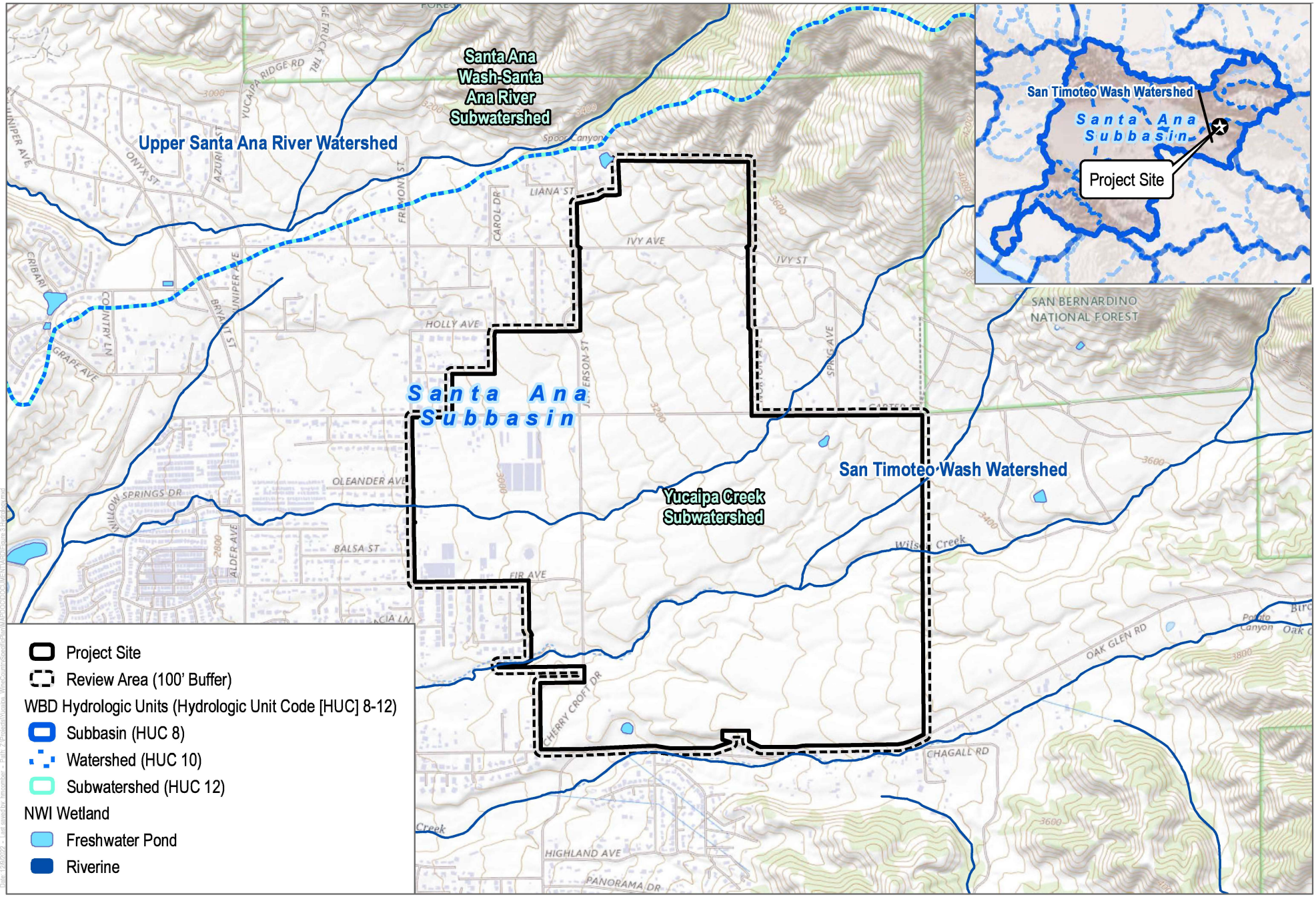
0 700 1,400 Feet

FIGURE 2

Soils Map

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



SOURCE: USGS Topo Maps; San Bernadino County 2022; USGS 2022; NWI 2022

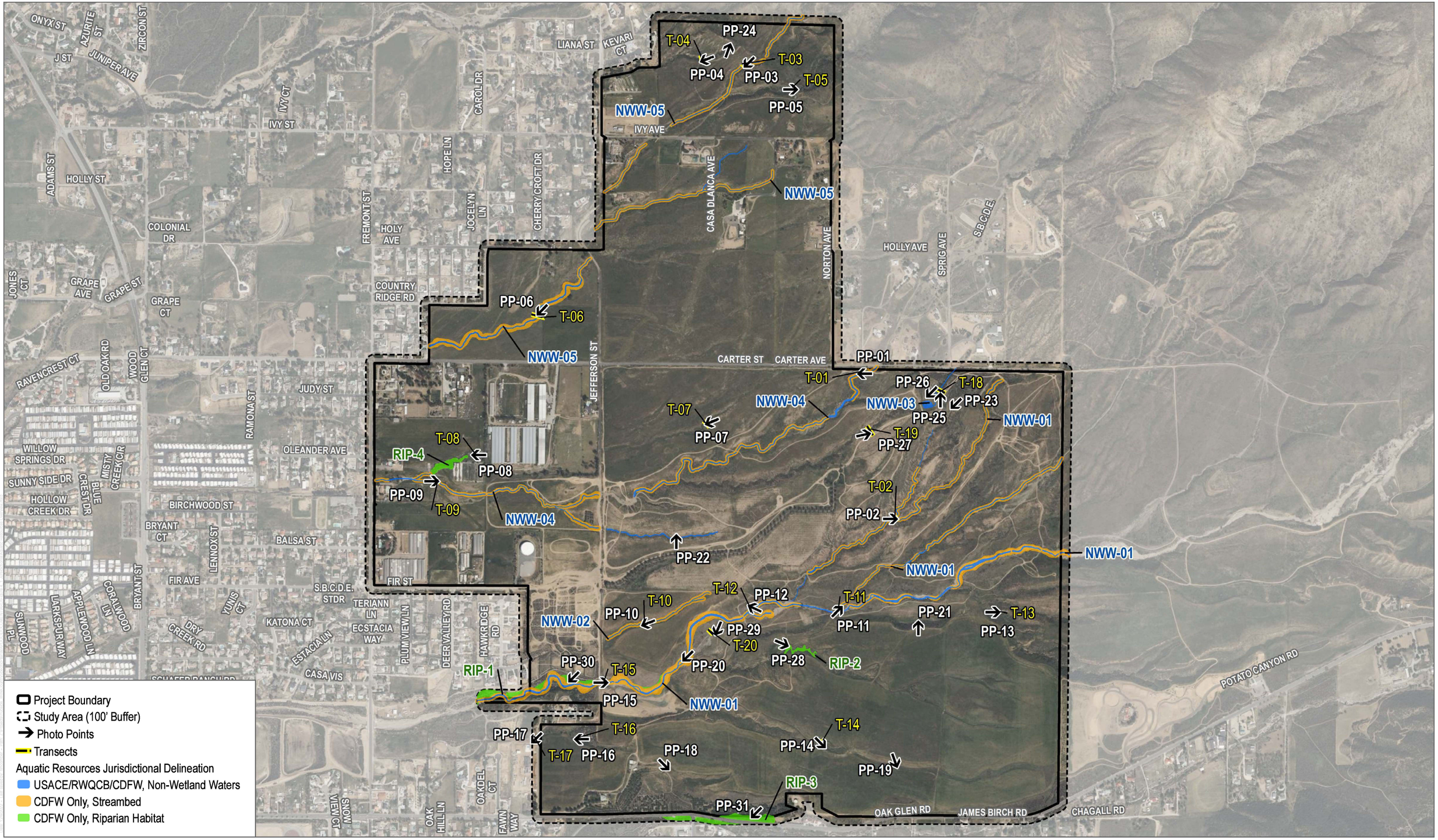
DUDEK

FIGURE 3

Hydrology Map

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

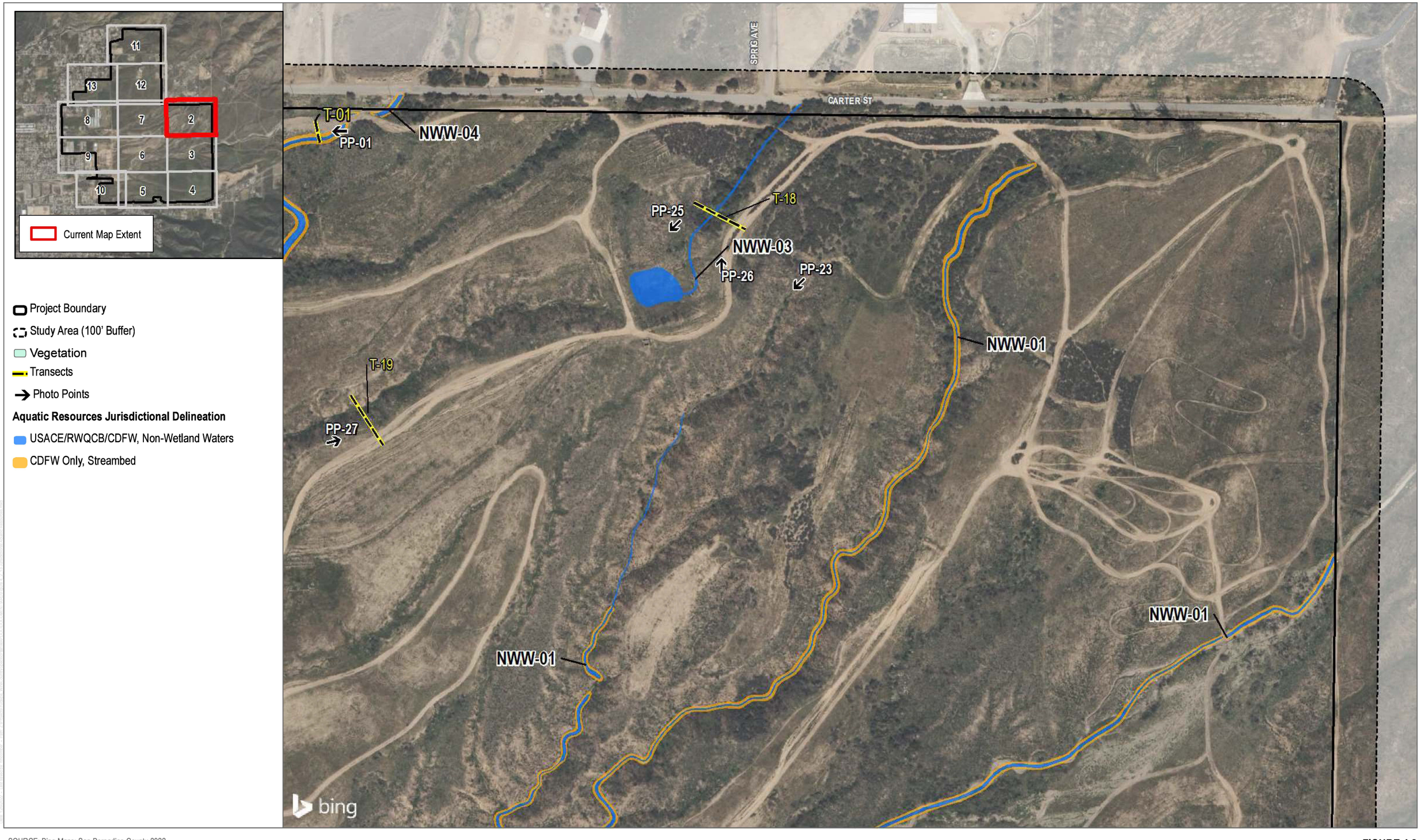
0 500 1,000 Feet

FIGURE 4-1

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; San Bernadino County 2022

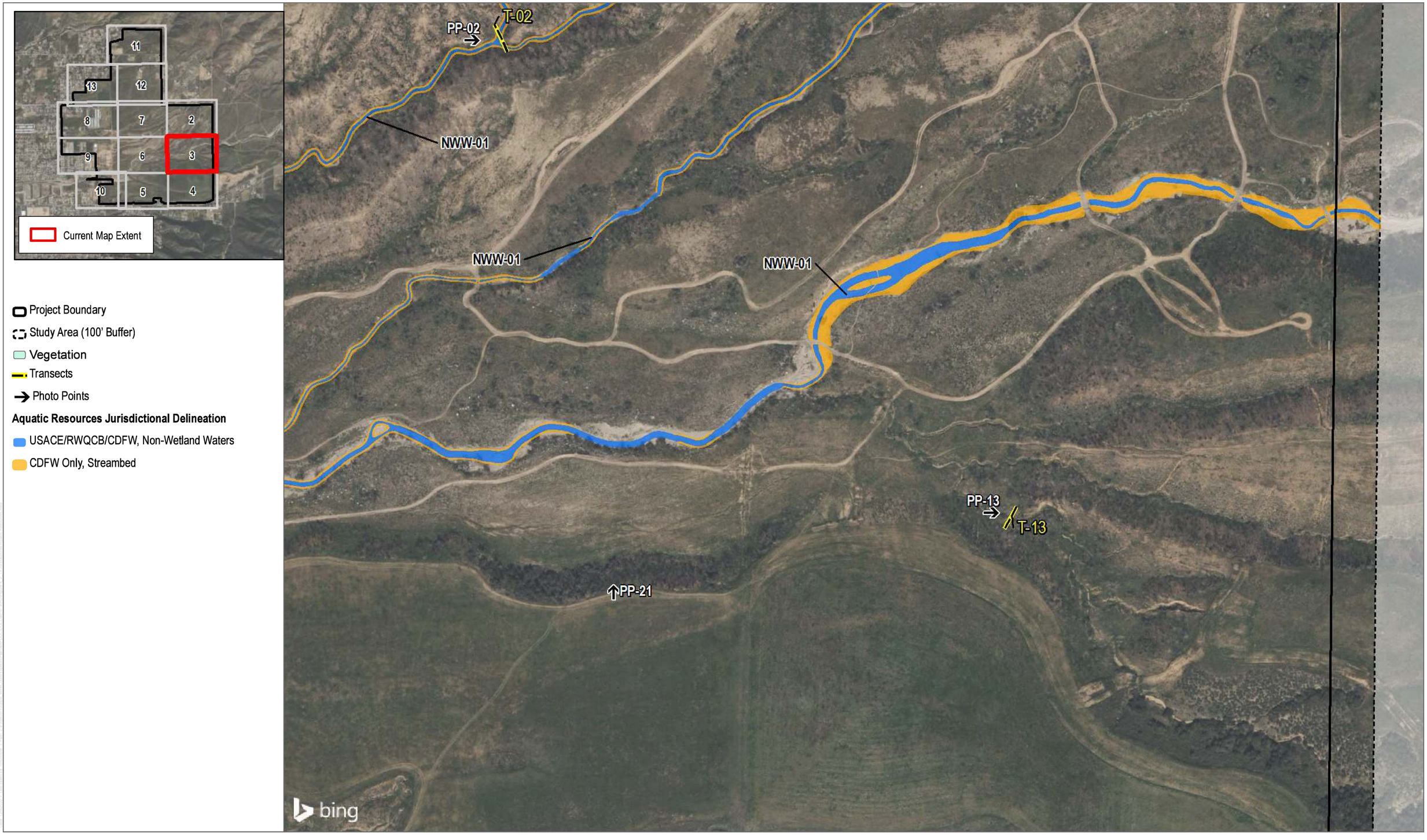
DUDEK 0 100 200 Feet

FIGURE 4-2

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; San Bernadino County 2022

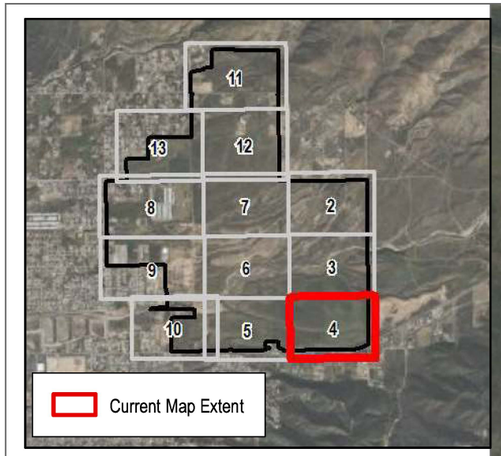
DUDEK 0 100 200 Feet

FIGURE 4-3

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



Project Boundary

Study Area (100' Buffer)

Vegetation

Transcects

Photo Points

PP-19

JAMES BIRCH RD

OAK GLEN RD

POTATO CANYON RD

CHAGALL RD

MARTEL AVE

bing

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

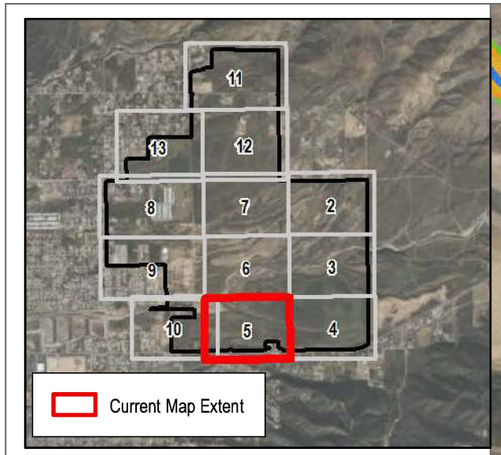
0 100 200 Feet

FIGURE 4-4

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



Project Boundary

Study Area (100' Buffer)

Vegetation

Transects

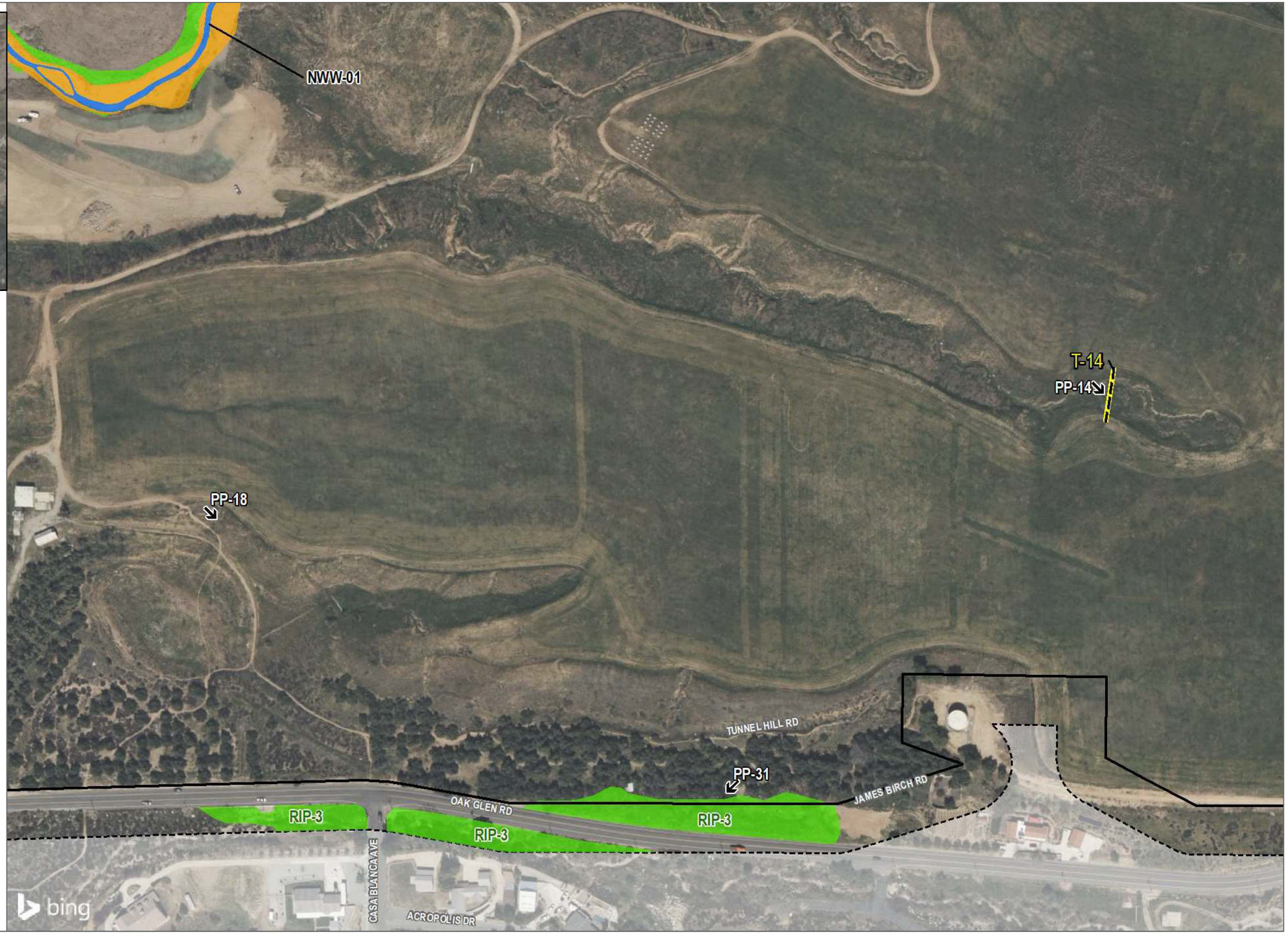
Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

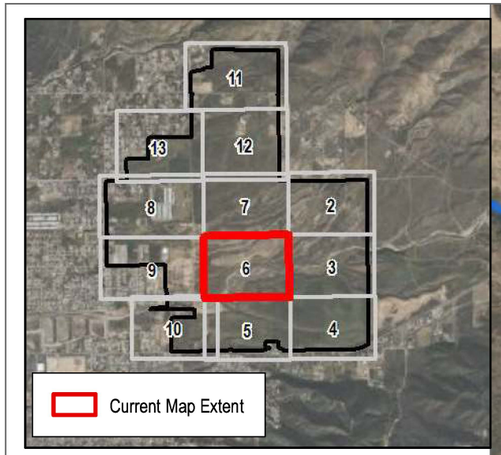
0 100 200 Feet

FIGURE 4-5

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



Project Boundary

Study Area (100' Buffer)

Vegetation

Transects

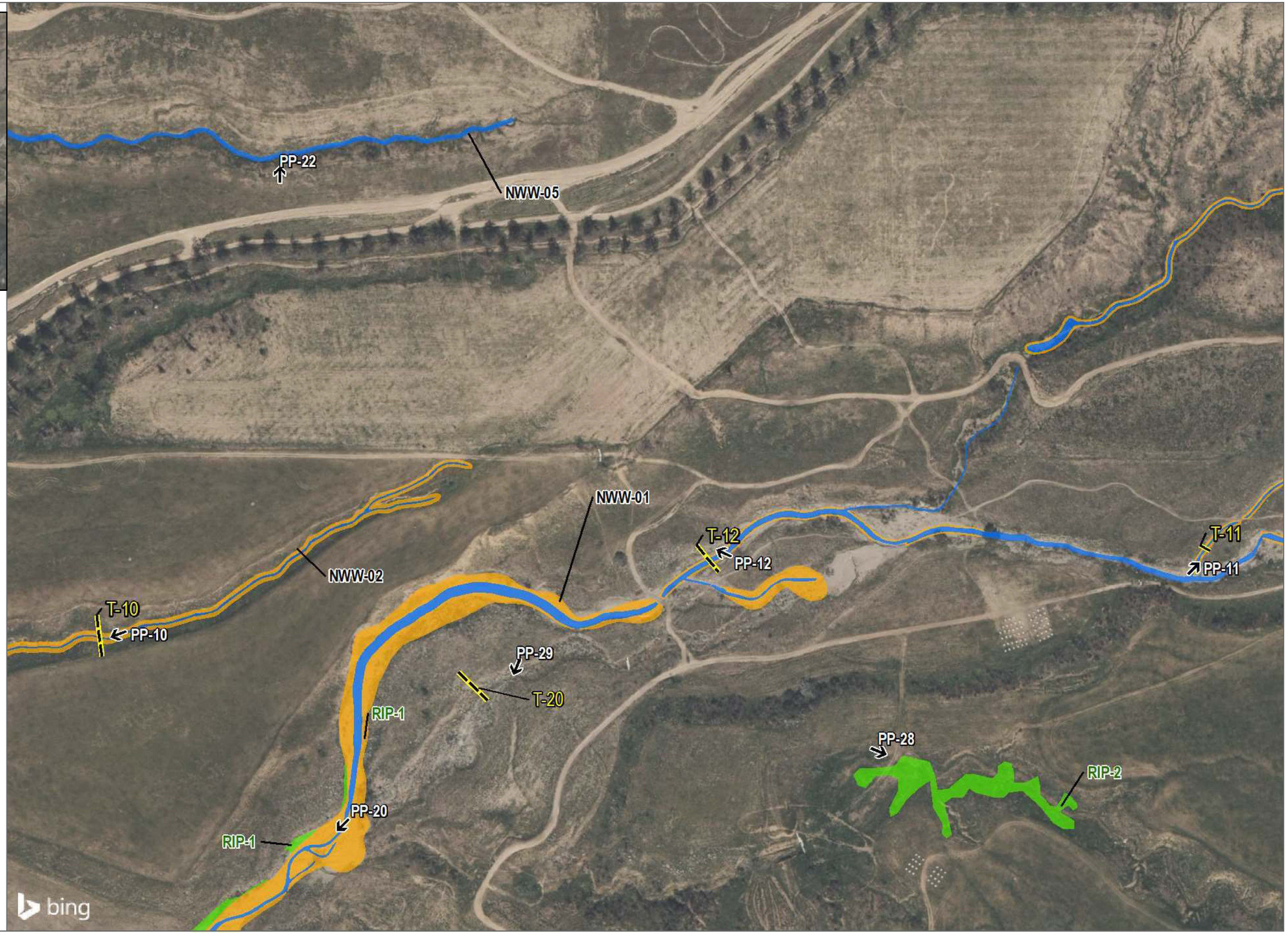
Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

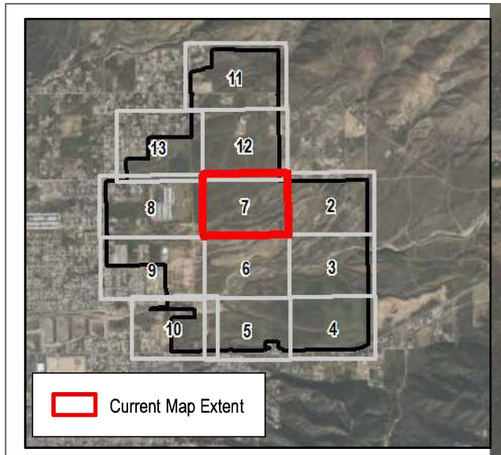
0 100 200 Feet

FIGURE 4-6

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



Project Boundary

Study Area (100' Buffer)

Vegetation

Transects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 4-7

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK

SOURCE: Bing Maps; San Bernadino County 2022

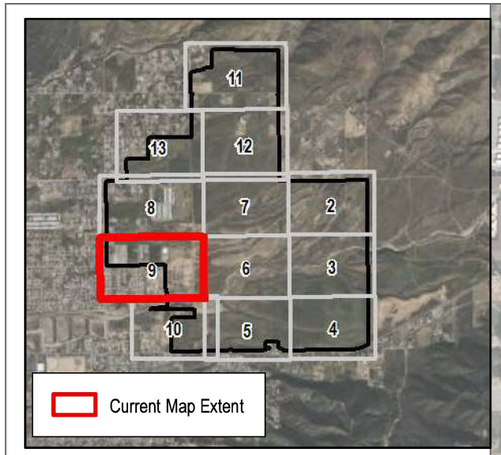
DUDEK 0 120 240 Feet

FIGURE 4-8

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



Project Boundary

Study Area (100' Buffer)

Vegetation

Transcripts

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

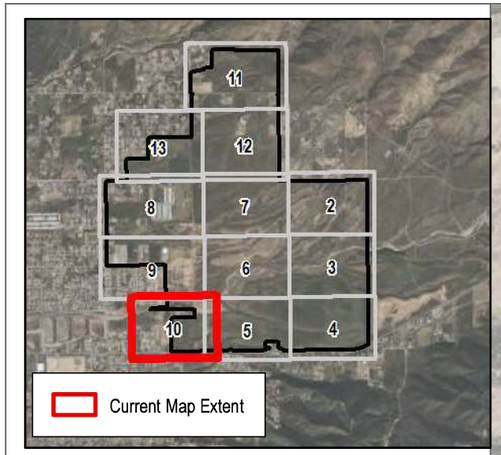
0 120 240 Feet

FIGURE 4-9

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



Project Boundary

Study Area (100' Buffer)

Vegetation

Transects

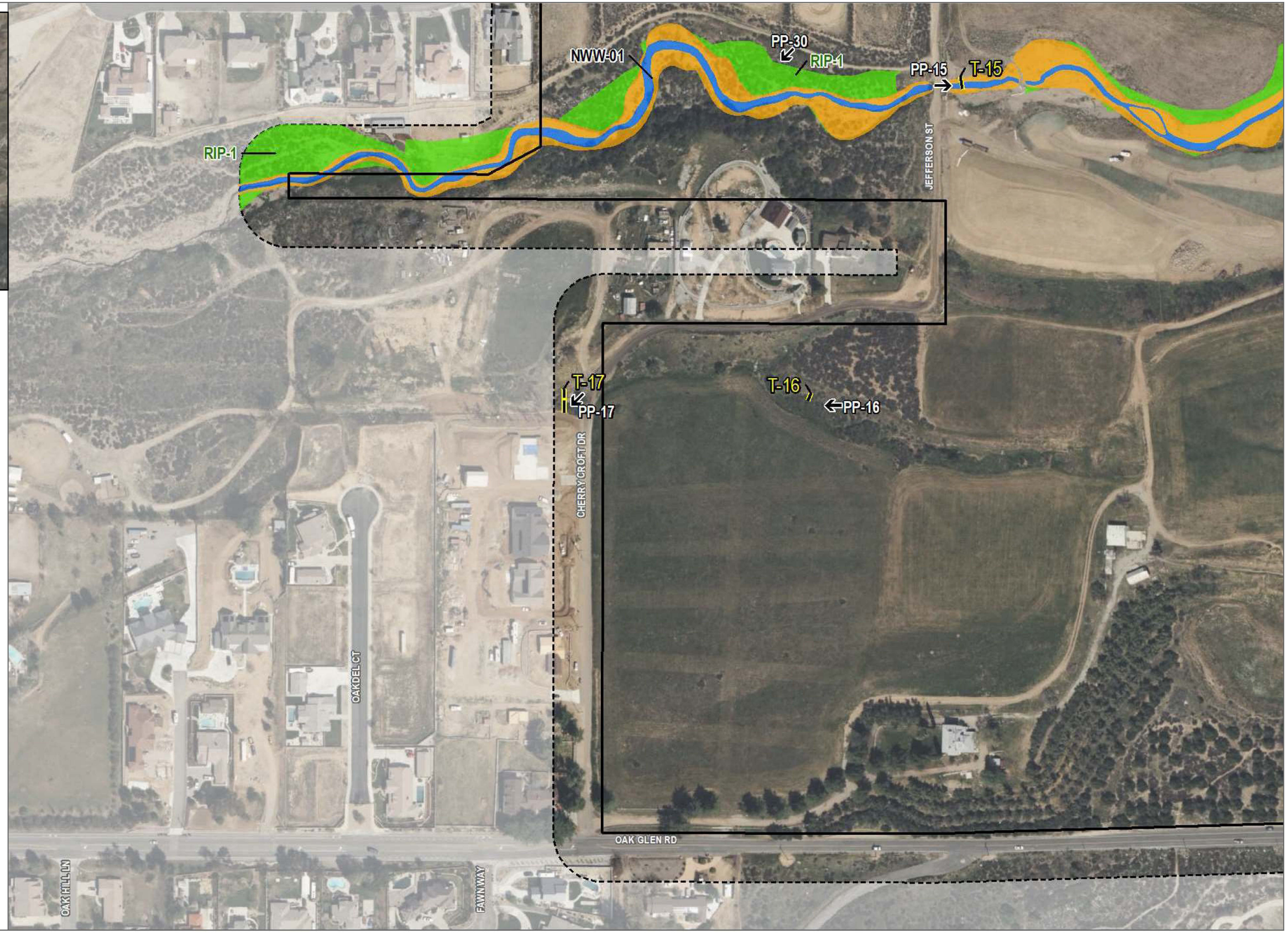
Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

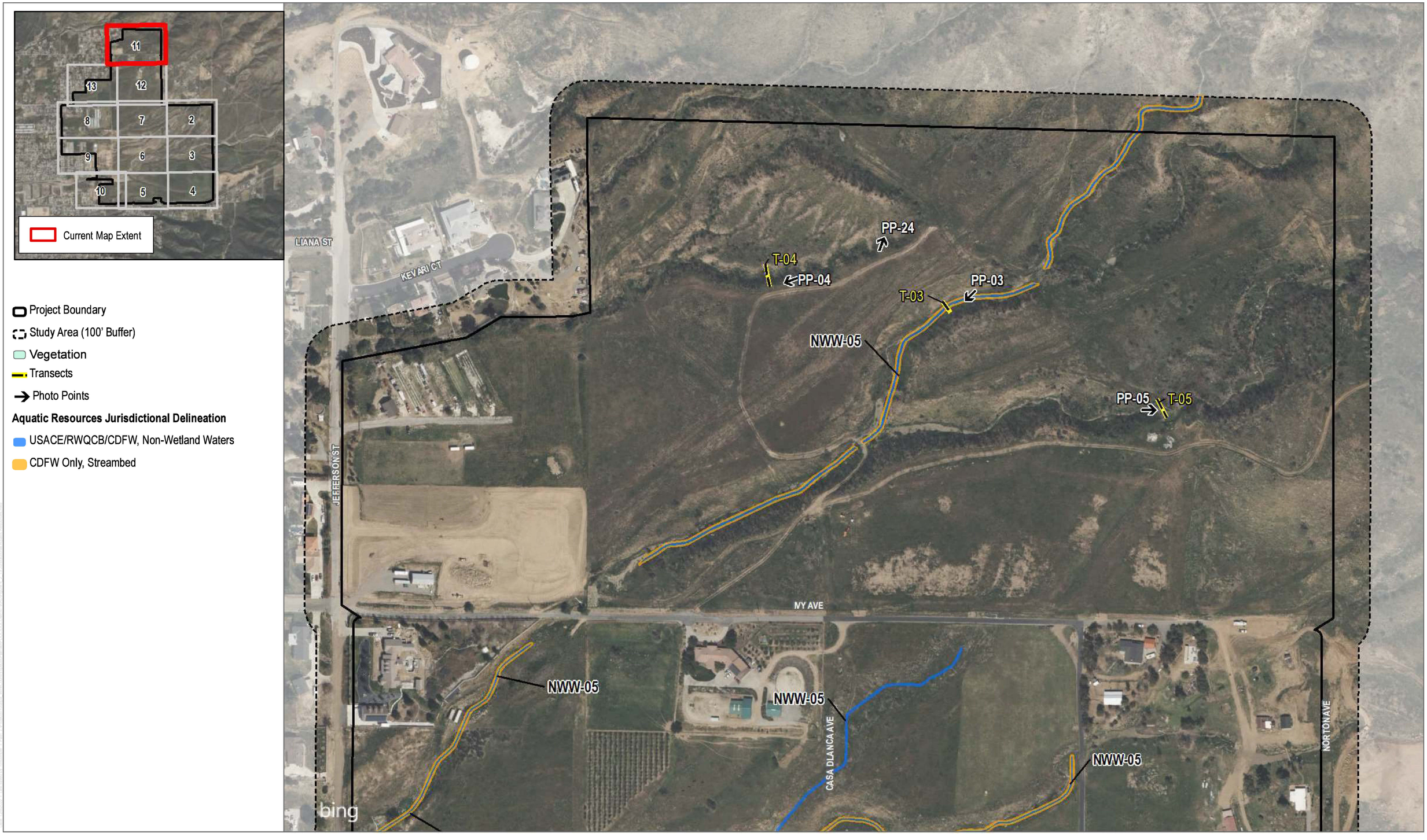
0 100 200 Feet

FIGURE 4-10

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



Project Boundary

Study Area (100' Buffer)

Vegetation

Transects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

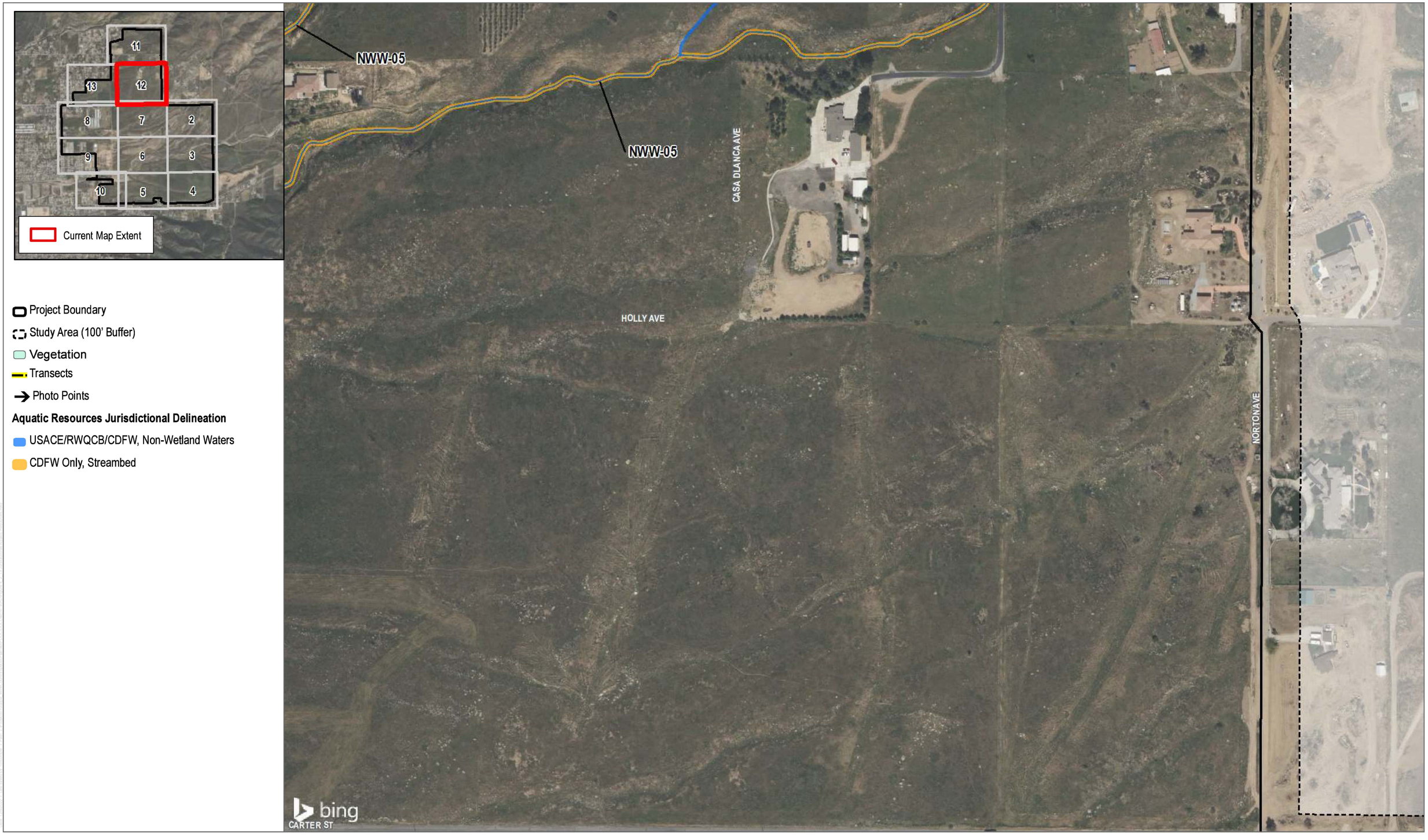
0 120 240 Feet

FIGURE 4-11

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; San Bernadino County 2022

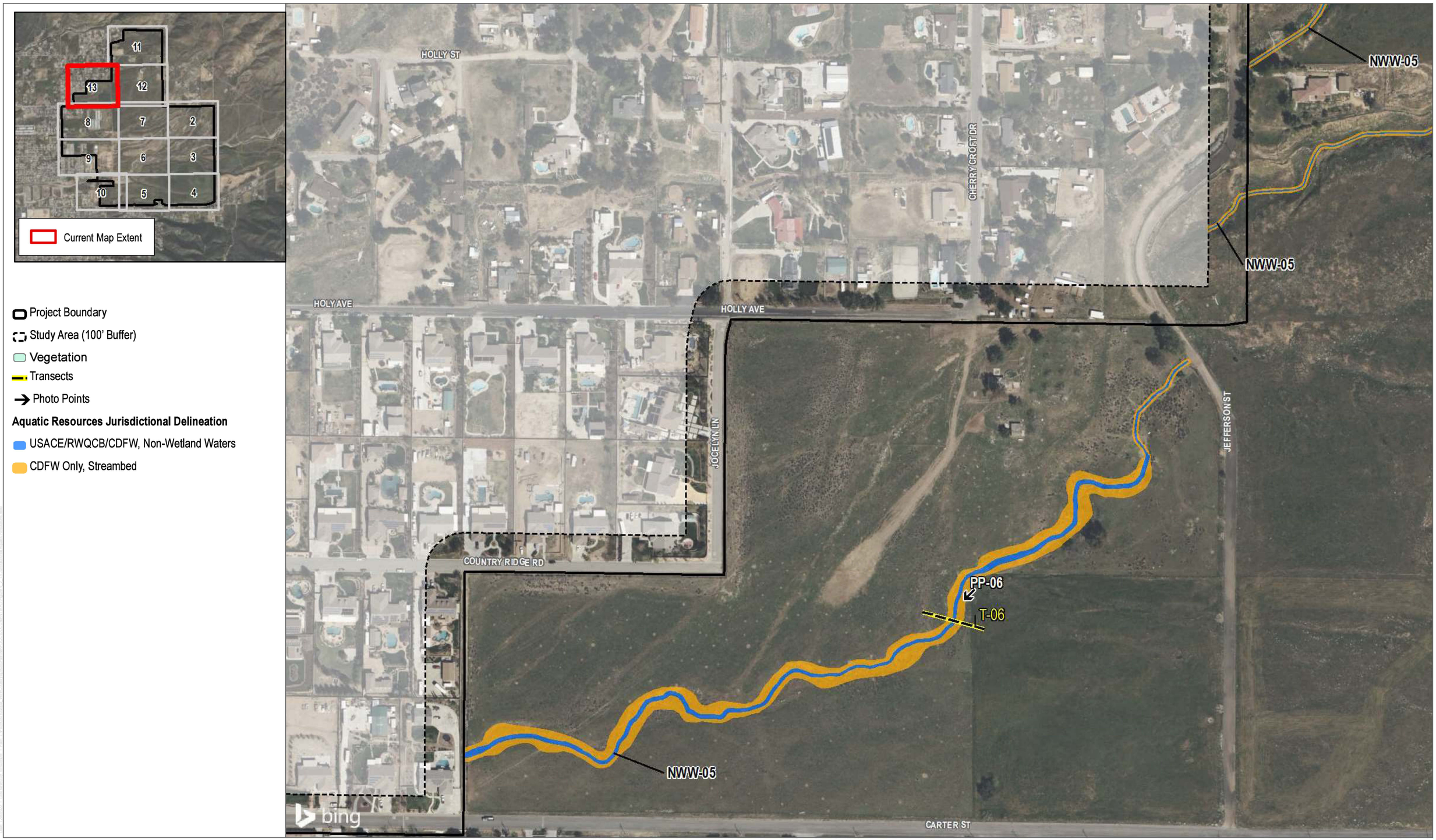
DUDEK 0 115 230 Feet

FIGURE 4-12

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 115 230 Feet

FIGURE 4-13

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK

Appendix A

Request for a Jurisdictional Determination

Appendix 1 - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To: District Name Here

- I am requesting a JD on property located at: 36104 Oak Glen Rd
  (Street Address)
  City/Township/Parish: Yucaipa County: San Bernardino State: CA
  Acreage of Parcel/Review Area for JD: 1,194.76
  Section: 29, 30 Township: 1S Range: 1W
  Latitude (decimal degrees): 34.054792 Longitude (decimal degrees): -117.018353
  (For linear projects, please include the center point of the proposed alignment.)
- Please attach a survey/plat map and vicinity map identifying location and review area for the JD.
- ☐ I currently own this property. ☐ I plan to purchase this property.
  ☑ I am an agent/consultant acting on behalf of the requestor.
  ☐ Other (please explain): _____.
- Reason for request: (check as many as applicable)
  ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
  ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
  ☑ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
  ☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
  ☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
  ☐ A Corps JD is required in order to obtain my local/state authorization.
  ☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
  ☐ I believe that the site may be comprised entirely of dry land.
  ☐ Other: _____
- Type of determination being requested:
  ☐ I am requesting an approved JD.
  ☑ I am requesting a preliminary JD.
  ☐ I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
  ☐ I am unclear as to which JD I would like to request and require additional information to inform my decision.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

*Signature: _____ Date: _____

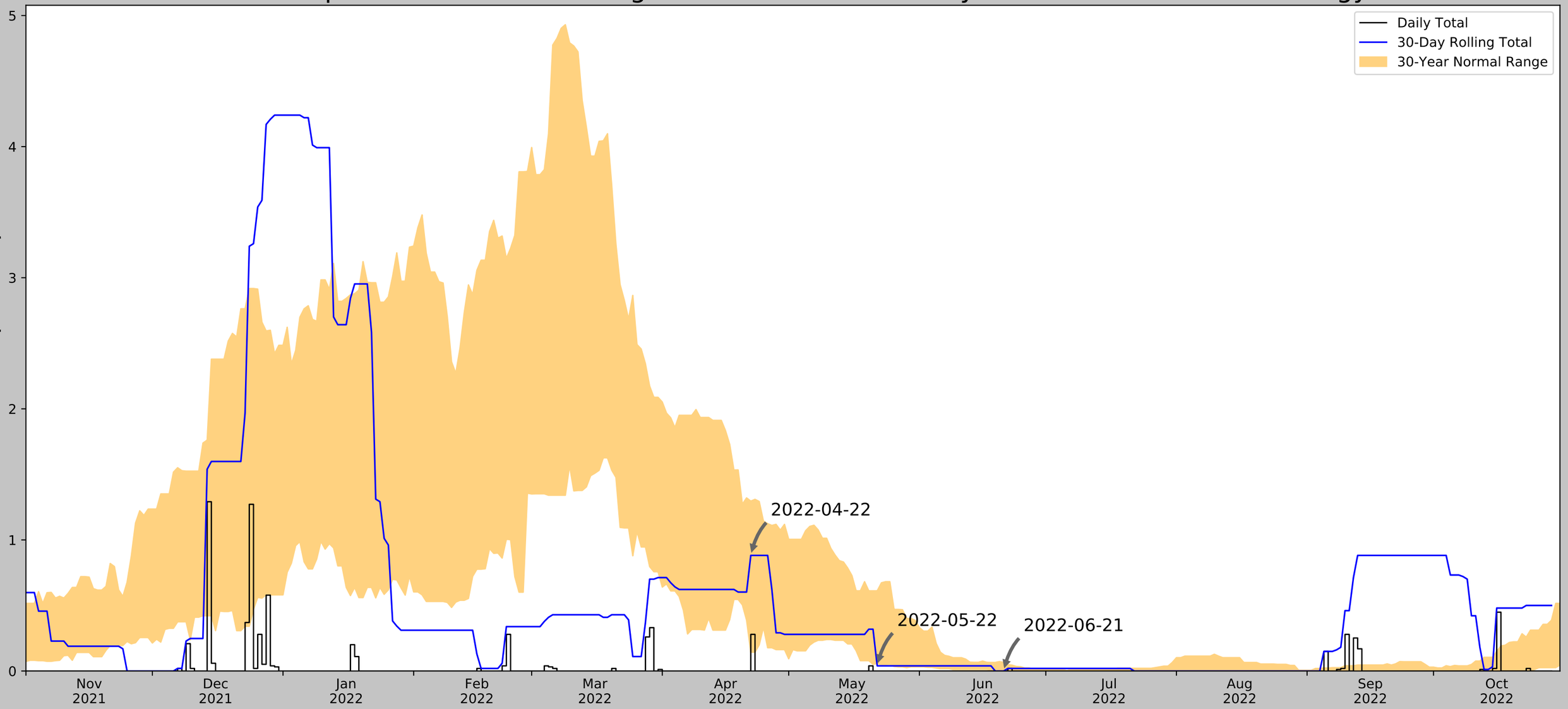
- Typed or printed name: Anna Cassady
  Company name: Dudek
  Address: 605 Third Street
  Encinitas, CA 92024
  Daytime phone no.: 951-300-1088
  Email address: acassady@dudek.com

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

Appendix B

Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.058313, -117.005628
Observation Date	2022-06-21
Elevation (ft)	3245.49
Drought Index (PDSI)	Extreme drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-06-21	0.0	0.065354	0.0	Normal	2	3	6
2022-05-22	0.056693	0.611811	0.03937	Dry	1	2	2
2022-04-22	0.143701	1.296063	0.88189	Normal	2	1	2
Result							Normal Conditions - 10

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
REDLANDS	34.0369, -117.1947	1410.105	10.925	1835.385	24.967	11218	90
RIVERSIDE 5.8 E	33.9406, -117.2964	1536.089	8.844	125.984	5.094	1	0
SAN BERNARDINO F S 226	34.1344, -117.2539	1140.092	7.54	270.013	5.429	41	0
RIVERSIDE CITRUS EXP	33.9669, -117.3614	985.892	10.704	424.213	9.358	93	0

Appendix C
Data Forms

OHWM DATA SHEET

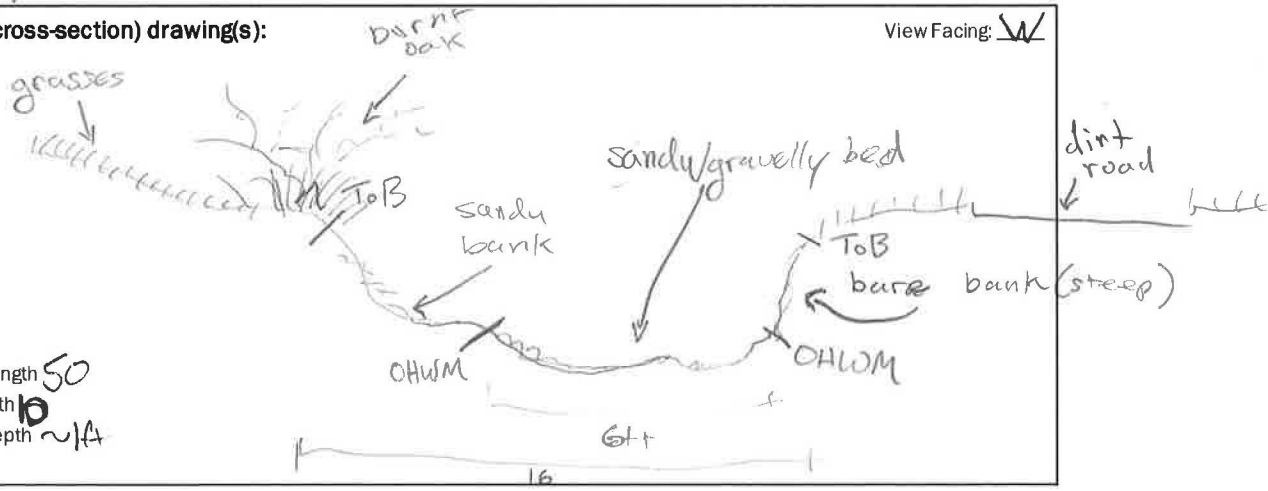
Project: Wine Country **Date:** 6/28/22 **Feature ID:** NWW-04

Investigator(s): Dylan Ayers **Transect ID:** T-01

Site Location: open, undeveloped lands north of Yucaipa.

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 50
☒ OHWM width 10
☒ Channel depth ~1ft
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☒ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM		X	X	X	

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	20	0	100	0
Below OHWM	0	0	0	100

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

Upland Species:	*Bank Species:*	*Emergent Species:*
-oak	-grasses -rhus	-none

OHWM DATA SHEET

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

- recently burnt
- ohv impacts in area
- potential grazing

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

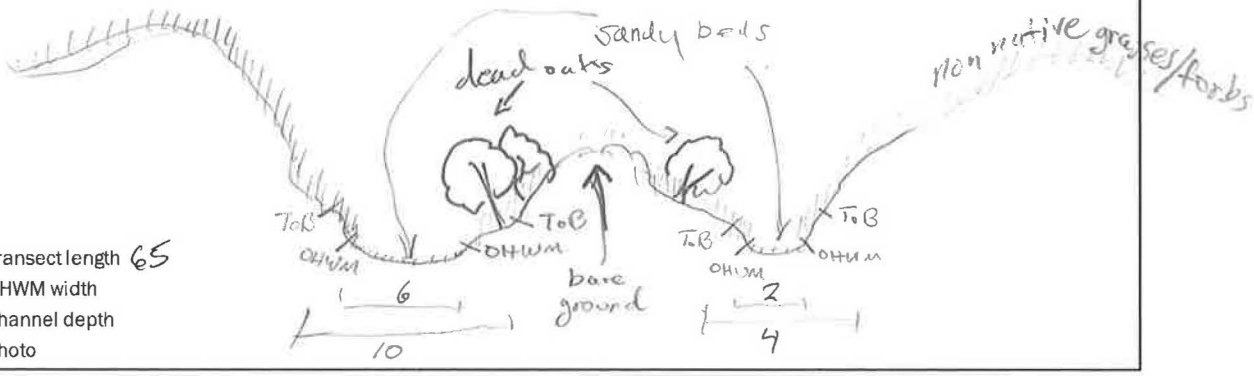
Project: Wine Country **Date:** 6/28/22 **Feature ID:** NWW-01

Investigator(s): Dylan Ayers **Transect ID:** T-02

Site Location: see T-01

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): ☆ convergence of two features shown here View Facing: NE



☒ Transect length 65
☒ OHWM width
☒ Channel depth
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☒ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM		X	X	X	

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	30	0	80	20
Below OHWM	0	0	0	100

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

Upland Species:	*Bank Species:*	*Emergent Species:*
- oaks - Rhus sp.	- non-native grasses/forbs	- none

OHWM DATA SHEET

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

- recently burnt
- ohv impacts

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

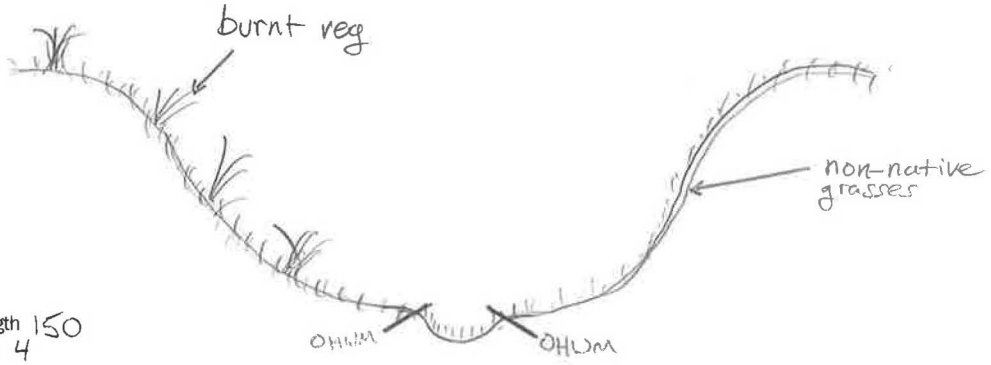
Project: Wine Country **Date:** _____ **Feature ID:** NWW-06

Investigator(s): Dylan Ayers **Transect ID:** T-03

Site Location: See T-01

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: SSW



☒ Transect length 150
☒ OHWM width 4
☒ Channel depth ~1
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☒ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM	X	X			

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	20	100	0
Below OHWM	0	6	90	10

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

Upland Species:	*Bank Species:*	*Emergent Species:*
- non-native grasses - oak (burnt)	- non-native grasses	- none

OHWM DATA SHEET

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

- recently burnt
- may have accepted ag runoff historically

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

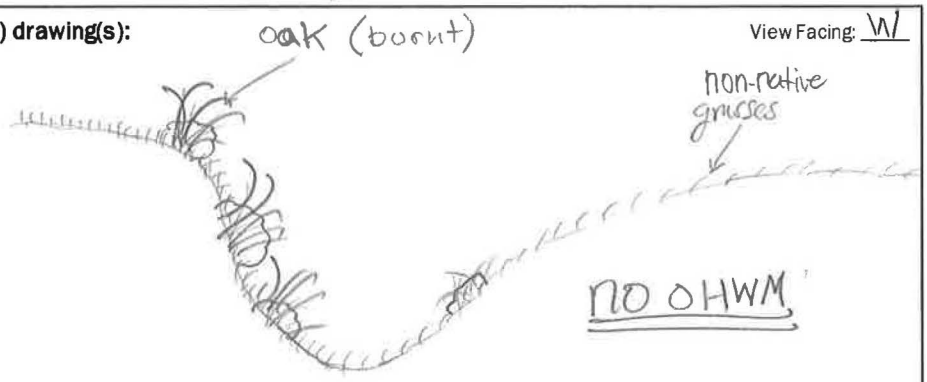
Project: Wine Country **Date:** _____ **Feature ID:** None

Investigator(s): Dylan Ayers **Transect ID:** T-04

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 85
☒ OHWM width —
☒ Channel depth
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	*Bank Species:*	*Emergent Species:*
-NNG - oak (burnt)		

OHWM DATA SHEET

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

- historic ag area
- nearby road
- recently burnt

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

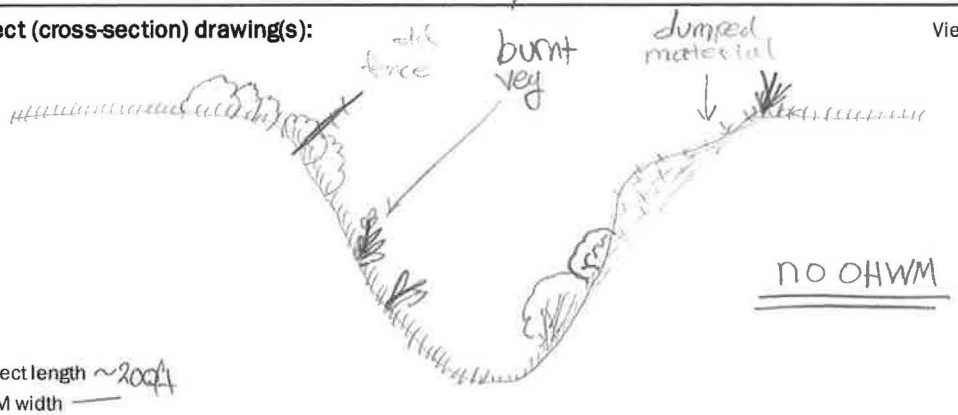
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-05

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: ESE



☒ Transect length ~200ft
☒ OHWM width
☒ Channel depth
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grass/forbs -oak (burnt)		

OHWM DATA SHEET

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

- trash dumping, soils
- nearby road
- area historically used for ag

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

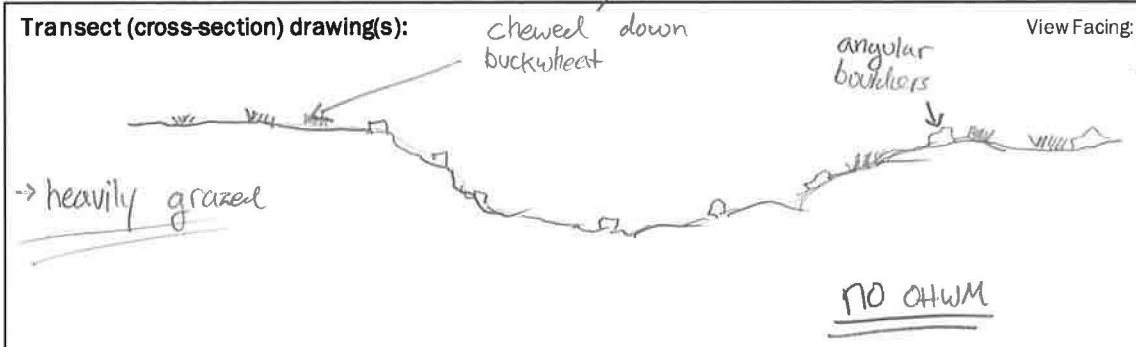
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-06

Site Location:
See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 150
☒ OHWM width —
☒ Channel depth —
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	*Bank Species:*	*Emergent Species:*
- cal. buckwheat - non-native grasses		

OHWM DATA SHEET

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

- heavy grazing
- compacted soils

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

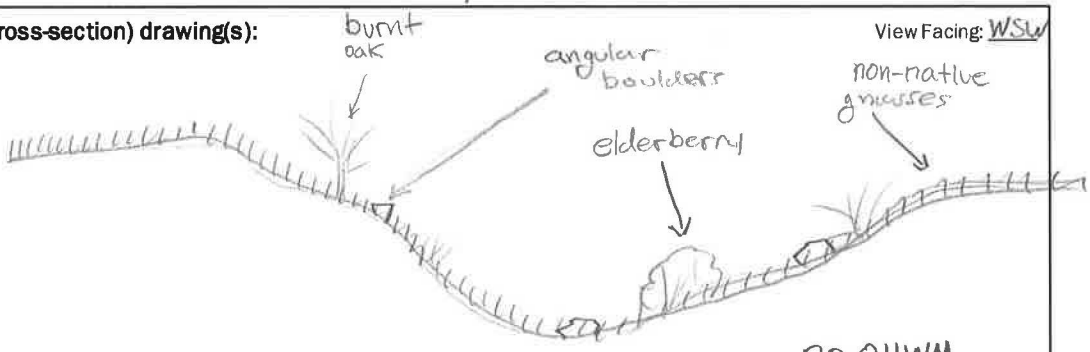
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayer **Transect ID:** T-07

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: WSW



☒ Transect length 100
☒ OHWM width —
☒ Channel depth —
☑ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	***Bank Species:***	***Emergent Species:***
-oak (burnt) -non-native grasses -elderberry		

OHWM DATA SHEET

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

-area historically used for ag
-appears relatively untouched

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

OHWM DATA SHEET

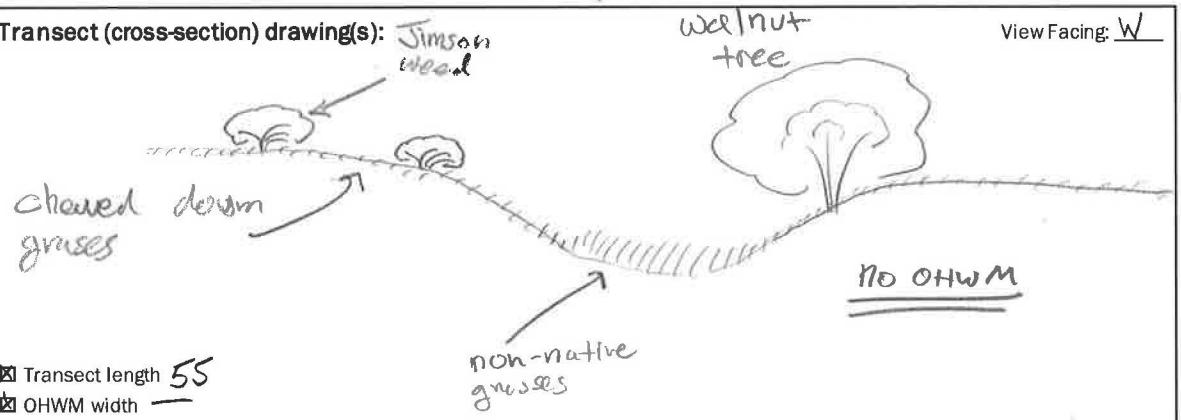
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-08

Site Location: see T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 55
☒ OHWM width —
☒ Channel depth —
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	*Bank Species:*	*Emergent Species:*
- walnut - jimson weed - non-native grasses		

OHWM DATA SHEET

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

- heavy grazing
- nearby ag operation

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

Project: Wine Country **Date:** _____ **Feature ID:** NWW-05

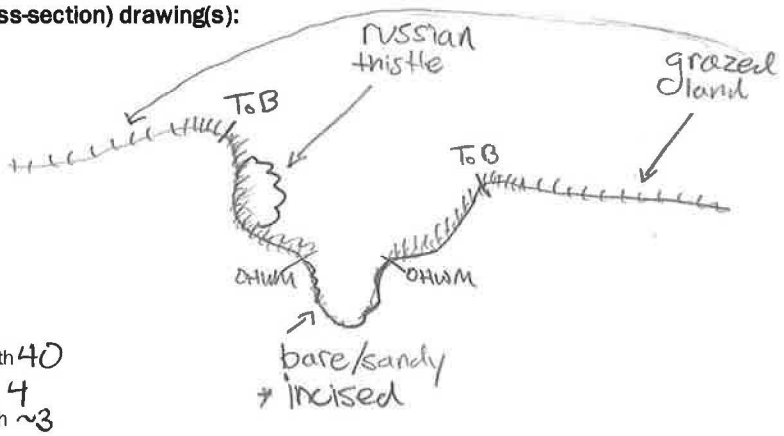
Investigator(s): Dylan Ayers **Transect ID:** T-09

Site Location:

See T-01

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: E



☒ Transect length 40
☒ OHWM width 4
☒ Channel depth ~3
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X		X	X	
Below OHWM	X	X			

Total Vegetation Cover

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

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

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses	-Russian thistle	-none

OHWM DATA SHEET

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

- grazing
- nearby ag activity

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

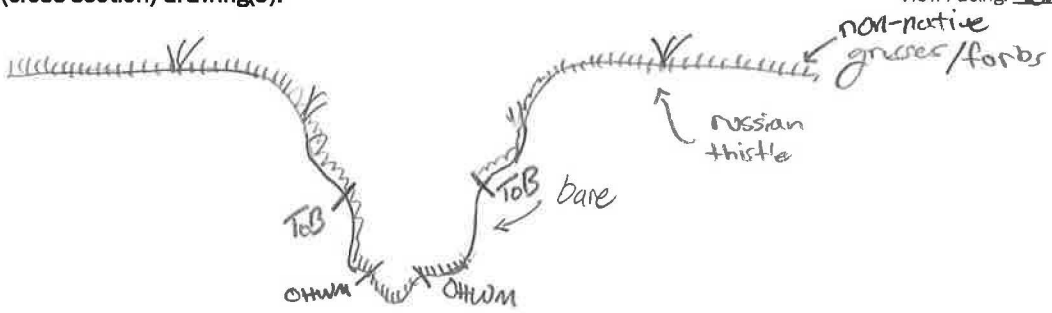
Project: Wine Country **Date:** _____ **Feature ID:** NWW-02

Investigator(s): Dylan Ayers **Transect ID:** T-10

Site Location: See T-01

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: WSW



☒ Transect length 87
☒ OHWM width 4
☒ Channel depth 24
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses -russian thistle	-non-native grasses	-none

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):
-area historically used for ag

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

Project: Wine Country **Date:** _____ **Feature ID:** NWW-01

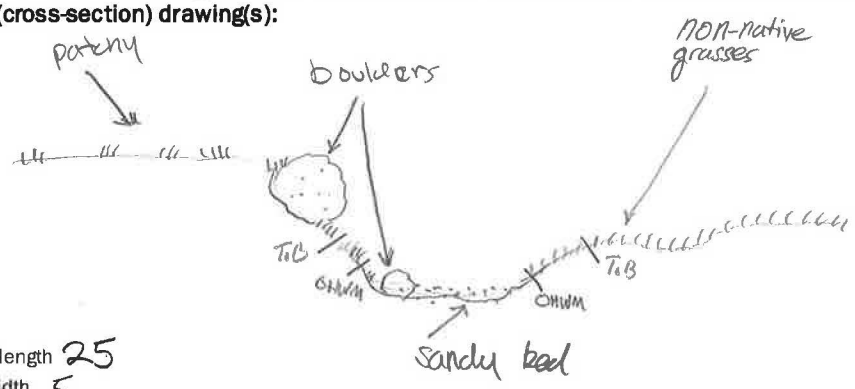
Investigator(s): Dylan Ayers **Transect ID:** T-11

Site Location:

see T-01

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: NE



☒ Transect length 25
☒ OHWM width 5
☒ Channel depth ~1
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				X
Below OHWM		X	X	X	X

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	70	30
Below OHWM	0	0	5	95

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

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses -Russian thistle	-mustards -non-native grasses	-none

OHWM DATA SHEET

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

-Nearby road with potential OHV use

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

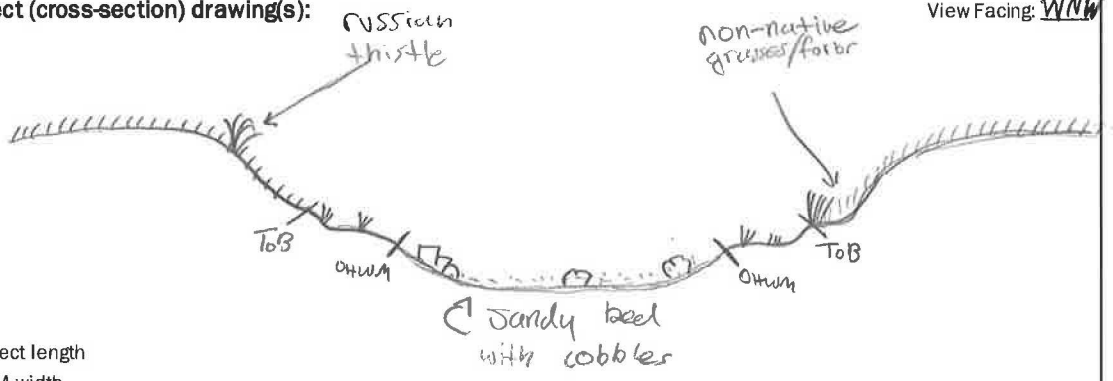
Project: Wine Country **Date:** _____ **Feature ID:** NWW-01

Investigator(s): Dylan Ayers **Transect ID:** T-12

Site Location: See T-01

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: WNW



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X		X		
Below OHWM		X	X	X	

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	80	20
Below OHWM	0	0	0	100

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

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses/forbs		

OHWM DATA SHEET

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

- Nearby road with OHV use

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

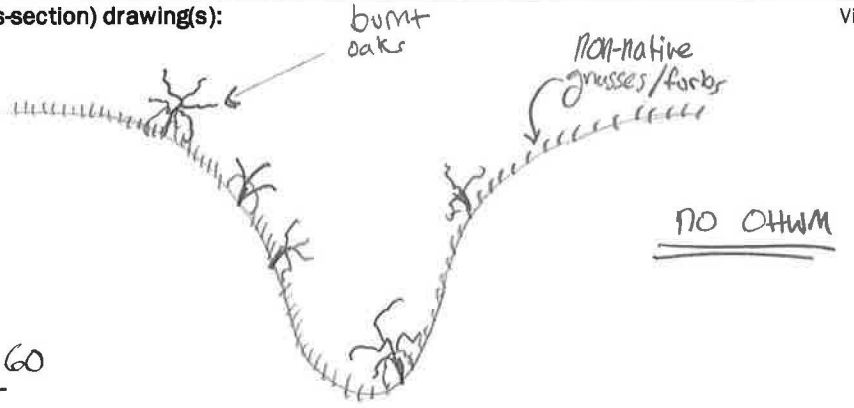
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-13

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: E



☒ Transect length 60
☒ OHWM width —
☒ Channel depth —
☑ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	***Bank Species:***	***Emergent Species:***
-oak -non-native grasses/forbs		

OHWM DATA SHEET

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

- relatively undisturbed
- recently burnt

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

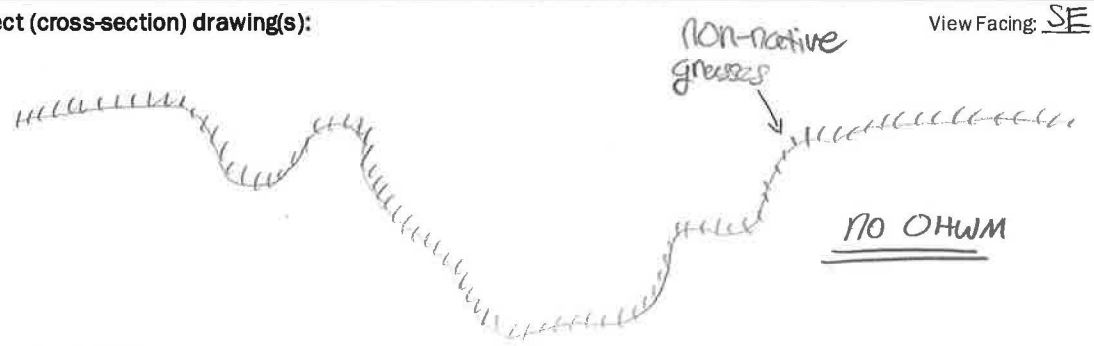
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-14

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: SE



☒ Transect length 120
☒ OHWM width —
☒ Channel depth —
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	*Bank Species:*	*Emergent Species:*
-non-native grasses		

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):
-areas historically used for ag activity
-recently burnt

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

OHWM DATA SHEET

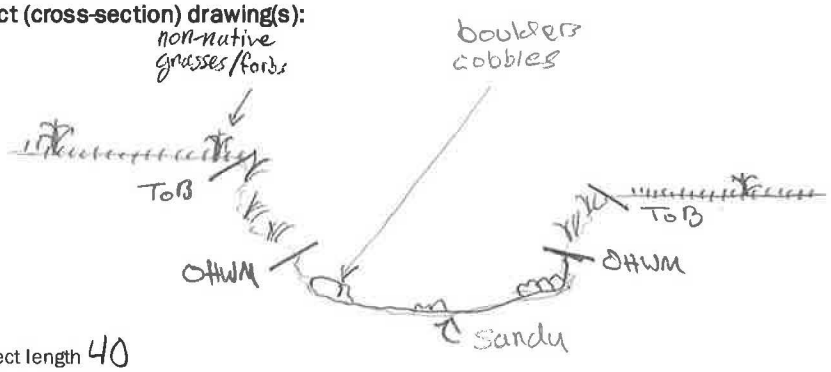
Project: Wine Country Date: _____ Feature ID: NWW-01

Investigator(s): Dylan Ayers Transect ID: T-15

Site Location: See T-01

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: E



☒ Transect length 40
☒ OHWM width 10
☒ Channel depth
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☒ Break in Slope at OHWM*: ☒ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X	X			
Below OHWM		X	X	X	X

Total Vegetation Cover

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

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

Upland Species:	*Bank Species:*	*Emergent Species:*
-Russian thistle -non-native grasses/forbs	-Russian thistle -non-native grasses/forbs	-none

OHWM DATA SHEET

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

- road bridge crosses feature in this area
- OHV/equestrian impacts

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

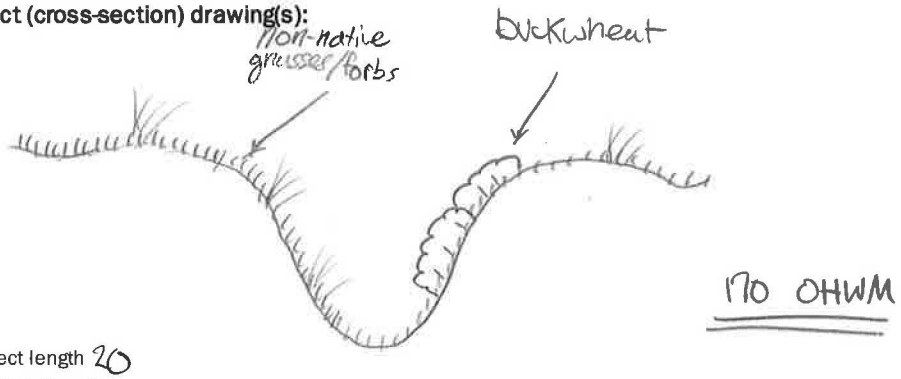
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-16

Site Location: see T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: E



☒ Transect length 20
☒ OHWM width —
☒ Channel depth —
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses/forbs -buckwheat		

OHWM DATA SHEET

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

- fence crosses area
- nearby road/residences

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

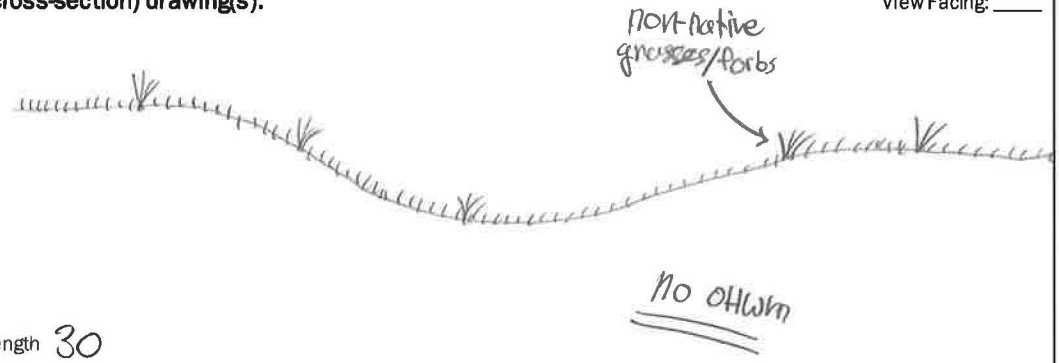
Project: Wine Country **Date:** _____ **Feature ID:** done

Investigator(s): Dylan Ayers **Transect ID:** T-17

Site Location: see T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: ____



☒ Transect length 30
☒ OHWM width —
☒ Channel depth —
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses/forbs		

OHWM DATA SHEET

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

- nearby roadway / residences

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

Project: Wine Country Date: _____ Feature ID: NWW-03

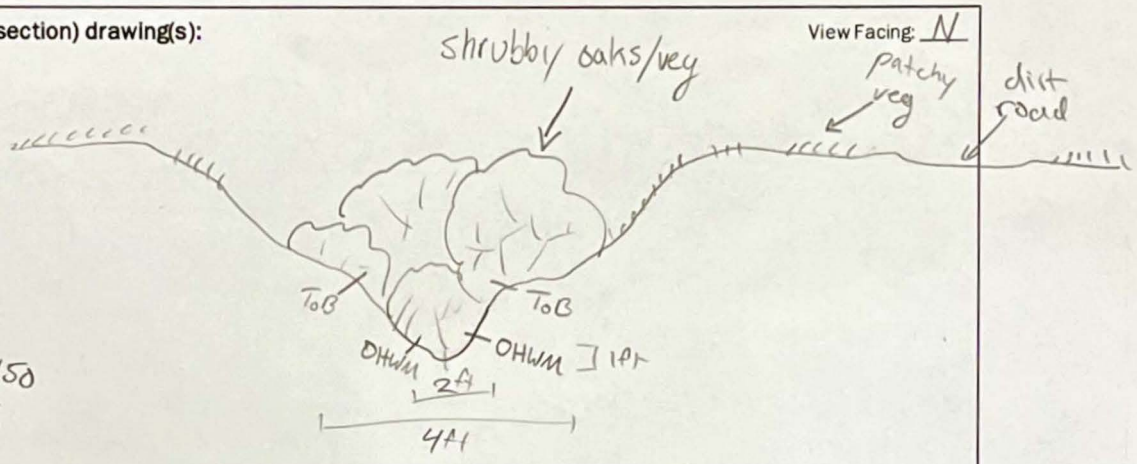
Investigator(s): Dylan Ayers Transect ID: T-18

Site Location: See T-01

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: N



☒ Transect length 150
☒ OHWM width 2
☒ Channel depth 1
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM	X	X			

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	100	80	20	70
Below OHWM	80	60	50	30

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

Upland Species:	*Bank Species:*	*Emergent Species:*
-oak	-oak	-none

OHWM DATA SHEET

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

- nearby road
- basin downstream has been artificially kerned

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

Project: Wine Country Date: _____ Feature ID: none

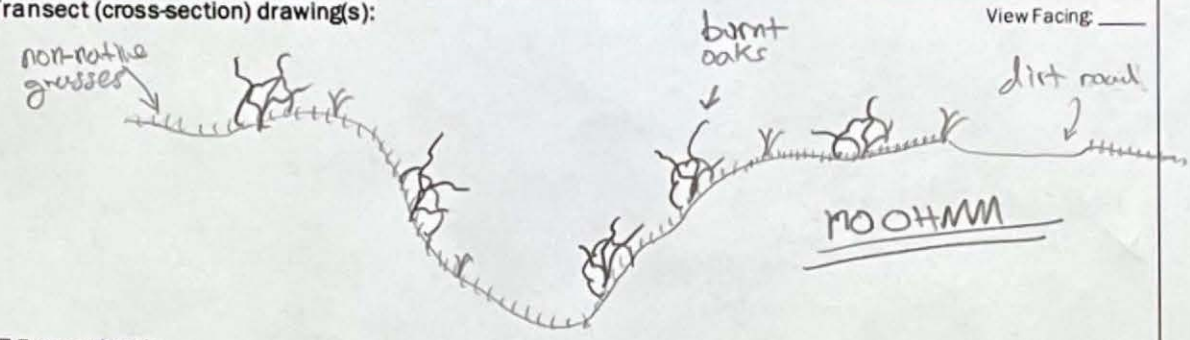
Investigator(s): Dylan Ayers Transect ID: T-19

Site Location:

see T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: ____



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	*Bank Species:*	*Emergent Species:*
-oak -non-native grasses	-none	-none

OHWM DATA SHEET

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

-flow to this feature has been altered due to upstream berm

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

OHWM DATA SHEET

Project: Wine Country Date: _____ Feature ID: _____

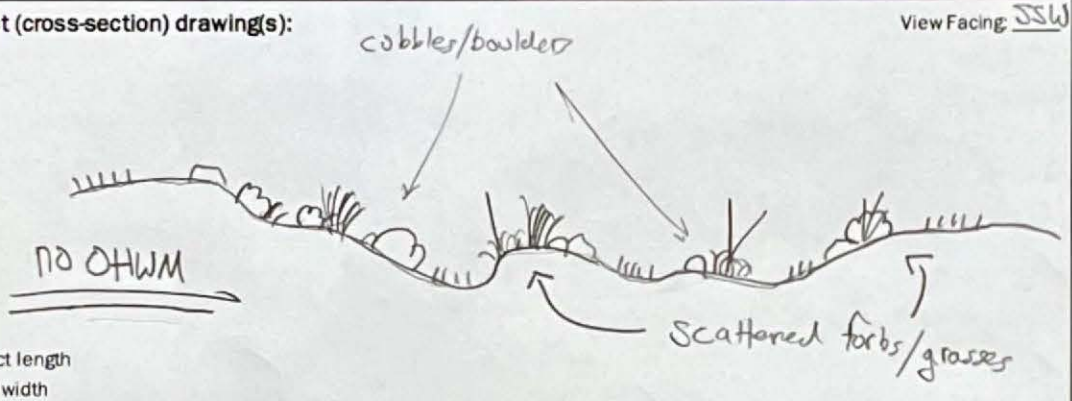
Investigator(s): Dylan Ayers Transect ID: T-20

Site Location:

see T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: SSW



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

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

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

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

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

Upland Species:	*Bank Species:*	*Emergent Species:*
-deer weed -yucca -forbs/grasses	-none	-none

OHWM DATA SHEET

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

- this area was likely a historic stream feature

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

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

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

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

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

Appendix D
Review Area Photos

Photo Number 1. View of Transect (T)-01 collected at Non-Wetland Water (NWW)-04, facing west.

Photo Number 2. View of T-02 collected at NWW-01, facing east.

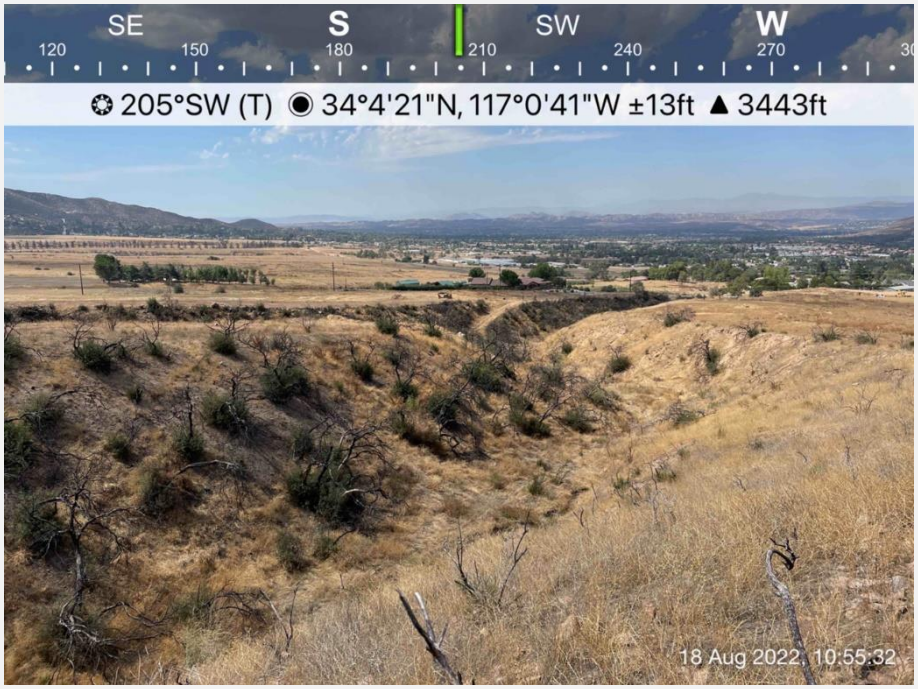


Photo Number 3. View of T-03 collected at NWW-06, facing south-southwest.

Photo Number 4. View of T-04 collected at a non-jurisdictional upland swale, facing north-northeast.

Photo Number 5. View of T-05 collected at a non-jurisdictional upland swale, facing east-southeast.

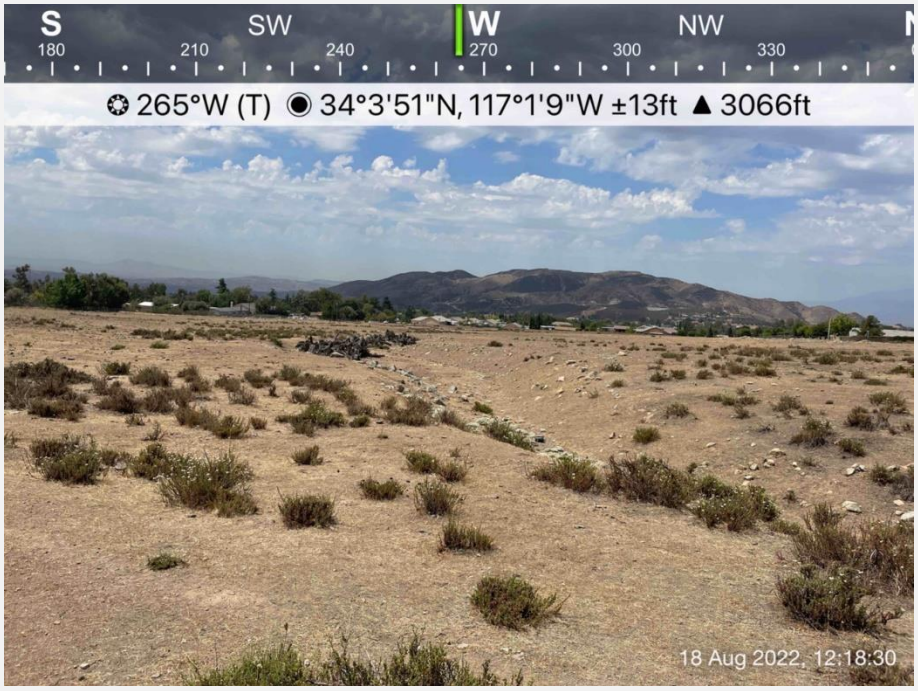


Photo Number 6. View of T-06 collected at a non-jurisdictional upland swale, facing west.

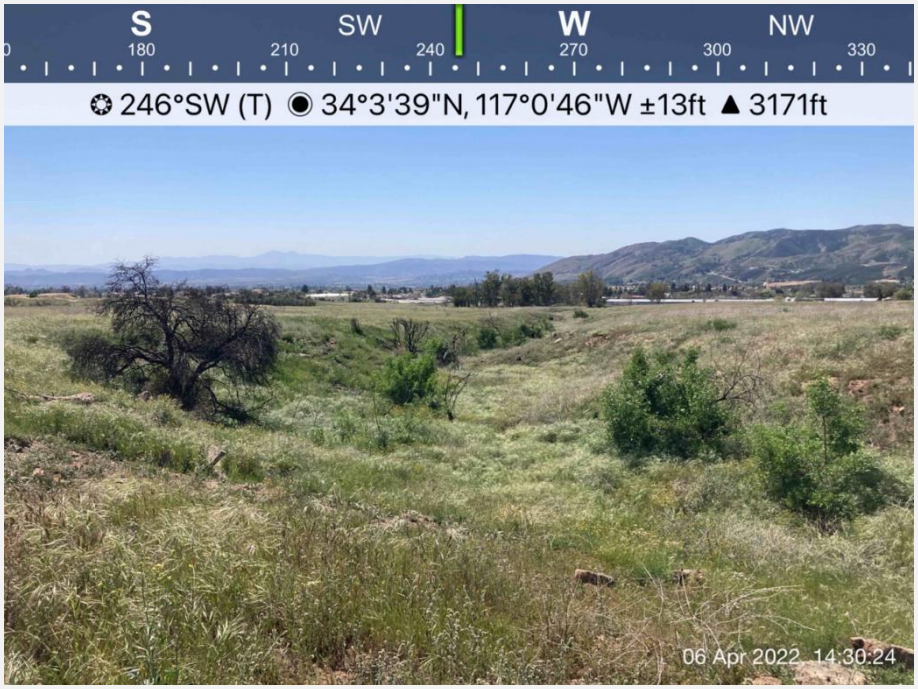


Photo Number 7. View of T-07 collected at a non-jurisdictional upland swale, facing west-southwest.

Photo Number 8. View of T-08 collected at a non-jurisdictional upland swale, facing west. Eastern edge of RIP-4 riparian habitat also shown.

Photo Number 9. View of T-09 collected at NWW-05, facing east.

Photo Number 10. View of T-10 collected at NWW-02, facing west-southwest.

Photo Number 11. View of T-11 collected at NWW-01, facing northeast.

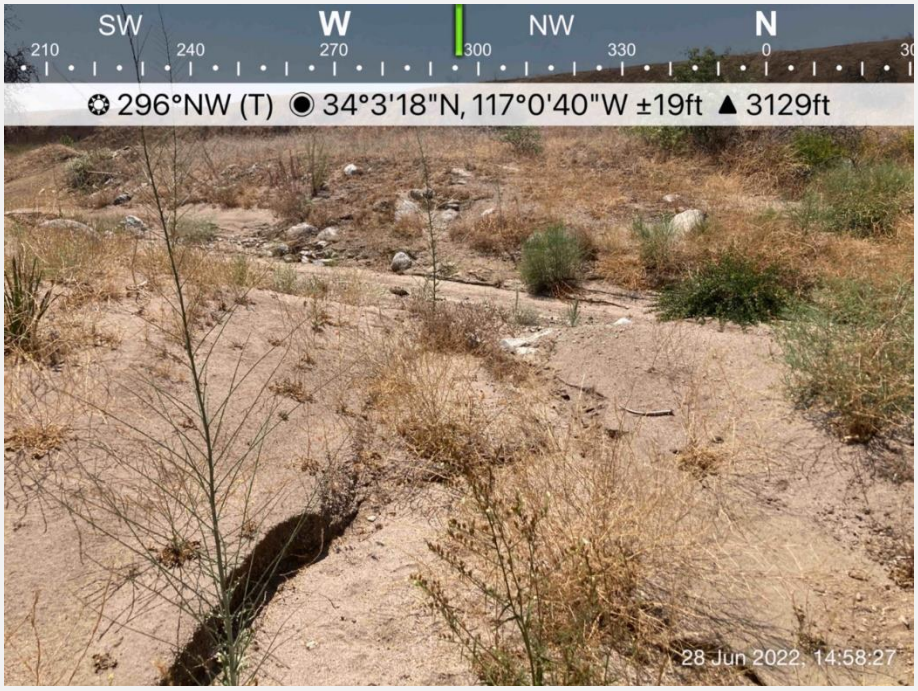


Photo Number 12. View of T-12 collected at a non-jurisdictional upland swale, facing west-northwest.

Photo Number 13. View of T-13 collected at a non-jurisdictional upland swale, facing east.

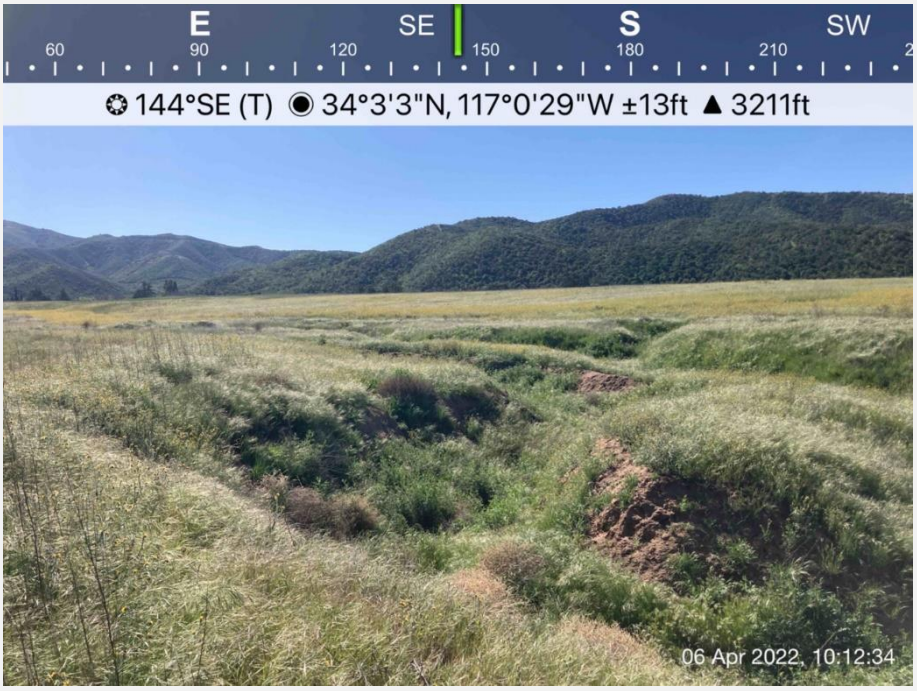


Photo Number 14. View of T-14 collected at a non-jurisdictional upland swale, facing southeast.

Photo Number 15. View from T-15 within NWW-4, facing east.

Photo Number 16. View of T-16 collected at a non-jurisdictional upland swale, facing west.

Photo Number 17. View of T-17 collected at a non-jurisdictional upland swale, facing southwest.

Photo Number 18. View looking towards south edge of review area, facing southeast. Sloped and terraced lands are remnant of historic agricultural uses.

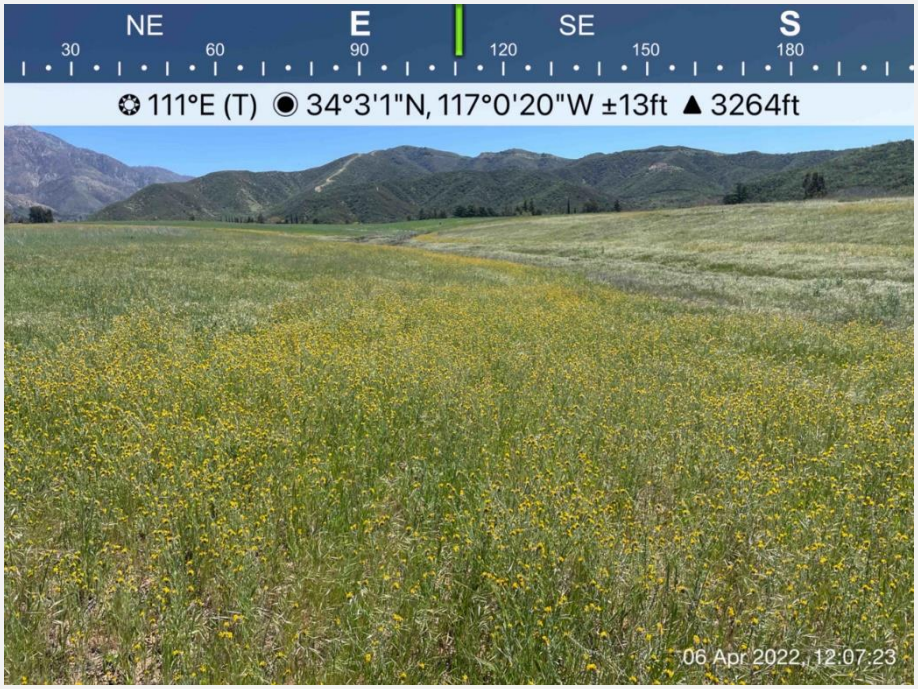


Photo Number 19. View of grassland habitat surrounding an upland swale feature near the southern edge of the review area, facing east-southeast.

Photo Number 20. View of Wilson Creek taken in wider section of NWW-01, facing southwest. Drift and sediment deposits shown.

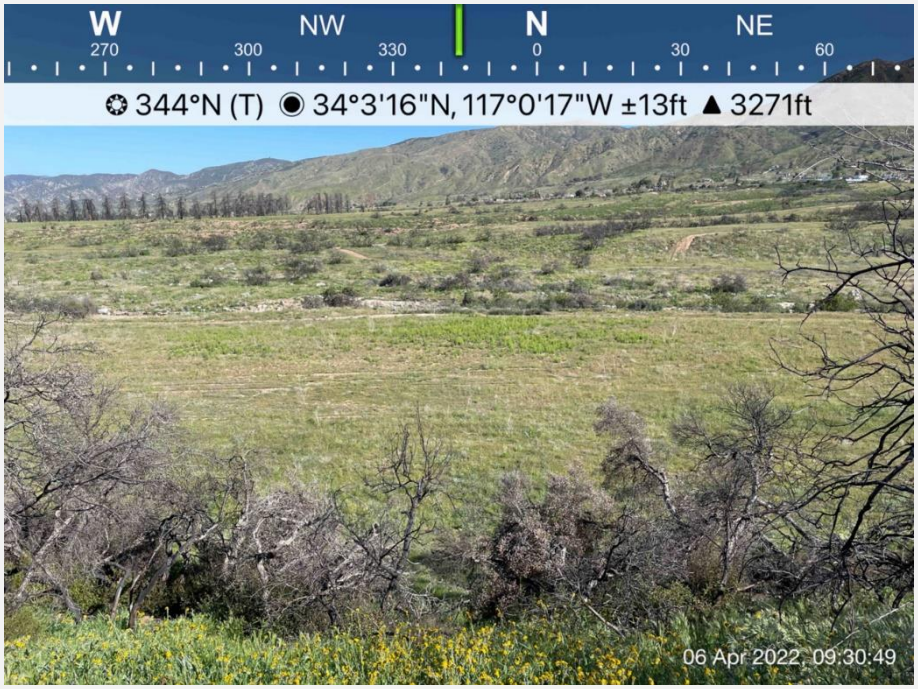


Photo Number 21. View of NWW-21, facing north, where no feature is present.

Photo Number 22. View of T-14 facing north, where no feature is present.

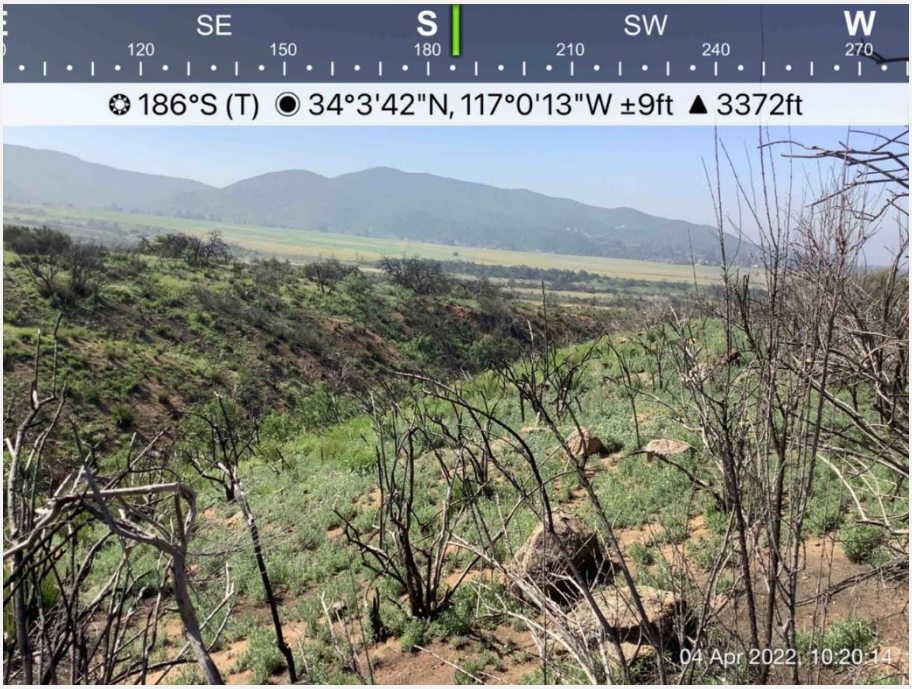


Photo Number 23. View facing south, where no feature is present.

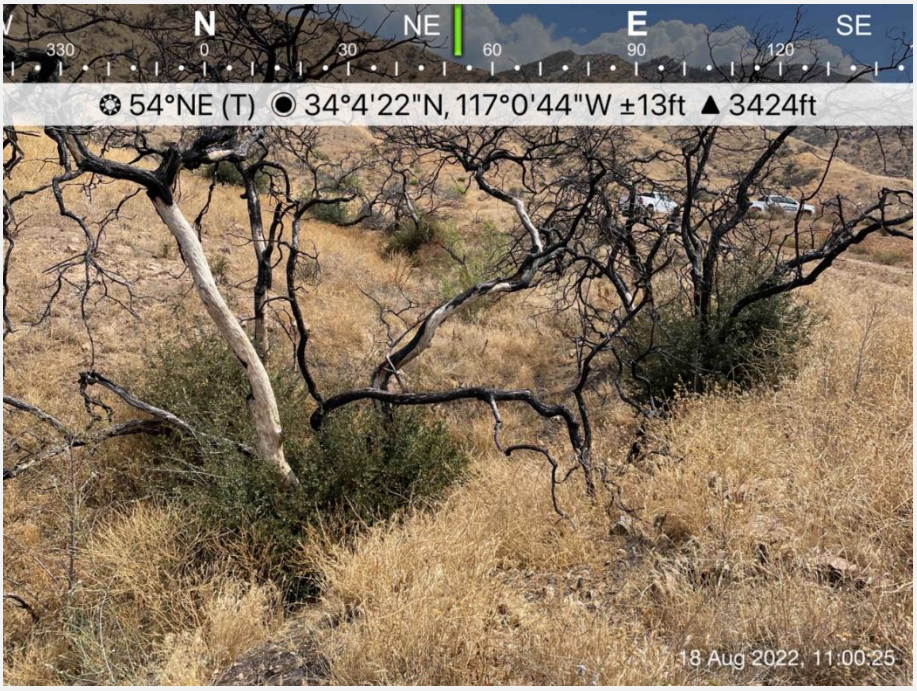


Photo Number 24. View of T-12 facing north–northeast towards NWW-07.

Photo Number 25. View of NWW-03 facing southwest. Berm shown at downstream end of feature, blocking and water from continuing southwest.

Photo Number 26. View of NWW-03 facing north. Vegetated portion of feature shown in this location.

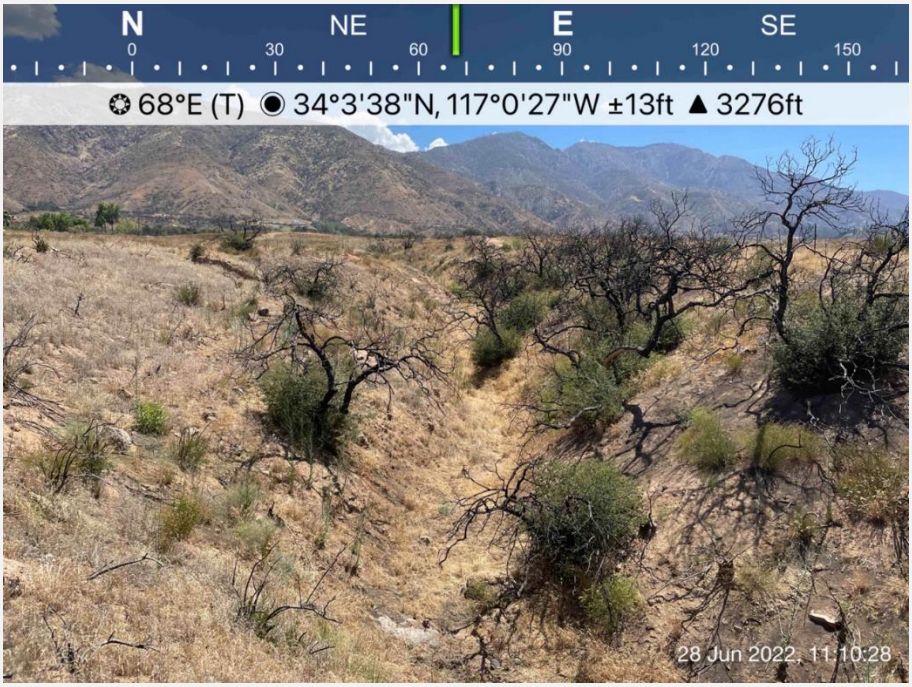


Photo Number 27. View of T-19 facing east-northeast. View shows swale feature that lacks OHWM.

Photo Number 28. View of RIP-2 feature showing low coverage of mulefat and elderberry shrubs.

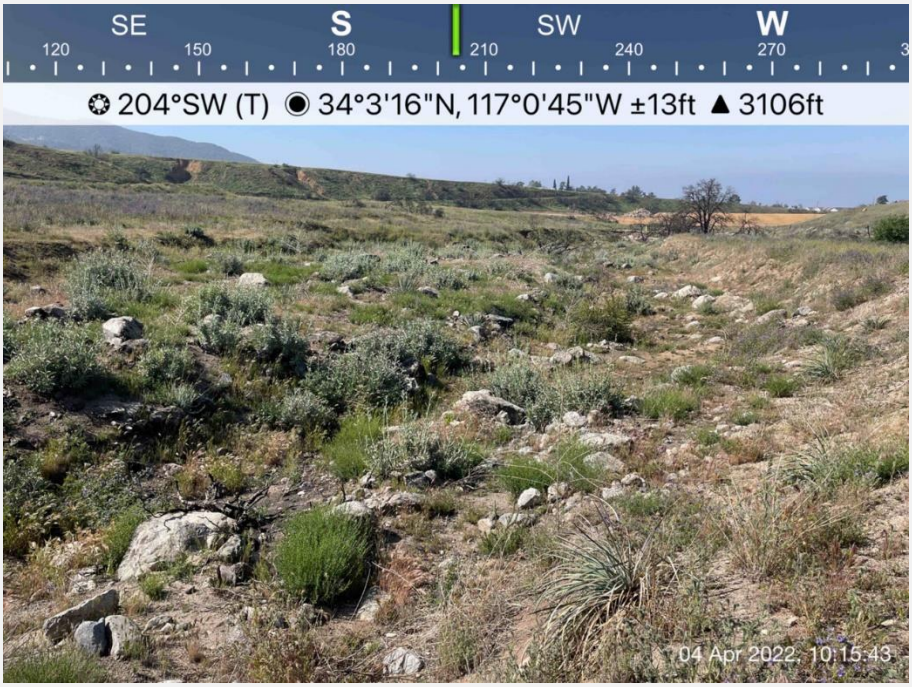


Photo Number 29. View of T-20 facing south-southwest. Inactive portion of streambed shown in this location, historically associated with NWW-01.

Photo Number 30. View of RIP-1 feature near NWW-1. Riparian habitat shown.

Photo Number 31. View of T-20 facing south-southwest. Inactive portion of streambed shown in this location, historically associated with NWW-01.