Appendix C3

Aquatic Resources Delineation Report - Lassen Facility

DRAFT

Aquatic Resources Delineation Report

Forest Resiliency Project Lassen County, California

JULY 2023

Prepared for:

GOLDEN STATE FINANCE AUTHORITY
1215 K Street, Suite 1650
Sacramento, California 95814
Contact: Arthur J. Wylene

Prepared by:

DUDEK
853 Lincoln Way, Suite 208
Auburn, California 95603
Contact: Allie Sennett

Printed on 30% post-consumer recycled material.

Table of Contents

SECTION **PAGE NO.**

Acronyms and Abbreviations iii

1 Executive Summary 1

2 Introduction 3
- 2.1 Disclaimer Statement 3
- 2.2 Contact Information 3

3 Review Area Description and Landscape Setting 5
- 3.1 Geology and Topography 5
- 3.2 Soils 5
- 3.3 Vegetation Communities and Land Cover Types 6
- 3.4 Watershed 6
- 3.5 Review Area Alterations, Current and Past Land Use 7

4 Precipitation Data and Analysis 9
- 4.1 Regional Climate 9

5 Investigation Methods 11
- 5.1 U.S. Army Corps of Engineers 11
- 5.2 Regional Water Quality Control Board 12
- 5.3 California Department of Fish and Wildlife 13

6 Aquatic Resources 15
- 6.1 Aquatic Resources Data Summary 15
- 6.2 Waters of the United States (USACE) 15
  - 6.2.1 Seasonal Wetland 16
  - 6.2.2 Seasonal Wetland Swale 16
  - 6.2.3 Ditch 16
- 6.3 Waters of the State (RWQCB) 16
- 6.4 CDFW Jurisdiction 16

7 References 17

TABLES

1 USACE Aquatic Resources in the Review Area 1
2 Contact Information 3
3 Antecedent Precipitation Tool Data for the Review Area 9
4 Schedule of the Aquatic Resources Delineation 11
5 USACE Aquatic Resources in the Review Area 15

FIGURES

1 Project Location 19
2 Project Site 21
3 Soil Types 23
4 Hydrologic Setting 25
5 Aquatic Resources Delineation – USACE, CDFW, and RWQCB 27

APPENDICES

A Request for a Jurisdictional Determination
B List of Plant Species Observed
C Antecedent Precipitation Tool Output
D Data Forms
E Review Area Photos

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APC	antecedent precipitation condition
APT	Antecedent Precipitation Tool
ARDR	Aquatic Resources Delineation Report
CDFW	California Department of Fish and Wildlife
OHWM	ordinary high-water mark
PDSI	Palmer Drought Severity Index
project	Forest Resiliency Program
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers

INTENTIONALLY LEFT BLANK

1 Executive Summary

The Forest Resiliency Program – Lassen Facility (project) will consist of a wood pellet production facility in Nubieber, California, approximately 3 miles southwest of the census-designated place of Bieber in northwestern Lassen County. The Golden State Natural Resources Forest Resiliency Demonstration Project is a response to the growing rate of wildfires in California, which has been exacerbated by hazardous excess fuel loads in forests, and the need to promote economic activity with California's rural counties. Golden State Finance Authority is the applicant for the proposed project.

This Aquatic Resources Delineation Report (ARDR) was prepared in accordance with the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (USACE 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (USACE 2010), and the Field Guide to the Identification of the Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (USACE 2014).

Dudek conducted a field delineation on September 21 and 22, 2021, and May 25 and 26, 2023, to identify aquatic resources in the approximately 113-acre review area potentially subject to regulations in Sections 401 and 404 of the Clean Water Act, the Porter–Cologne Water Quality Control Act, and Section 1602 of the California Fish and Game Code. Table 1 summarizes the delineation findings under USACE jurisdiction. Potential jurisdiction of each aquatic resource is preliminary until verified by the USACE Sacramento District.

Table 1. USACE Aquatic Resources in the Review Area

Aquatic Resource	Cowardin Code[1]	Location (Latitude, Longitude)	Acres[2]	Linear Feet
Non-Wetland Waters				
DIT-01	R4	41.098070, 121.176645	0.017	219
DIT-02	R4	41.093100, -121.176762	0.87	2,159
DIT-03	R4	41.092637, -121.175466	0.54	1,422
DIT-04	R4	41.090568, -121.175542	0.04	761
DIT-05	R4	41.089719, -121.174785	0.35	1,147
DIT-06	R4	41.088498, -121.175355	0.27	819
		Non-Wetland Waters Subtotal	*2.11*	*6,527*
Wetlands				
SW-01	PEM	41.092290, -121.174613	5.94	N/A
SW-02	PEM	41.097149, -121.176399	3.69	N/A
SW-03	PEM	41.094362, -121.176134	3.54	N/A
SW-04	PEM	41.090258, -121.173967	3.69	N/A
SW-05	PEM	41.089234, -121.173814	7.92	N/A
SW-06	PEM	41.087735, -121.174192	5.36	N/A
SW-07	PEM	41.086056, -121.179508	14.86	N/A
SWS-01	PEM	41.088069, -121.17748	0.38	N/A

Table 1. USACE Aquatic Resources in the Review Area

Aquatic Resource	Cowardin Code[1]	Location (Latitude, Longitude)	Acres[2]	Linear Feet
SWS-02	PEM	41.090962, -121.173515	0.10	N/A
		Wetlands Subtotal	*45.46*	*N/A*
		Total[3]	***47.57***	***6,527***

Notes:
USACE = U.S. Army Corps of Engineers; N/A = not applicable

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 2022). PEM = palustrine, emergent; R4 = intermittent channel.

2 Acreage of the non-wetland waters extend to the ordinary high-water mark.

3 Minor discrepancies in totals are the result of rounding differences between Excel and ArcMap.

2 Introduction

This ARDR was prepared in accordance with the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This ARDR and supporting appendices provide the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. This ARDR presents the results of the jurisdictional aquatic resource delineation conducted by Dudek for the proposed Forest Resiliency Program, located in Lassen County, California. The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of 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).

2.1 Disclaimer Statement

This ARDR 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 ARDR 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.

2.2 Contact Information

Contact information for the project applicant and agent are provided in Table 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. Golden State Finance Authority is the project applicant and landowner.

Table 2. Contact Information

Project Applicant	Golden State Finance Authority	**Agent**	Dudek
Contact Name	Arthur J. Wylene	**Contact Name**	Allie Sennett
Address	1215 K Street, Suite 1650 Sacramento, California 95814	**Address**	853 Lincoln Way Auburn, California 95603
Phone	916.447.4806	**Phone**	916.521.5798
Email	awylene@rcrcnet.org	**Email**	asennett@dudek.com

INTENTIONALLY LEFT BLANK

3 Review Area Description and Landscape Setting

The approximately 113-acre review area for the proposed project is at 551000 Rosevelt Avenue (sometimes spelled Roosevelt), approximately 3 miles southwest of the census-designated place of Bieber in northwestern Lassen County, California (Figure 1, Project Location). The review area is between State Route 299/Lassen State Highway and Babcock Road, immediately west of the common terminus of the former Western Pacific Railroad and Great Northern Railway.

The review area consists of two parcels: Assessor's Parcel Number 001-270-080-000 (northern parcel) and Assessor's Parcel Number 001-270-26-11 (southern parcel). The review area is in Township 38 North, Range 7 East, and Sections 28 and 33 of the U.S. Geological Survey Bieber, California, 7.5-minute quadrangle (USGS 2021). The approximate center of the review area corresponds to 41°05'33.60" north latitude and -121°10'31.07 west longitude. The review area is a brownfield that was formerly a wood processing sawmill. A chemical company and two residences are adjacent to the review area (Figure 2, Project Site). The review area is surrounded by widely scattered rural development and open space generally composed of cropland, sagebrush scrub, and wet meadow.

To access the review area from Sacramento, travel north on Interstate 5 for approximately 161 miles. Take exit 680 for State Route 299/Lake Boulevard. Take a slight right onto State Route 299 East and continue for approximately 85 miles. Turn right onto Adams Avenue, then turn left at the second cross street onto Washington Avenue. The review area is at the terminus of Washington Avenue.

3.1 Geology and Topography

The review area is within Big Valley at the eastern edge of the Big Valley Mountain range. Geology at the review area is classified as Plio-Pleistocene and Pliocene loosely consolidated deposits (USGS 2023a). Review area geology is associated with older Tertiary volcanic (Cascade Volcanic Field) flow rocks (USGS 2023a). Elevation is approximately 4,120 feet above mean sea level. The review area topography is relatively flat.

3.2 Soils

According to the Natural Resources Conservation Service (USDA 2023a), there are three soil types mapped in the review area: Bieber–Modoc complex, 0%–5% slopes; Cupvar; silty clay, 0%–2% slopes; and Pit silty clay, drained, 0%–2% slopes (Figures 3, Soil Types). The Bieber–Modoc soil type is composed of the Bieber and Modoc soil series. The Bieber soil series consists of very shallow and shallow to a duripan, well-drained or moderately well-drained soils that formed in alluvium derived from volcanic rocks. Bieber soils are on stream terraces and fan remnants. The Modoc series consists of moderately deep to duripan, well-drained soils that formed in volcanic ash over lacustrine deposits or alluvium derived from basalt, andesite, and pyroclastic rocks. Modoc soils are on lake terraces and fan remnants. None of this soil map unit is classified as hydric (USDA 2023b). The Cupvar soil series is found in basins and consists of moderately deep to duripan, moderately well-drained soils formed in alluvium from extrusive igneous rock. This soil series comprises the southwestern corner of the review area. None of this soil map unit is classified as hydric (USDA 2023b). The Pit soil series is found on floodplains and in basins and consists of very deep, poorly drained soils that formed in fine-textured alluvium weathered

from extrusive and basic igneous rocks. This map unit comprises the majority of the review area. This soil map unit is classified as hydric (USDA 2023b).

3.3 Vegetation Communities and Land Cover Types

The following vegetation communities and land cover types were documented within the review area and are described in further detail below: Great Basin grassland, seasonal wetland, and disturbed habitat. A total of 60 species of native or naturalized plants, 40 native (67%) and 20 non-native (33%), were recorded during the delineation. A list of plant species identified during the field delineation, including the assigned wetland indicator status for each species, is presented in Appendix B.

Great Basin Grassland. Great Basin grassland is the dominant vegetation community present in the review area. This community is generally present in undeveloped areas throughout the review area. Plant species present in this community include a mix of perennial grasses and forbs, with the dominant species consisting of ashy ryegrass (*Elymus cinereus*), bald brome (*Bromus racemosus*), and nineleaf biscuitroot (*Lomatium triternatum*). Other, less-dominant species include herbs, a non-native lettuce species (*Lactuca serriola*), and common sheep sorrel (*Rumex acetosella*). The tree layer is absent in this vegetation community. The shrub layer is sparse, and where present is typically limited to small patches of big sagebrush (*Artemisia tridentata*). Also included in this mapping unit are six earthen ditches (DIT-01 through DIT-06), two seasonal wetland swales (SWS-01 and SWS-02), and seven seasonal wetlands (SW-01 through SW-07), all of which are described further in Section 6.2, Waters of the United States (USACE).

Seasonal Wetland. There are seven seasonal wetlands and two seasonal wetland swales within the review area. These types of resources are generally within low-lying areas of the landscape. Aerial imagery shows these features seasonally fill with water, likely from precipitation events, but inundation is not consistent year to year (Google Earth 2023). This vegetation community is described in more detail in Section 6.2.

Disturbed Habitat. This land cover type includes areas that have been heavily disturbed or completely altered by human activities and contain little to no vegetation. Such areas in the review area include buildings, stockpiling and staging areas, paved and gravel roadways, gravel lots, and other constructed environments. Infrastructure within disturbed habitat mapped in the review area includes a railroad and track yard, silo, storage barns, and a warehouse.

3.4 Watershed

The review area occurs within the Pit River hydrologic unit, in the Big Valley hydrologic area, within the Bieber subarea (Hydrologic Unit Code 1802000219). The review area is in a natural basin that receives runoff from the Big Valley Mountains flowing from west to east into a matrix of freshwater emergent wetlands and sloughs that generally drain in a southerly direction toward the Pit River. The Pit River flows from east to west approximately 3 miles south of the review area, eventually terminating into Lake Shasta. Surface run-off in the review area is generally directed to the east through six constructed drainage ditches and two seasonal wetland swales, where the water then flows south in an unnamed stream into Bull Run Slough before flowing into the Pit River. The Pit River flows from east to west approximately 3 miles south of the review area, eventually terminating into Lake Shasta.

The U.S. Fish and Wildlife Service National Wetlands Inventory identifies two aquatic resources within the review area that are both excavated riverine channels (R2ABFx and R5UBFx) (USFWS 2023). A majority of the review area

is within Federal Emergency Management Agency Flood Zone mapped 100-year Floodplain (FEMA 2019) (Figure 4, Hydrologic Setting).

3.5 Review Area Alterations, Current and Past Land Use

The review area was formerly a wood processing sawmill. A chemical company and two residences are adjacent to the review area. Agricultural land is to the north, east, and south. Most of the lands adjacent to the review area are under Williamson Act contracts. The review area is partially developed, with most of the structures built in the northern portion of the review area, including railroad and track yard, a silo, storage barns, and a warehouse (Figure 2).

The review area has contained development since at least 1960 (the oldest ariel photographs available). Evidence of the ditches in the review area are visible from at least 1960. The northern portion of the review area, at the end of Rosevelt Avenue, has contained structures/buildings, the railroad, the silo, and the track yard since at least 1960. By 1981, the area north of the end terminus of Rosevelt Avenue was developed all the way to State Route 299, and the storage barns and warehouse that are in the review area today were constructed. By 1993, structures in the developed area north of the terminus of Rosevelt Avenue were removed and the area was not developed further up to the present. By 1993, the facility west of the review area was developed. By 2005, the lot at the terminus of Washington Avenue was expanded (Google Earth 2023).

INTENTIONALLY LEFT BLANK

4 Precipitation Data and Analysis

4.1 Regional Climate

The review area region has a Mediterranean climate where annual average temperatures range from 21.3°F to 86.4°F (WRCC 2023). According to the Adin (040029) Weather Station Gauge, yearly precipitation averages 15.56 inches, with the highest average rainfall recorded in December (2.09 inches) and January (2.03 inches) (WRCC 2023).

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 2020). 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 (APC). 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 2021) 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 Western Mountains, Valleys, and Coast Region Supplement). If the APC score is less than 10, then the APC is classified as drier than normal; normal conditions are present with an APC score of 10 to 14; conditions are wetter than normal when an APC score is greater than 14 (USACE 2020).

Table 3 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, APC score, and APC. Based on the APT output provided in Appendix C and summarized in Table 3, the precipitation and climatic conditions for the review area were wetter than normal before fieldwork on September 21, 2021, and within the normal range on May 25, 2023. The APT is less likely to consider extreme precipitation events that are highly localized when incorporating data from weather stations located outside of the drainage area.

Table 3. Antecedent Precipitation Tool Data for the Review Area

Main Field Survey Date	PDSI Class	Season	Antecedent Precipitation Condition Score	Antecedent Precipitation Condition
September 21, 2021	Extreme drought	Dry season	15	Wetter than normal
May 25, 2023	Moderate wetness	Dry season	14	Normal

Note:
PDSI = Palmer Drought Severity Index

INTENTIONALLY LEFT BLANK

5 Investigation Methods

The jurisdictional delineation was conducted by Dudek biologists Allie Sennett and Paul Keating on September 21 and 22, 2021, and Dudek biologists Jessica Baldridge and Elizabeth Meisman on May 25 and 26, 2023 (Table 4). Prior to conducting the jurisdictional delineation, U.S. Fish and Wildlife Service's National Wetlands Inventory data (USFWS 2023) was reviewed to determine if the review area contained any features mapped by the U.S. Fish and Wildlife Service. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters.

Potential aquatic resources were recorded using ESRI Field Maps on a mobile device and a Trimble® R1 Global Navigation Satellite System Receiver with submeter accuracy. Following the field work, aquatic resources were digitized using ArcGIS. Remote sensing was not used for the delineation.

All plant species encountered were identified to the lowest taxonomic level needed to determine wetland plant indicator status. Those species that could not be immediately identified were brought into the laboratory for further investigation. Latin names follow conventions within the PLANTS Database (USDA 2023c). These resources were further referenced to identify plant taxonomic level appropriate to determine species and regulatory status, if needed. Wetland plant indicator status for each plant was determined using the National Wetland Plant List (USACE 2023). Appendix B contains a complete list of plant species identified in the review area and their indicator status.

Table 4. Schedule of the Aquatic Resources Delineation

Date	Hours	Personnel	Conditions (Temperature, Winds, Sky)
September 21, 2021	0830–1630	Allie Sennett and Paul Keating	62–92°F, 0–13 mph winds, clear
September 22, 2021	0800–1600	Allie Sennett and Paul Keating	62–95°F, 0–9 mph winds, clear
May 25, 2023	0900–1730	Jessica Baldridge and Elizabeth Meisman	68–85°F, 5–15 mph winds, clear in the morning, rain in late afternoon
May 26, 2023	0700–1500	Jessica Baldridge and Elizabeth Meisman	61–82°F, 0–9 mph winds, clear

5.1 U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (USACE 2010). A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Western Mountains, Valleys, and Coast Region of the Western United States: A Delineation Manual (USACE 2014) 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 D.

5.2 Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) defines a waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]). As of April 2019, the SWRCB has clarified their definition of a wetland water of the state in the State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) to include the following (SWRCB 2019):

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

All waters of the United States are waters of the state. Wetlands, such as isolated seasonal wetlands, that are not generally considered waters of the United States are considered waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."

Wetlands subject to RWQCB jurisdiction were delineated based on methodology described in the USACE Wetlands Delineation Manual (USACE 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a) and per the Procedures (SWRCB 2019). Non-wetland waters were mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

5.3 California Department of Fish and Wildlife

In Title 14 of the California Code of Regulations, Section 1.56, CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." Diversion, obstruction, or change to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or other aquatic wildlife requires authorization from CDFW by entering into an agreement pursuant to Section 1602 of the California Fish and Game Code. In Title 14 of the California Code of Regulations, Section 1.72, CDFW defines a "stream" as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."

The delineation defined areas under the jurisdiction of CDFW pursuant to Sections 1600–1603 of the California Fish and Game Code. CDFW asserts jurisdiction over rivers, streams, and lakes to the extent of the top of bank. The term "bank" is interpreted to encompass the physical bank of the stream that rises vertically above and horizontally away from it (Vyverberg 2010). The top of bank was mapped as the physical break in slope between the channel or lake and surrounding upland. Streambeds or lakes 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).

Riparian status was determined by the USACE National Wetland Plant List indicator of the dominant species in a community being classified as obligate, facultative wetland, or facultative (USACE 2023). In general, the change in species cover and/or composition from the surrounding upland to predominantly hydrophytic vegetation was used to determine CDFW-regulated riparian areas associated with a stream channel or lake.

INTENTIONALLY LEFT BLANK

6 Aquatic Resources

6.1 Aquatic Resources Data Summary

Results from 12 representative data points and 6 transects document potentially jurisdictional aquatic resources within the review area based on observable field indicators. The data collected at each data point and transect are provided in Appendix D. Photos of the review area are included in Appendix E.

6.2 Waters of the United States (USACE)

Dudek biologists delineated approximately 2.11 acres (6,527 linear feet) of non-wetland waters and 45.46 acres of wetlands potentially subject to USACE jurisdiction (Table 5). Figure 5, Aquatic Resources Delineation – USACE, CDFW, and RWQCB, visually depicts waters of the United States mapped within the review area. Photos of the potential aquatic features delineated within the review area, as well as additional areas reviewed for the presence of these resources, are provided in Appendix E. Findings with regard to federal jurisdiction are preliminary until verified by the USACE Sacramento District.

Table 5. USACE Aquatic Resources in the Review Area

Aquatic Resource	Cowardin Code[1]	Location (Latitude, Longitude)	Acres[2]	Linear Feet
Non-Wetland Waters				
DIT-01	R4	41.098070, 121.176645	0.017	219
DIT-02	R4	41.093100, -121.176762	0.87	2,159
DIT-03	R4	41.092637, -121.175466	0.54	1,422
DIT-04	R4	41.090568, -121.175542	0.04	761
DIT-05	R4	41.089719, -121.174785	0.35	1,147
DIT-06	R4	41.088498, -121.175355	0.27	819
		Non-Wetland Waters Subtotal	*2.11*	*6,527*
Wetlands				
SW-01	PEM	41.092290, -121.174613	5.94	N/A
SW-02	PEM	41.097149, -121.176399	3.69	N/A
SW-03	PEM	41.094362, -121.176134	3.54	N/A
SW-04	PEM	41.090258, -121.173967	3.69	N/A
SW-05	PEM	41.089234, -121.173814	7.92	N/A
SW-06	PEM	41.087735, -121.174192	5.36	N/A
SW-07	PEM	41.086056, -121.179508	14.86	N/A
SWS-01	PEM	41.088069, -121.17748	0.38	N/A
SWS-02	PEM	41.090962, -121.173515	0.10	N/A
		Wetlands Subtotal	*45.46*	*N/A*
		Total[3]	***47.57***	***6,527***

Notes:
USACE = U.S. Army Corps of Engineers; N/A = not applicable

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 2022). PEM = palustrine, emergent; R4 = intermittent channel.

2 Acreage of the non-wetland waters extend to the ordinary high-water mark.

3 Minor discrepancies in totals are the result of rounding differences between Excel and ArcMap.

6.2.1 Seasonal Wetland

There are seven seasonal wetlands (SW-01 through SW-07) totaling approximately 45 acres within the review area. These features collect and hold water seasonally and are discernible from the adjacent upland areas by a distinct change in vegetation. These features are dominated by wetland plant species timothy (*Phleum pratense*; Facultative [FAC]), jointleaf rush (*Juncus articulates*; Obligate [OBL]), and camas (*Camassia* sp., Facultative Wetland [FACW]). Other associated species with low cover in this feature include buttercup (*Ranunculus* sp.), western marsh cudweed (*Gnaphalium palustre*; FACW), and curly dock (*Rumex crispus*; FAC). Hydric soils are present as indicated by a thick dark surface (Hydric Soil Indicator A12) or depleted matrix (Hydric Soil Indicator F3). Wetland hydrology was confirmed by the presences of drift deposits (Hydrology Indicator B3) and surface soil cracks (Hydrology Indicator B6). The seasonal wetland feature did not contain standing water or saturated soils during the September 2021 or May 2023 field surveys.

6.2.2 Seasonal Wetland Swale

There are two seasonal wetland swales (SWS-01 and SWS-02), totaling approximately 0.48 acres within the review area. Similar to a seasonal wetland, this narrower feature also collects water seasonally and is discernible from the adjacent upland areas by a distinct change in vegetation. Unlike the seasonal wetlands, the seasonal wetland swales are not closed depression features, and transition into sheet flow or into another water feature. These features support a dominance of two wetland plant species: pale spike rush (*Eleocharis macrostachya*; OBL) and Baltic rush (*Juncus balticus*; FACW). Hydric soils are present, as indicated by a thick dark surface (Hydric Soil Indicator A12), and wetland hydrology was confirmed by the presences of surface soil cracks (Hydrology Indicator B6). These features did not contain standing water or saturated soils during the September 2021 or May 2023 field surveys.

6.2.3 Ditch

There are six upland ditches present within the review area (DIT-01 through DIT-06), totaling approximately 6,527 linear feet in length and occupying 2.11 acres. These ditches are unlined, earthen water conveyance systems that were constructed in upland habitat. These features are discernable from the adjacent upland areas by primary OHWM indicators of a moderate break in slope and change in vegetation, with the top of bank being the same as the OHWM. Ditches within the review area are generally 5 to 6 feet wide at the top of bank/OHWM width with a depth of about 6 inches. DIT-01 is located along the northern boundary of the review area between a seasonal wetland (SW-02) to the south and a dirt parking lot to the north. DIT-02 flows north/south along the western review area boundary, with a culvert at its northern end. DIT-03 through DIT-06 flow through the central portion of the review area.

6.3 Waters of the State (RWQCB)

All of the features described in Section 6.2 have been identified as waters of the state potentially regulated by the RWQCB (Table 5).

6.4 CDFW Jurisdiction

All of the features described in Section 6.2, located within the floodplain on the Pitt River, have been identified as streambed potentially regulated by CDFW (Table 5).

7 References

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.

FEMA (Federal Emergency Management Agency). 2019. National Flood Hazard Layer Viewer. Accessed June 2019. https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd.

Google Earth. 2023. Google Earth view of the Review Area. Accessed June 2023. https://www.google.com/earth/.

NOAA (National Oceanic and Atmospheric Administration). 2021. Climate Division Scale Palmer Drought Severity Index (PDSI) dataset.

SWRCB (State Water Resources Control Board). 2021. *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. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. Environmental Laboratory, ERDC/EL TR-10-3. U.S. Army Engineer Research and Development Center. Vicksburg, Mississippi. May 2010. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046494.pdf.

USACE. 2014. *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*. Matthew K. Mersel and Robert W. Lickvar, Cold Regions Research and Engineering Laboratory, ERDC/CRREL TR-14-13, Hanover, New Hampshire. August 2014.

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. 2020. Antecedent Precipitation Tool (APT) - v1.0.13. Accessed August 2022 and June 2023. https://github.com/jDeters-USACE/Antecedent-Precipitation-Tool/releases/tag/v1.0.13.

USACE. 2022. Cowardin Codes for ORM Data Entry. Accessed June 2023. https://www.spa.usace.army.mil/Portals/16/docs/civilworks/regulatory/Bulk%20Upload/Bulk%20Data%20Cowardin.pdf.

USACE. 2023. National Wetland Plant List. Accessed June 2023. https://wetland-plants.sec.usace.army.mil/nwpl_static/v34/home/home.html.

USDA (U.S. Department of Agriculture). 2023a. Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed October 2021 and May 2023. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

USDA. 2023b. "State Soil Data Access (SDA) Hydric Soils List." Accessed October 2021 and May 2023. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1389479.html#reportref.

USDA. 2023c. The PLANTS Database. Natural Resources Conservation Service. National Plant Data Team, Greensboro, NC. Accessed May 2023. http://plants.usda.gov.

USFWS (U.S. Fish and Wildlife Service). 2023. National Wetlands Inventory [map]. Accessed October 2021 and May 2023. http://www.fws.gov/data.

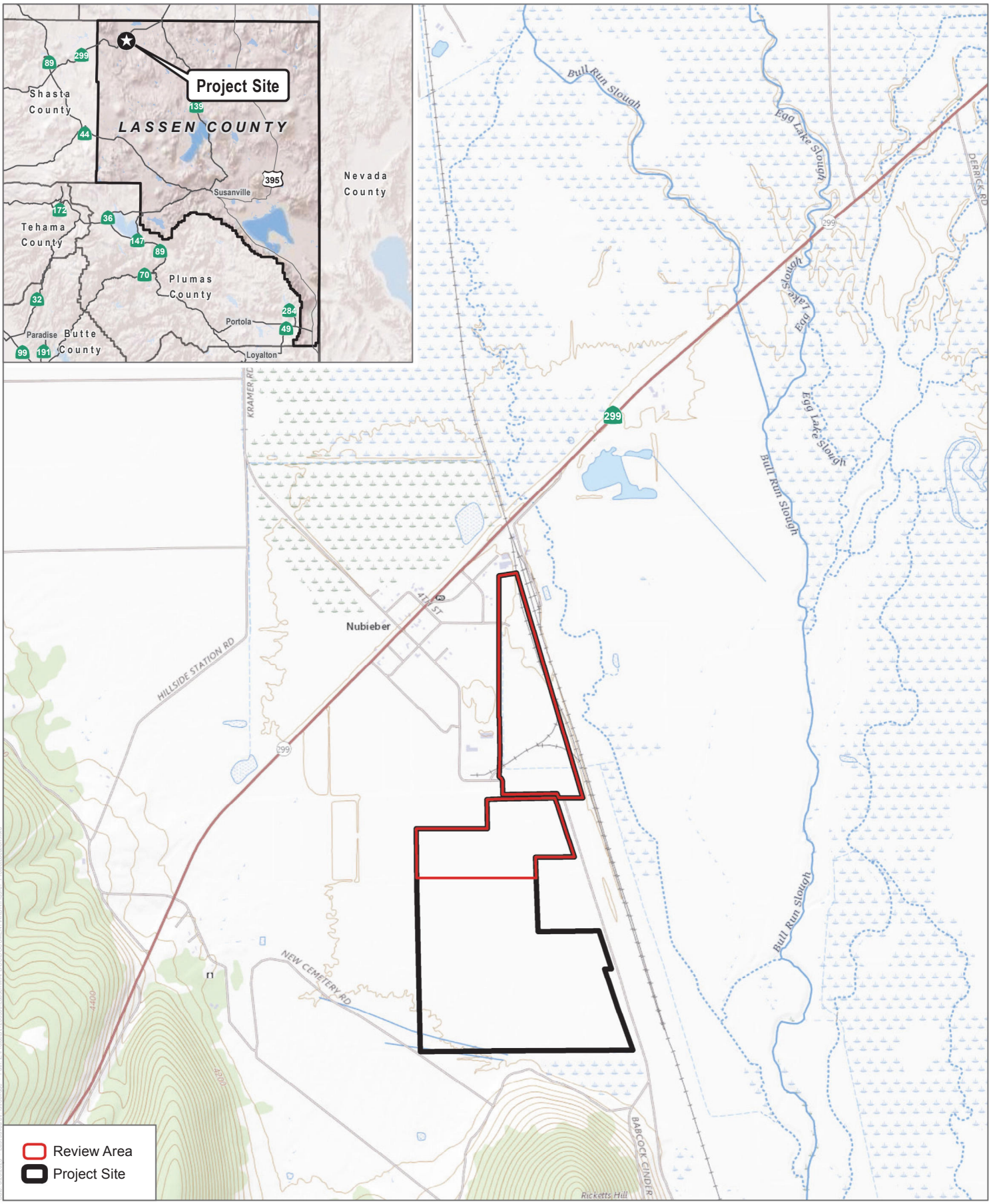
USGS (U.S. Geological Survey). 2021. "Beiber, CA" [map]. 7.5-Minute Series (Topographic). Accessed September 2021. https://www.usgs.gov/core-science-systems/ngp/tnm-delivery/.

USGS. 2023a. Mineral Resources Online Spatial Data. USGS Geologic Maps of U.S. States. Accessed May 2023. https://mrdata.usgs.gov/geology/state/map-us.html#home.

USGS. 2023b. National Hydrography Dataset [online database]. USGS National Hydrography Products. Accessed June 2023. https://www.usgs.gov/national-hydrography/national-hydrography-dataset.

Vyverberg, K. 2010. *A Review of Stream Processes and Forms in Dryland Watersheds.* California Department of Fish and Wildlife. December 2010.

WRCC (Western Regional Climate Center). 2023. Historical Climate Information: Adin RS, California (040029). Accessed June 2023. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?0029.



SOURCE: Bing Maps 2020, Lassen County 2015

DUDEK

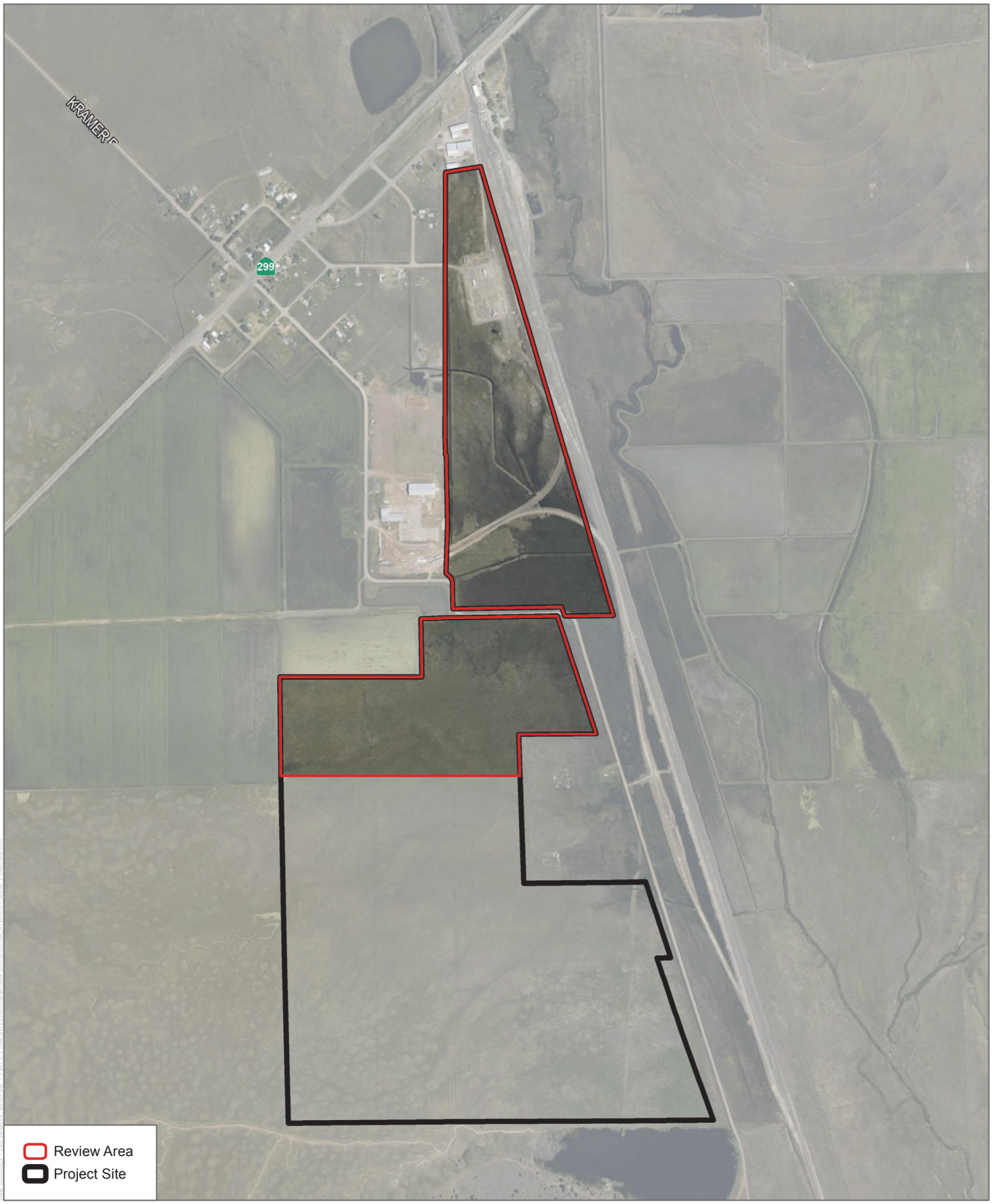
0 1,000 2,000 Feet

FIGURE 1

Project Location

Forest Resiliency Program - Lassen Facility

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps 2020, Lassen County 2015

DUDEK

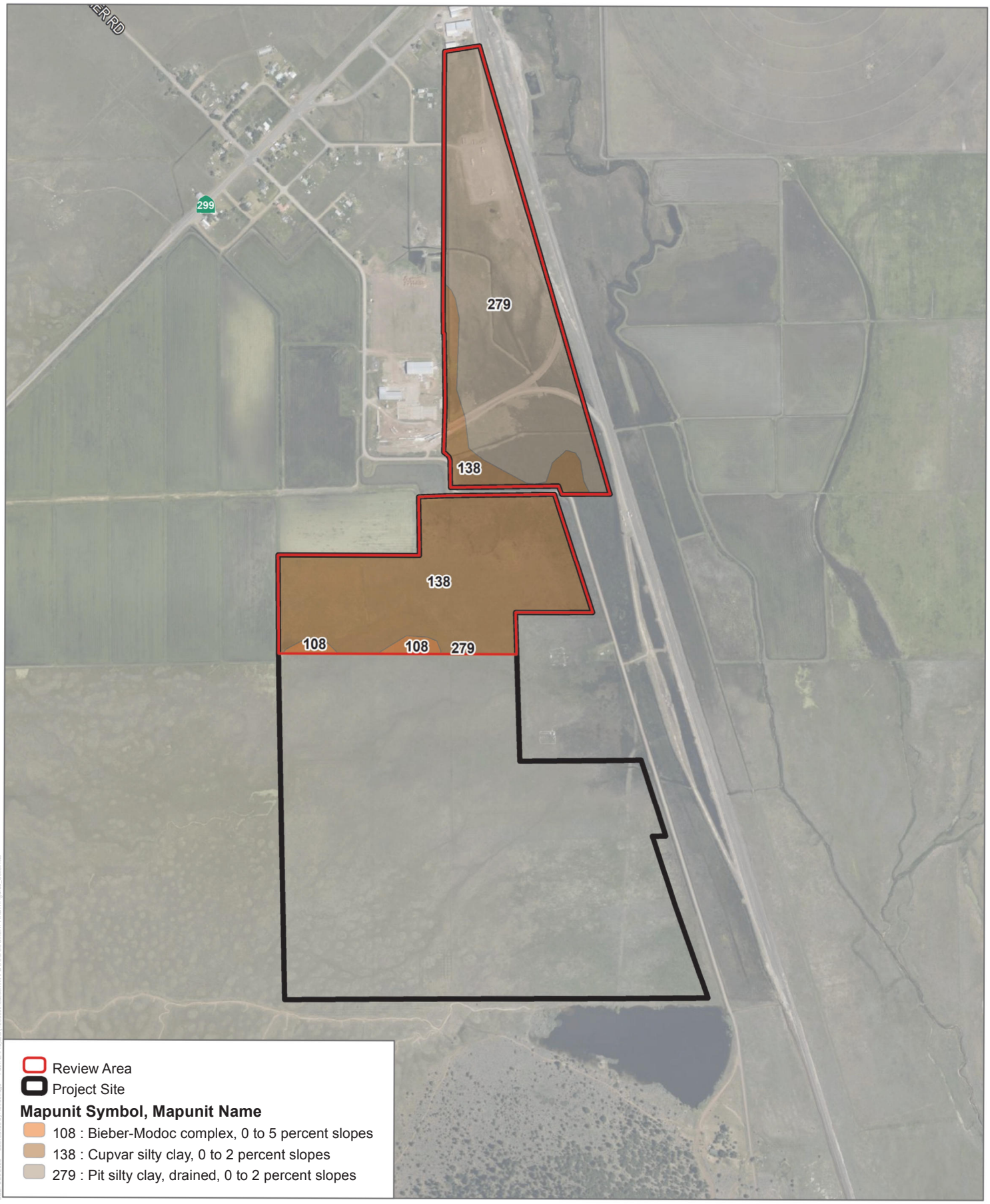
0 500 1,000 Feet

FIGURE 2

Project Site

Forest Resiliency Program - Lassen Facility

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps 2020, Lassen County 2015, USDA SSURGO 2021

DUDEK

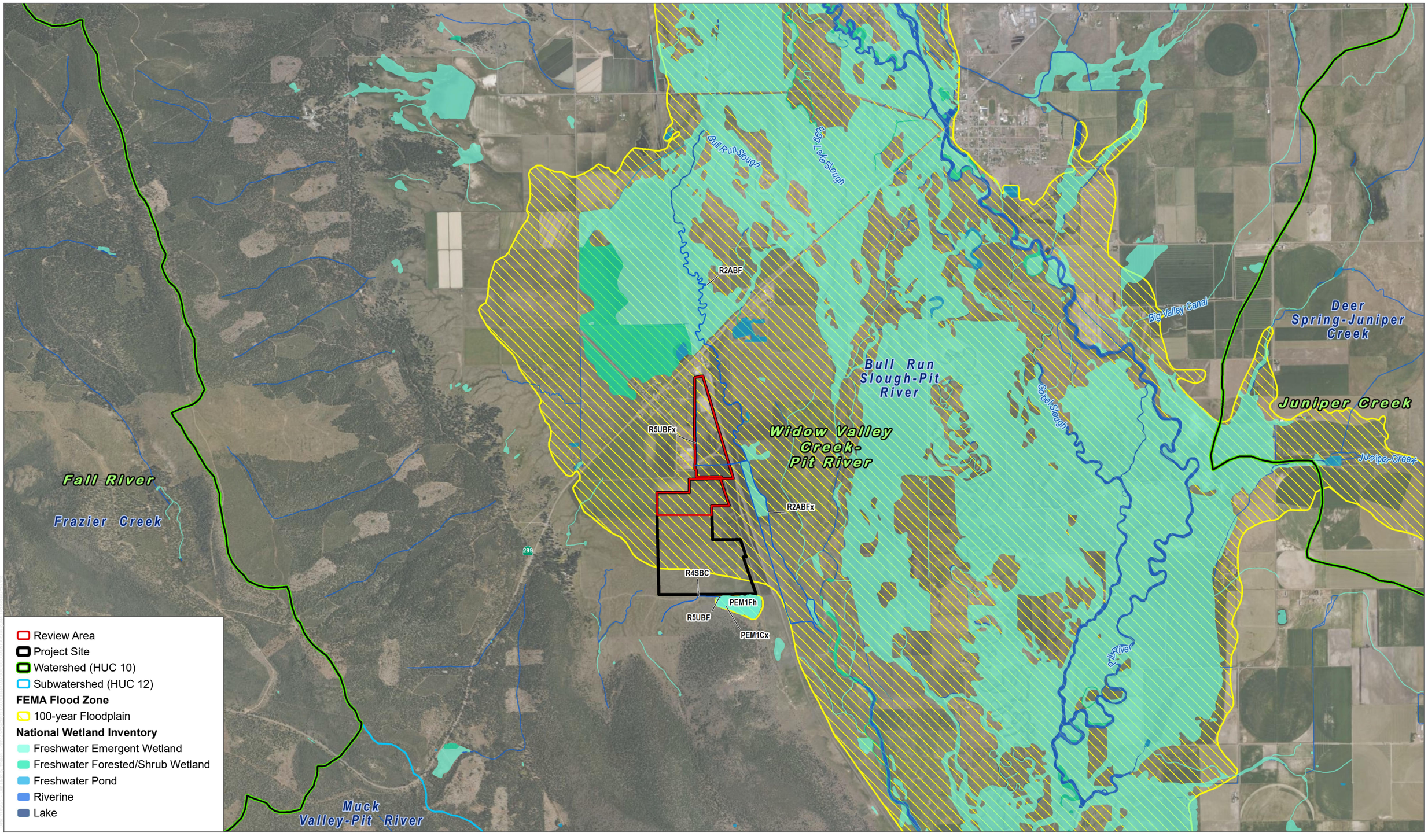
0 500 1,000 Feet

FIGURE 3

Soil Types

Forest Resiliency Program - Lassen Facility

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps 2021, USFWS 2019, NHD, FEMA 2019

DUDEK

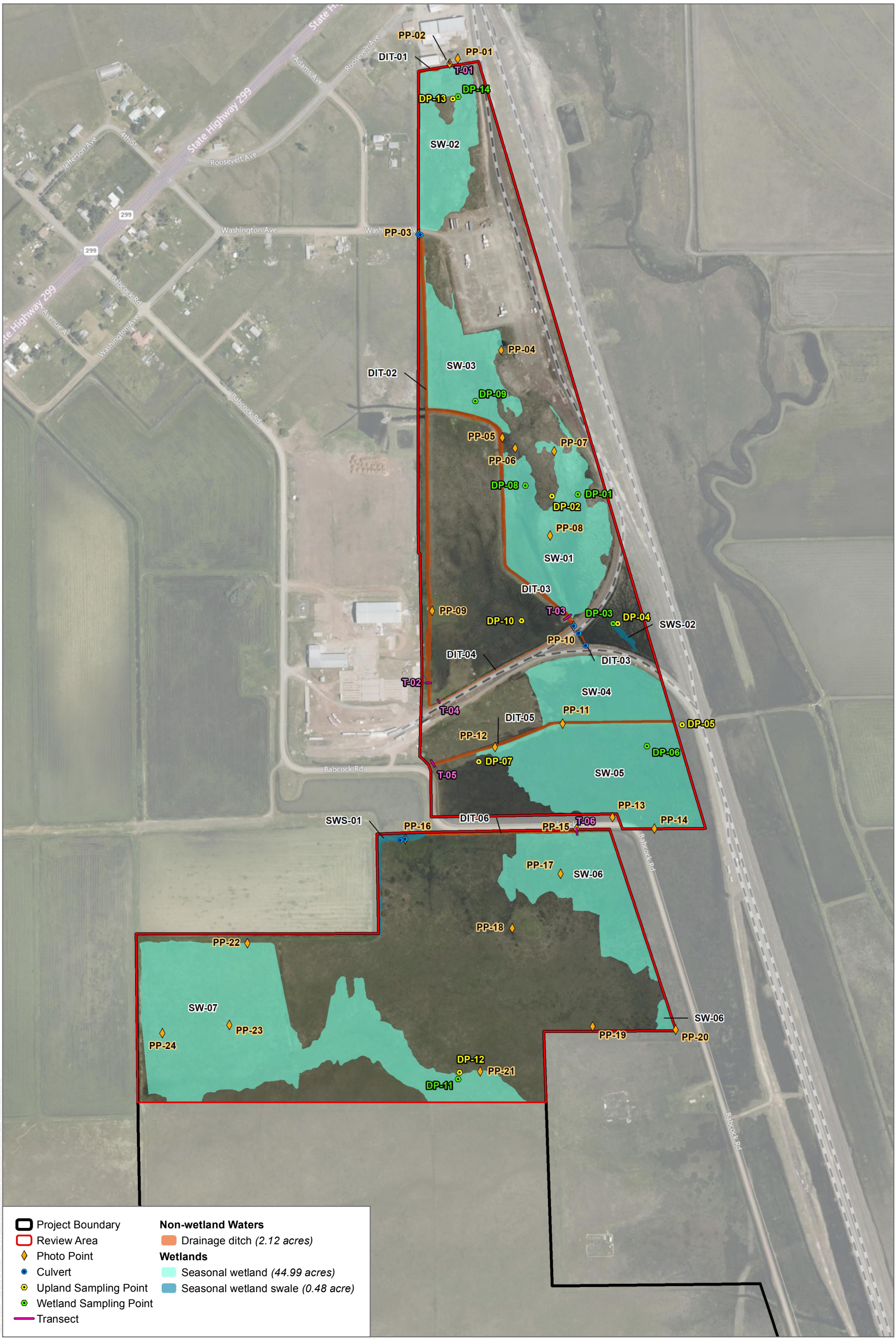
0 1,500 3,000 Feet

FIGURE 4

Hydrologic Setting

Forest Resiliency Program - Lassen Facility

INTENTIONALLY LEFT BLANK



SOURCE: Bing Maps 2023

DUDEK

0 200 400 Feet

FIGURE 5

Aquatic Resources Delineation - USACE, CDFW, and RWQCB

Forest Resiliency Program - Lassen Facility

INTENTIONALLY LEFT BLANK

Appendix A

Request for a Jurisdictional Determination

REQUEST FOR AQUATIC RESOURCES DELINEATION VERIFICATION

OR JURISDICTIONAL DETERMINATION

A separate jurisdictional determination (JD) is not necessary to process a permit. An Approved Jurisdictional Determination (AJD) is required to definitively determine the extent of waters of the U.S. and is generally used to disclaim jurisdiction over aquatic resources that are not waters of the U.S., in cases where the review area contains no aquatic resources, and in cases when the recipient wishes to challenge the water of the U.S. determination on appeal. Either an Aquatic Resources Delineation Verification or a Preliminary Jurisdictional Determination (PJD) may be used when the recipient wishes to assume that aquatic resources are waters of the U.S. for the purposes of permitting. In some circumstances an AJD may require more information, a greater level of effort, and more time to produce. If you are unsure which product to request, please speak with your project manager or call the Sacramento District's general information line at (916) 557-5250.

I am requesting the product indicated below from the U.S. Army Corps of Engineers, Sacramento District, for the review area located at:

Street Address: 551000 Rosevelt Avenue City: Bieber County: Lassen
State: CA Zip: _____ Section: 28, 33 Township: 38 North Range: 7 East
Latitude (decimal degrees): 41.098070 Longitude (decimal degrees): 121.176645
The approximate size of the review area for the JD is 113 acres. **(Please attach location map)**

Choose one:
- ○ I own the review area
- ○ I hold an easement or development rights over the review area
- ○ I lease the review area
- ○ I plan to purchase the review area
- ◉ I am an agent/consultant acting on behalf of the requestor
- ○ Other: _____

Choose one product:
- ○ I am requesting an Aquatic Resources Delineation Verification
- ○ I am requesting an Approved JD
- ○ I am requesting a Preliminary JD
- ○ I am requesting additional information to inform my decision about which product to request

Reason for request: (check all that apply)
- ☐ I need information concerning aquatic resources within the review area for planning purposes.
- ☐ I intend to construct/develop a project or perform activities in this review area which would be designed to avoid all aquatic resources.
- ☐ I intend to construct/develop a project or perform activities in this review area which would be designed to avoid those aquatic resources determined to be waters of the U.S.
- ☑ I intend to construct/develop a project or perform activities in this review area which may require authorization from the Corps; this request is accompanied by my permit application.
- ☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district's list of navigable waters under Section 10 of the Rivers and Harbors Act of 1899 and/or is subject to the ebb and flow of the tide.
- ☐ My lender, insurer, investors, local unit of government, etc. has indicated that an aquatic resources delineation verification is inadequate and is requiring a jurisdictional determination.
- ☐ I intend to contest jurisdiction over particular aquatic resources and request the Corps confirm that these aquatic resources are or are not waters of the U.S.
- ☐ I believe that the review area may be comprised entirely of dry land.
- ☐ Other: _____

Attached Information:
- ☑ Maps depicting the general location and aquatic resources within the review area consistent with Map and Drawing Standards for the South Pacific Division Regulatory Program (Public Notice February 2016, http://www.spd.usace.army.mil/Missions/Regulatory/Public-Notices-and-References/Article/651327/updated-map-and-drawing-standards/)
- ☑ Aquatic Resources Delineation Report, if available, consistent with the Sacramento District's Minimum Standards for Acceptance (Public Notice January 2016, http://1.usa.gov/1V68IYa)

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 review area. Your signature shall be an affirmation that you possess the requisite property rights for this request on the subject property.

*Signature: _____ Date: 07/18/2023
Name: Jessica Baldridge Company name: Dudek
Address: 853 Lincoln Way, Suite 105
Auburn, CA 95603
Telephone: 530.328.9032 Email: jbaldridge@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
List of Plant Species Observed

Vascular Species

Eudicots

APIACEAE – CARROT FAMILY

Eryngium alismifolium – coyote thistle
FACW-OBL

APIACEAE – CARROT FAMILY

Eryngium sp. – eryngo
FACW-OBL

ASTERACEAE – SUNFLOWER FAMILY

Artemisia tridentata – big sagebrush
Not listed

* *Centaurea solstitialis* – yellow star-thistle
Not listed

* *Chondrilla juncea* – rush skeletonweed
Not listed

Cirsium vulgare – bull thistle*
FACU

Ericameria nauseosa – rubber rabbitbrush
Not listed

* *Grindelia squarrosa* – curlycup gumweed
FACU

Holocarpha sp. – tarweed
Not listed

Lactuca sp. – lettuce
UPL-FAC

Symphyotrichum sp. – aster
UP-OBL

* *Tragopogon* sp. – salsify
Not listed

BRASSICACEAE – MUSTARD FAMILY

* *Lepidium chalepense* – lenspod whitetop
Not listed

CARYOPHYLLACEAE – PINK FAMILY

* *Paronychia* sp. – nailwort
Not Listed

Spergularia sp. – sandspurry
FAC-OBL

CHENOPODIACEAE – GOOSEFOOT FAMILY

Chenopodium sp. – goosefoot
FACU-FACW

FABACEAE – LEGUME FAMILY

Acmispon americanus – Spanish clover
UPL

PLANTAGINACEAE – PLANTAIN FAMILY

Collinsia parviflora–maiden blue eyed Mary
Not Listed

POLYGONACEAE – BUCKWHEAT FAMILY

* *Polygonum aviculare* – prostrate knotweed
FAC
* *Rumex acetosella* – common sheep sorrel
FACU
* *Rumex crispus* – curly dock
FAC

SALICACEAE – WILLOW FAMILY

Salix spp. – willow
FAC-OBL

Gymnosperms and Gnetophytes

PINACEAE – PINE FAMILY

Abies magnifica – red fir
Not listed

Monocots

CYPERACEAE – SEDGE FAMILY

Eleocharis macrostachya – pale spike rush
OBL
Eleocharis parishii – Parish's spikerush
FACW

JUNCACEAE – RUSH FAMILY

Juncus balticus – Baltic rush
FACW
Juncus sp. – rush
FAC-OBL

POACEAE – GRASS FAMILY

* *Agrostis stolonifera* – creeping bentgrass
FACW
* *Bromus tectorum* – cheatgrass
Not listed
* *Elymus caput-medusae* – medusahead
Not listed
Elymus trachycaulus – slender wheatgrass
FACU
* *Festuca bromoides* – brome fescue
FACU
Festuca idahoensis – Idaho fescue
FACU
Festuca microstachys – small fescue
Not listed
* *Festuca myuros* – rat-tail fescue
FACU
* *Gastridium phleoides* – nit grass
FACU
* *Poa pratensis* – Kentucky blue grass
FAC
* *Phleum pratense* – timothy
FACU

TYPHACEAE – CATTAIL FAMILY

Typha sp. – cattail
OBL

* Signifies introduced (non-native) species.

Indicator Status

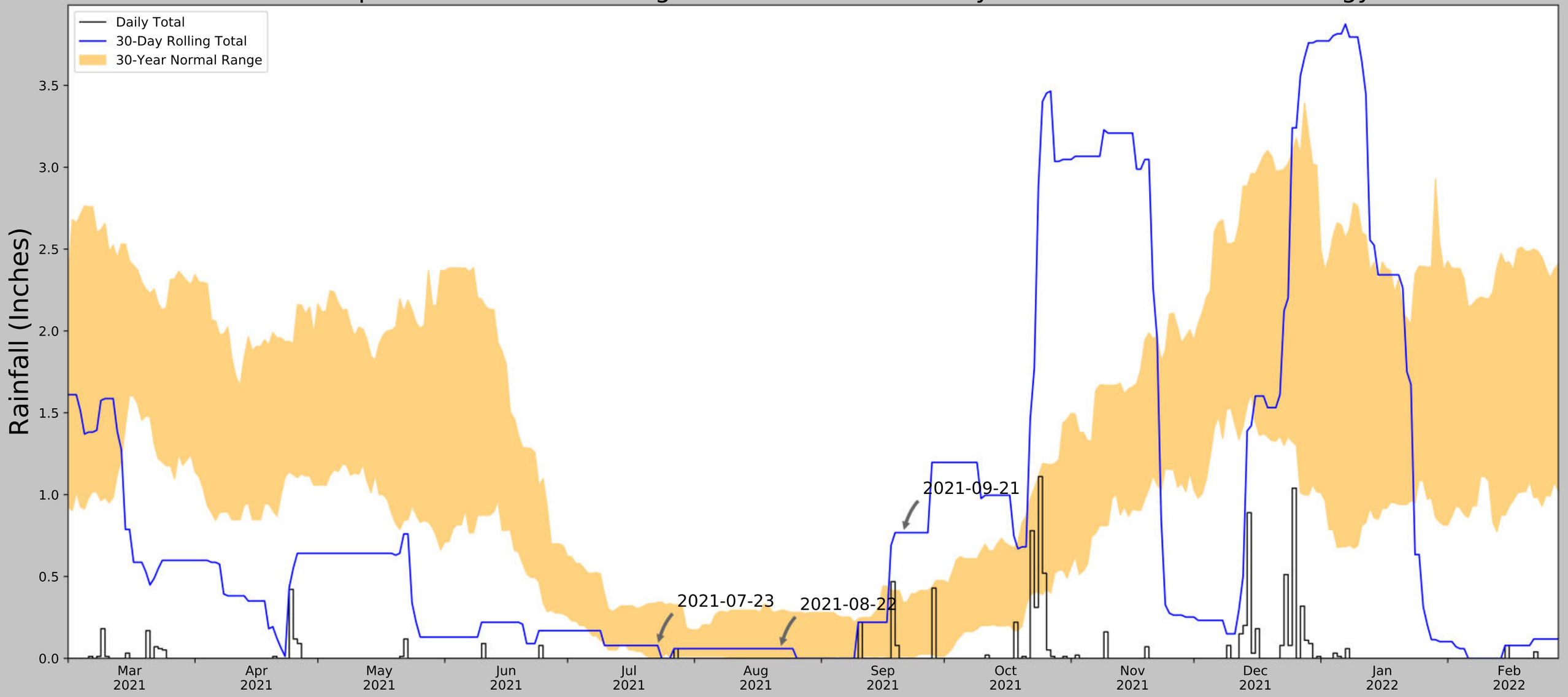
- FAC = Facultative
- FACU = Facultative Upland
- FACW = Facultative Wetland
- OBL = Obligate
- UPL = Upland

INTENTIONALLY LEFT BLANK

Appendix C

Antecedent Precipitation Tool Output

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



Coordinates	41.092025, -121.175236
Observation Date	2021-09-21
Elevation (ft)	4118.52
Drought Index (PDSI)	Extreme drought
WebWIMP H_2O Balance	Dry Season

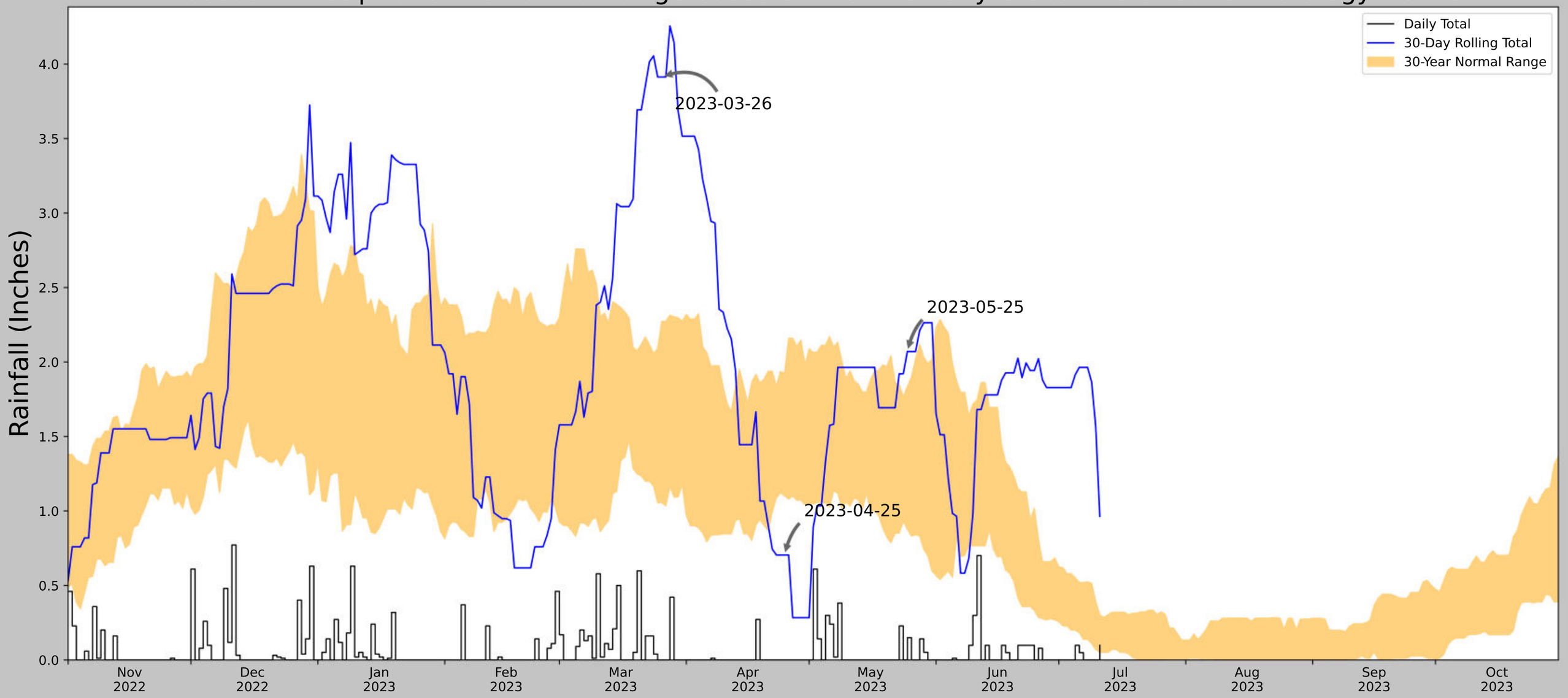
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-09-21	0.011811	0.33937	0.767717	Wet	3	3	9
2021-08-22	0.0	0.294094	0.059055	Normal	2	2	4
2021-07-23	0.008268	0.34252	0.07874	Normal	2	1	2
Result							Wetter than Normal - 15

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
ADIN RS	41.1933, -120.9444	4202.1	13.901	83.58	7.417	11102	90
CANBY 3 SW	41.4219, -120.9017	4310.04	15.949	107.94	8.899	85	0
Adin Mtn	41.24, -120.79	6189.961	8.649	1987.861	21.085	166	0

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



Coordinates	41.09229, -121.174613
Observation Date	2023-05-25
Elevation (ft)	4116.885
Drought Index (PDSI)	Moderate wetness
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
2023-05-25	0.877953	1.834646	2.070866	Wet	3	3	9
2023-04-25	1.101969	1.923228	0.704724	Dry	1	2	2
2023-03-26	1.055906	2.272835	3.913386	Wet	3	1	3
Result							Normal Conditions - 14

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
ADIN RS	41.1933, -120.9444	4202.1	13.863	85.215	7.42	11213	90
CANBY 3 SW	41.4219, -120.9017	4310.04	15.949	107.94	8.899	51	0
Adin Mtn	41.24, -120.79	6189.961	8.649	1987.861	21.085	89	0

Appendix D
Data Forms

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Lassen/Gould City/County: Lassen County Sampling Date: 9/21/2021

Applicant/Owner: Golden State Finance Authority State: CA Sampling Point: DP-01

Investigator(s): A. Sennett, P. Keating Section, Township, Range: S28&33, T 38N, R7E

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): Lat: 41.092735 Long: -121.174254 Datum: WGS84

Soil Map Unit Name: Pit silty clay, drained, 0-2% slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

SWS-01

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Rumex crispus	2	N	FAC
2. Eleocharis macrostachya	10	Y	OBL
3. Aster sp. 1	2	N	
4. Aster sp. 2	3	N	
5. Juncus balticus	10	Y	FACW
6. Centromadia sp.	3	N	
7.			
8.			
9.			
10.			
11.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 70

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Some plants not identifiable due to delineation occurring outside of the typical growing season.

SOIL

Sampling Point: DP-01-SWS-01

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR2/1	95	5YR4/6	5	C	PL	Clay	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ✓ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 12

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Lassen/Gould City/County: Lassen County Sampling Date: 9/21/2021

Applicant/Owner: Golden State Finance Authority State: CA Sampling Point: DP-02

Investigator(s): A. Sennett, P. Keating Section, Township, Range: S28&33, T 38N, R7E

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): C Lat: 41.092717 Long: -121.174687 Datum: WGS84

Soil Map Unit Name: Pit silty clay, drained, 0-2% slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Upland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Grindelia squarrosa	20	Y	FACU
2. Festuca bromoide	20	Y	FAC
3. Festuca idahoensis	10	Y	FACU
4. Rumex Crispus	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 70

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 25	x 3 = 75
FACU species 30	x 4 = 120
UPL species _____	x 5 = _____
Column Totals: 55 (A)	195 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: DP-02-SWS-01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR2/1	100					Clay	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ✓ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 12

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Lassen/Gould City/County: Lassen County Sampling Date: 9/21/20221

Applicant/Owner: Golden State Finance Authority State: CA Sampling Point: DP-03

Investigator(s): A. Sennett, P. Keating Section, Township, Range: S28&33, T 38N, R7E

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): C Lat: 41.091107 Long: -121.173689 Datum: WGS84

Soil Map Unit Name: Pit silty clay, drained, 0-2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Juncus balticus	35	Y	FACW
2. Eleocharis macrostachya	35	Y	OBL
3. Lactuca sp.	5	N	UNK
4. Polygonum aviculare	2	N	FAC
5. Rumex crispus	1	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	78 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 22

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP-03-SWS-02

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR2/1	100					Clay	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ✓ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 12

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Lassen/Gould City/County: Lassen County Sampling Date: 9/21/2021

Applicant/Owner: Golden State Finance Authority State: CA Sampling Point: DP-04

Investigator(s): A. Sennett, P. Keating Section, Township, Range: S28&33, T 38N, R7E

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): C Lat: 41.091105 Long: -121.173612 Datum: WGS84

Soil Map Unit Name: Pit silty clay, drained, 0-2% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Upland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Aster sp. (sunflower)	33	Y	UNK
2. Festuca bromoide	25	Y	FAC
3. Festuca idahoensis	10	Y	FACU
4. Phleum pratense	7	N	NL
5. Artemisia tridentata	7	N	FACU
6. Grindelia squarrosa	5	N	FACU
7.			
8.			
9.			
10.			
11.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 15

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Some plants not identifiable due to delineation occurring outside of the growing season. Aster sp. was prevalent in the uplands so assumed to be an upland species.

SOIL

Sampling Point: DP-02-SWS-01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR2/1	100					Clay	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ✓ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 12

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Lassen/Gould City/County: Lassen County Sampling Date: 9/21/2021

Applicant/Owner: Golden State Finance Authority State: CA Sampling Point: DP-06

Investigator(s): A. Sennett, P. Keating Section, Township, Range: S28&33, T 38N, R7E

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Flat Slope (%): 0

Subregion (LRR): C Lat: 41.089565 Long: -121.173149 Datum: WGS84

Soil Map Unit Name: Pit silty clay, drained, 0-2% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Festuca bromoides	20	Y	FAC
2. Typha sp.	2	N	OBL
3. Unknown sp.	1	N	UNK
4. Eriophyllum lanatum	1	N	NL
5. Unknown sp.	1	N	UNK
6.			
7.			
8.			
9.			
10.			
11.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 75

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Some plants not identifiable due to delineation occurring outside of the growing season.

SOIL

Sampling Point: DP-06

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	100					Clay	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ✓ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Lassen/Gould City/County: Lassen County Sampling Date: 9/21/2021

Applicant/Owner: Golden State Finance Authority State: CA Sampling Point: DP-07

Investigator(s): A. Sennett, P. Keating Section, Township, Range: S28&33, T 38N, R7E

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Flat Slope (%): 0

Subregion (LRR): C Lat: 41.089387 Long: -121.175941 Datum: WGS84

Soil Map Unit Name: Pit silty clay, drained, 0-2% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Grindelia squarrosa	10	Y	FACU
2. Festuca bromoides	8	Y	FACU
3. Festuca idahoensis	5	N	FACU
4. Rumex crispus	2	N	FAC
5. Unknown sp.	1	N	UNK
6.			
7.			
8.			
9.			
10.			
11.			
	26 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 74

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: DP-07

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	100					Clay	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ✓ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Lassen/Gould City/County: Lassen County Sampling Date: 9/21/2021

Applicant/Owner: Golden State Finance Authority State: CA Sampling Point: DP-08

Investigator(s): A. Sennett, P. Keating Section, Township, Range: S28&33, T 38N, R7E

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Flat Slope (%): 0

Subregion (LRR): C Lat: 41.092850 Long: -121.175123 Datum: WGS84

Soil Map Unit Name: Pit silty clay, drained, 0-2% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Finger of wetland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Juncus balticus	30	Y	FACW
2. Festuca idahoensis	7	N	FACU
3. Festuca bromoides	5	N	FAC
4. Phleum pratense	2	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	44 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 56

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP-08

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	100					Clay	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ✓ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Lassen/Gould City/County: Lassen County Sampling Date: 9/21/2021

Applicant/Owner: Golden State Finance Authority State: CA Sampling Point: DP-09

Investigator(s): A. Sennett, P. Keating Section, Township, Range: S28&33, T 38N, R7E

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Flat Slope (%): 0

Subregion (LRR): C Lat: 41.093920 Long: -121.1759431 Datum: WGS84

Soil Map Unit Name: Pit silty clay, drained, 0-2% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Festuca idahoensis	35	Y	FACU
2. Phleum pratense	15	Y	FAC
3. Rumex acetosella	2	N	FACU
4. Rumex crispus	2	N	FAC
5. Lactuca sp.	1	N	FAC
6. Unknown	1	N	FAC
7.			
8.			
9.			
10.			
11.			
	57 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 43

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 19	x 3 = 57
FACU species 37	x 4 = 148
UPL species _____	x 5 = _____
Column Totals: 56 (A)	205 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: DP-09

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	100					Clay	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ✓ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Forest Resiliency City/County: Nubieber/Lassen Sampling Date: 2023-05-25

Applicant/Owner: State: California Sampling Point: DP20

Investigator(s): Elizabeth Meisman, Jessica Baldridge Section, Township, Range: Township 38N / Range 7E / Section 28

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): Lat: 41.09259628 Long: -121.17489696 Datum: WGS 84

Soil Map Unit Name: Pit silty clay, drained, 0 to 2 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1. Artemesia tridentata	5	✓	
2.			
3.			
4.			
5.			
	5% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Agrostis stolonifera	25	✓	FAC
2. Phleum pratense	25	✓	FAC
3. Lomatium triternatum	20	✓	
4. Rumex acetosella	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	75% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 25.0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	50	x 3 =	150
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	55 (A)		170 (B)

Prevalence Index = B/A = 3.1

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: DP20

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 3							Silty Clay	
3 - 18	10YR 2/1	100					Clay	
-								
-								
-								
-								
-								
-								

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Forest Resiliency City/County: Nubieber/Lassen Sampling Date: 2023-05-25

Applicant/Owner: State: California Sampling Point: DP21 --DP-11

Investigator(s): Elizabeth Meisman, Jessica Baldridge Section, Township, Range: Township 38N / Range 7E / Section 33

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): Lat: 41.08539304 Long: -121.17635184 Datum: WGS 84

Soil Map Unit Name: Cupvar silty clay, 0 to 2 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil ✓, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Camassia quamash	30	✓	FACW
2. Lomatium triternatum	25	✓	
3. Rumex acetosella	7		FACU
4. Phleum pratense	5		FAC
5. Poa annua	5		FAC
6. Lactuca serriola	3		FACU
7.			
8.			
9.			
10.			
11.			
	75% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 25.0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	10	x 3 =	30
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	50 (A)		130 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: DP21

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3							Loamy Sand	Ash
3 - 18	7.5YR 3/2	95	2.5YR 5/8	5	C	M	Clay	
-								
-								
-								
-								
-								
-								

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ✓ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Forest Resiliency City/County: Nubieber/Lassen Sampling Date: 2023-05-25

Applicant/Owner: State: California Sampling Point: DP22 DP-12

Investigator(s): Elizabeth Meisman, Jessica Baldridge Section, Township, Range: Township 38N / Range 7E / Section 33

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): Lat: 41.08549885 Long: -121.17630021 Datum: WGS 84

Soil Map Unit Name: Pit silty clay, drained, 0 to 2 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Lomatium triternatum	49	✓	
2. Lactuca serriola	5		FACU
3. Microsteris gracilis	5		
4. Trifolium wormskioldii	5		FACW
5. Rumex acetosella	3		FACU
6. Tragopogon dubius	3		
7.			
8.			
9.			
10.			
11.			
	70% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 30.0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	8	x 4 =	32
UPL species	0	x 5 =	0
Column Totals:	13 (A)		42 (B)

Prevalence Index = B/A = 3.2

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: DP22

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 3								Ash
3 - 18	7.5YR 4/2	40						
3 - 18	10YR 4/2	60						
-								
-								
-								
-								
-								

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Forest Resiliency City/County: Nubieber/Lassen Sampling Date: 2023-05-26

Applicant/Owner: State: California Sampling Point: DP23 DP-13

Investigator(s): Elizabeth Meisman, Jessica Baldridge Section, Township, Range: Township 38N / Range 7E / Section 33

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): Lat: 41.09771565 Long: -121.17625568 Datum: WGS 84

Soil Map Unit Name: Pt silty clay, drained, 0 to 2 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Poa bulbosa	65	✓	FACU
2. Lomatium triternatum	7		UPL
3. Ranunculus occidentalis	5		FACW
4. Elymus cinerus	3		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 20.0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	68	x 4 =	272
UPL species	7	x 5 =	35
Column Totals:	80 (A)		317 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: DP23

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 18	7.5YR 3/1	100						
-								
-								
-								
-								
-								
-								
-								

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Forest Resiliency City/County: Nubieber/Lassen Sampling Date: 2023-05-26

Applicant/Owner: State: California Sampling Point: DP24 DP-14

Investigator(s): Elizabeth Meisman, Jessica Baldridge Section, Township, Range: Township 38N / Range 7E / Section 33

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): Lat: 41.0977381 Long: -121.1762016 Datum: WGS 84

Soil Map Unit Name: Pit silty clay, drained, 0 to 2 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Phleum pretens	80	✓	FAC
2. Elymus cinerius	5		FAC
3. Juncus articulatus	5		OBL
4. Latium triternatum	3		UPL
5. Poa bulbosa	2		FACU
6.			
7.			
8.			
9.			
10.			
11.			
	95% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5.0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	0	x 2 =	0
FAC species	85	x 3 =	255
FACU species	2	x 4 =	8
UPL species	3	x 5 =	15
Column Totals:	95 (A)		283 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: DP24

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 3/1	97	7.5YR 4/6	3	C	M	Clay	
-								
-								
-								
-								
-								
-								
-								

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ✓ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

OHWM DATA SHEET

Project: Forest Resiliency Date: 5/25 Feature ID: D-01

Investigator(s): J. Baldridge, E. Meismann Transect ID: T-01

Site Location:

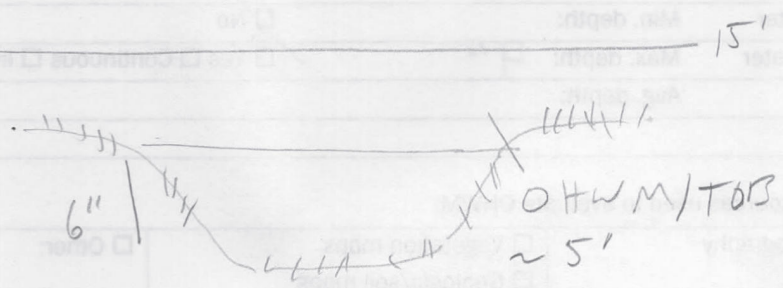
Lassen County, South side of 299 near Nubieber, CA.

Stream Flow: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☐ Controlled/Other

Transect (cross-section) drawing(s):

View Facing: E

View Facing: ☐ upstream ☐ downstream



☒ Transect length
☒ OHWM width
☒ TOB width
☐ Channel depth
☒ Photo in Field Maps
☒ Mapped in Field Maps

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	90		10		
Below OHWM	90		10		

Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	—	—	30	70
Below OHWM	—	—	40	60

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

Upland Species:	*Bank Species:*	*Emergent Species:*
BROTEC CENSOL Epilobium	Spergularia bottom celery	ELOMAC RUMCRI

OHWM DATA SHEET

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

Hydrology:		Riparian:
☐ Flowing water	Min. depth:	☒ No
☒ Standing water	Max. depth: 4 "	☐ Yes ☐ Continuous ☐ Intermittent
☐ Saturated	Avg. depth:	
☐ Dry		

Checklist of resources used to evaluate OHWM:

☒ Aerial photography	☐ Vegetation maps	☐ Other:
☒ GPS unit	☒ Geologic/soil maps	
☒ Rainfall data	☐ Gage data	
☒ Topographic maps	☐ LiDAR	

Other drawings (aerial view):

Connectivity 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

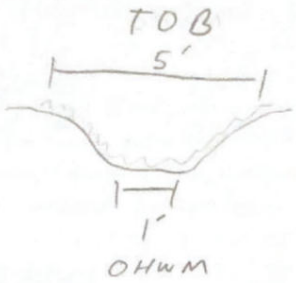
Project: Lassen/Gould Date: 9/22/21 Feature ID: IO-01

Investigator(s): P. Keating A. Sennett Transect ID: T-T - IO01

Site Location: Roadside Drainage
veg brown/dry

Feature Type: ☐ Ephemeral ☑ Intermittent ☐ Perennial ☐ Other

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



☐ 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	90		10		
Below OHWM	95	~~/~~	5	~~/~~	~~/~~

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	~~/~~	~~/~~	40	60
Below OHWM	~~/~~	~~/~~	30	70

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

Upland Species:	*Bank Species:*	*~~Emergent Species:~~*
	BROTEC CENSOL Salix sp	Bed Button celery Spurgularia ELOMAC RUMCRI

OHWM DATA SHEET

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

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

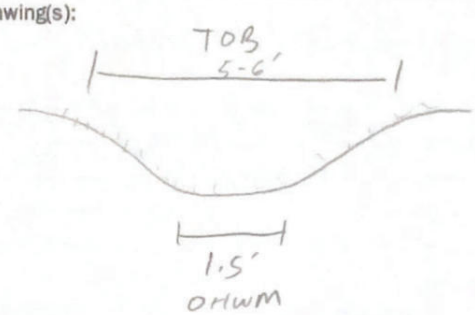
Project: Lassen/Gould Date: 9/22/21 Feature ID: IO-02

Investigator(s): P.Keating, A. Sennett Transect ID: T-2 - IO 02

Site Location: Drainage/ditch

Feature Type: ☐ Ephemeral ☑ Intermittent ☐ Perennial ☐ Other

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



☐ 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	90	—	10	—	—
Below OHWM	95	—	5	—	—

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	—	—	40	60
Below OHWM	—	—	20	80

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

Upland Species:	*Bank Species:*	*Emergent Species:* Bed
	ELOMAC CENSOL Skeleton weed	ELOMAC RUMCRI upland grasses

OHWM DATA SHEET

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

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

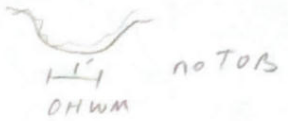
Project: Lassen / Gould Date: 9/22/21 Feature ID: JD-03

Investigator(s): R Keating A Sennett Transect ID: T3-JD03

Site Location: Ditch along Railroad tracks

Feature Type: ☐ Ephemeral ☑ Intermittent ☐ Perennial ☐ Other

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



☐ 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	90	—	10	—	—
Below OHWM	95	—	5	—	—

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM			30	70
Below OHWM			10	90

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

Upland Species:	*Bank Species:*	*Emergent Species:* / Bed
	CENSOL ELY CAPMED Skeleton weed sunflower	BROTEC RUMCRI upland grasses Salix sp.

OHWM DATA SHEET

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

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

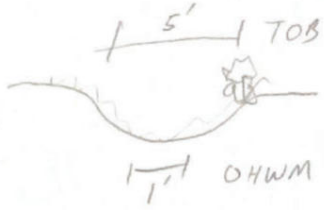
Project: Lassen Gould Date: 9/22/21 Feature ID: I004

Investigator(s): P. Keating A Scarrett Transect ID: T-4-I004

Site Location: Drainage ditch

Feature Type: ☐ Ephemeral ☑ Intermittent ☐ Perennial ☐ Other

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



☐ 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	90	—	10	—	—
Below OHWM	95	—	5	—	—

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	—	—	40	60
Below OHWM	—	—	15	85

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

Upland Species:	*Bank Species:*	*Emergent Species:* Bank
	Eryngium sp Sunflower Salix sp (10%) upland grasses	goosefoot vine Skeleton weed AGRSTO Salix sp unk. purple flower

OHWM DATA SHEET

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

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: Forest Resil. Date: 5/26/

Feature ID: DIT-20 (Renamed to DIT-06 on map)

Investigator(s): JD, LM.

Transect ID: T-20 / T-06

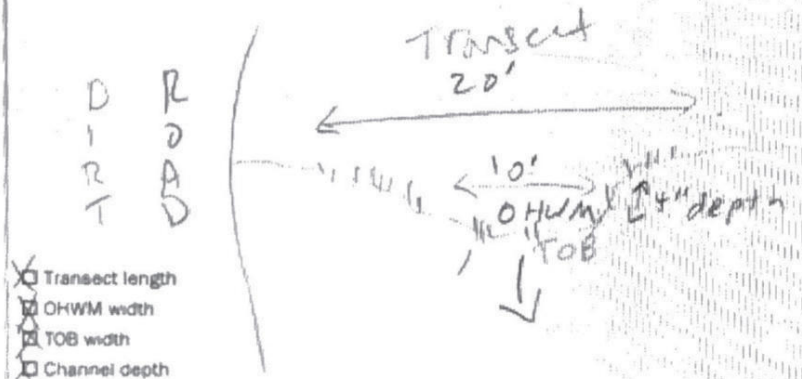
Site Location:
Southeast of town of Nubieber, south side of Hwy 299.

Stream Flow: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Controlled/Other

Transect (cross-section) drawing(s):

View Facing: E

View Facing: ☒ upstream ☐ downstream



☐ Transect length
☒ OHWM width
☒ TOB width
☐ Channel depth
☒ Photo in Field Maps
☒ Mapped in Field Maps

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	60		30	10	
Below OHWM	100				

Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	–	–	100	
Below OHWM	–	–	30	70 — bare ground leaf veg litter

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

Upland Species:	*Bank Species:*	*Emergent Species:*
BROTEC Poa bulbosa	Phleum pratense	Rumex acetosella JUNCUS

OHWM DATA SHEET

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

erosion, culverts,

Hydrology:		Riparian:
☐ Flowing water	Min. depth:	☒ No
☐ Standing water	Max. depth:	☐ Yes ☐ Continuous ☐ Intermittent
☐ Saturated	Avg. depth:	
☒ Dry		

Checklist of resources used to evaluate OHWM:

☒ Aerial photography	☒ Vegetation maps	☐ Other:
☒ GPS unit	☐ Geologic/soil maps	
☐ Rainfall data	☐ Gage data	
☒ Topographic maps	☐ LiDAR	

Other drawings (aerial view):

Connectivity 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 E
Review Area Photos



Photo 1. View facing south across ditch (DIT-01) at the seasonal wetland (SW-02). May 26, 2023.



Photo 2. View facing east from southern bank of ditch (DIT-01) of the review area. May 26, 2023.



Photo 3. View facing south at DIT-01 that runs along the west boundary of the northern portion of the review area. May 26, 2023.



Photo 4. View facing west at seasonal wetland (SW-03) in the northern portion of the review area. May 26, 2023.



Photo 5. View facing south at ditch (DIT-03) that runs through the middle of the northern portion of the review area. May 26, 2023.



Photo 6. View facing south at a transition from upland to seasonal wetland (SW-01). May 25, 2023.



Photo 7. View facing north at upland area north of seasonal wetland (SW-01). May 26, 2023.



Photo 8. View facing south at seasonal wetland (SW-01). May 25, 2023.



Photo 9. View facing north at upland area north of seasonal wetland (SW-01). May 26, 2023.



Photo 10. View facing west at ditch (DIT-04) adjacent to railway. May 25, 2023.



Photo 11. View facing east at ditch (DIT-05), with seasonal wetland (SW-04) on the left/north and seasonal wetland (SW-05) on the right/south. May 26, 2023.



Photo 12. View facing south at the intersection between seasonal wetland (SW-05) and upland area to the south. May 26, 2023.

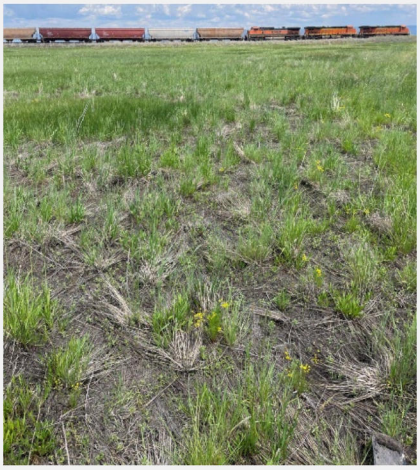


Photo 13. View facing east at seasonal wetland (SW-05). May 26, 2023.



Photo 14. View facing west at ditch at seasonal wetland (SW-05). May 26, 2023.



Photo 15. View facing south across ditch (DIT-06) on south side of Babcock Road. May 26, 2023.



Photo 16. View facing east at seasonal wetland swale (SWS-02) in the low-lying depressional area that partially drains ditch (DIT-06). May 26, 2023.



Photo 17. View facing north at seasonal wetland (SW-06). May 26, 2023.



Photo 18. View facing north from middle of upland area between seasonal wetlands to the northeast (SW-06) and southwest (SW-07). May 26, 2023.



Photo 19. View facing west at upland area between seasonal wetlands to the northeast (SW-06) and southwest (SW-07). May 25, 2023.



Photo 20. View facing north at seasonal wetland (SW-06) in the southeast corner of the review area. May 26, 2023.



Photo 21. View facing west at upland area to the north/right and seasonal wetland (SW-07) on the south/left. May 25, 2023.



Photo 22. View facing south at seasonal wetland (SW-07). May 26, 2023.



Photo 23. View facing south at seasonal wetland (SW-07), with upland area shown in the far background. May 26, 2023.

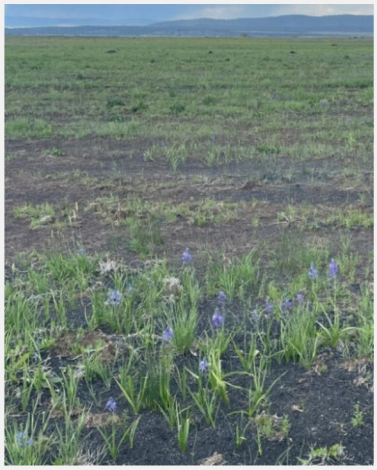


Photo 24. View facing east at seasonal wetland (SW-07). May 25, 2023.