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memorandum

date March 30, 2018

to B.F. Sisk Safety of Dams Project File D130314.04

from Brian Pittman and Rebecca Acosta

subject B.F. Sisk Dam SRA Vegetation Survey

Environmental Science Associates' (ESA) surveyed the B.F. Sisk Dam and surrounding San Luis State Recreation Area (referred to as the "project site") to identify vegetation types in the vicinity of the Sisk Dam and reservoir. Wildlife and special status species observed during the survey were also noted.

ESA wildlife biologists Julie Remp and Rebecca Acosta surveyed the project site on June 13 and 14, 2016, to characterize vegetation types and ground-truth vegetation mapping based on analysis of aerial photographs. The biologists surveyed all vegetation cover in places which were visible from publicly accessible paths or roadways. The vegetation types identified were:

- California sagebrush (Artemisia californica) scrub
- Blue oak (Quercus douglasii) woodland
- Cottonwood (Populus fremontii) stand
- California buckeye (Aesculus californica) grove
- Coyote brush (Baccharis pilularis)- silver lupine (Lupinus albifrons) scrub
- Non-native grassland

Wildlife species observed included endemic tule elk (*Cervus canadensis nannodes*), western burrowing owl (*Athene cunicularia*), a California species of special concern, and Swainson's hawk (*Buteo swainsoni*), a California Threatened species. The full list of wildlife observed is below.

- California ground squirrel (Otospermophilus beecheyi)
- Tule elk (Cervus canadensis nannodes): 12-15 individuals on east side of dam on slope
- American Crow (Corvus brachyrhynchos): crow nests visible in power towers
- Common raven (*Corvus corax*)
- Turkey vulture (Cathartes aura)
- Red-tailed hawk (Buteo jamaicensis): juvenile
- Western burrowing owl (Athene cunicularia hypugaea): perched in grassland south of reservoir
- Loggerhead shrike (*Lanius ludovicianus*)
- Brewer's blackbird (*Euphagus cyanocephalus*)
- Western kingbird (*Tyrannus verticalis*)
- Mourning dove (Zenaida macroura)



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- Western meadowlark (Sturnella neglecta)
- California horned lark (Eremophila alpestris actia)
- Yellow-billed magpie (Pica nuttalli)
- Oriole sp. (*Icterus* sp.)
- Black phoebe (Sayornis nigricans)
- Swainson's hawk (Buteo swainsoni)
- Cottontail rabbit (*Sylvilagus sp.*)
- California quail (Callipepla californica)
- Great blue heron (Ardea Herodias)
- Great egret (*Ardea alba*)
- Snowy egret (*Egretta thula*)
- Killdeer (*Charadrius vociferous*)
- Mallard (*Anas platyrhynchos*)
- Scrub jay (Aphelocoma californica)
- Bald eagle (Haliaeetus leucocephalus): west of reservoir
- White pelican (*Pelecanus erythrorhynchos*)
- House finch (Haemorhous mexicanus)
- Monarch butterfly (Danaus plexippus)



DEPARTMENT OF THE ARMY

U.S. ARMY ENGINEER DISTRICT, SACRAMENTO CORPS OF ENGINEERS 1325 J STREET SACRAMENTO CA 95814-2922

REPLY TO ATTENTION OF

June 23, 2010

Regulatory Division SPK-2010-00683

Patti Clinton
Bureau of Reclamation
1243 N Street
Fresno, California 93721-1813

Dear Ms. Clinton:

We are responding to your May 21, 2010 request for a preliminary jurisdictional determination (JD), in accordance with our Regulatory Guidance Letter (RGL) 08-02, for the Sisk Dam Corrective Action site. The approximately 2,578.80-acre site is located on San Luis Creek at San Luis Reservoir, in Sections 13, 26, 27, 28, 33, and 34, Township 10 S, Range 9 E, and an unsectioned portion of the San Luis Dam USGS 7.5 minute quadrangle, near Latitude 37.04872°, Longitude -121.07453°, Merced County, California.

Based on available information, we concur with the estimate of potential waters of the United States, as depicted on the January 5, 2010, Figures 4a-e, entitled *Preliminary Boundaries of Waters of the United States, Including Wetlands*, prepared by North State Resources, Inc. The approximately 28.728 acres of wetlands and 893.085 acres of other water bodies present within the survey area may be jurisdictional waters of the United States. These waters may be regulated under Section 404 of the Clean Water Act.

A copy of our RGL 08-02 Preliminary Jurisdictional Determination Form for this site is enclosed. Please sign and return a copy of the completed form to this office. Once we receive a copy of the form with your signature we can accept and process a Pre-Construction Notification or permit application for your proposed project.

You should not start any work in potentially jurisdictional waters of the United States unless you have Department of the Army permit authorization. You may request an approved JD for this site at any time prior to starting work within waters. In certain circumstances, as described in RGL 08-02, an approved JD may later be necessary.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This preliminary determination has been conducted to identify the potential limits of wetlands and other water bodies which may be subject to Corps of Engineers' jurisdiction for the particular site identified in this request. A Notification of Appeal Process and Request for

Appeal (RFA) form is enclosed to notify you of your options with this determination. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2010-00683 in any correspondence concerning this project. If you have any questions, please contact Zachary Simmons at our California South Branch, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email Zachary. M. Simmons@usace.army.mil, or telephone 916-557-6746. For more information regarding our program, please visit our website at www.spk.usace.army.mil/regulatory.html.

Sincerely,

ORIGINAL SIGNED

Paul Maniccia Chief, California South Branch

Enclosure(s)

Copy furnished without enclosure(s):

Scott Goebl, North State Resources, Inc., 11321 20th Street, Sacramento, California 95814-4233 Dale Harvey, Central Valley Regional Water Quality Control Board, 1685 E Street, Fresno, California 93706-2007

Jason Brush, U.S. Environmental Protection Agency, Region IX, Wetlands Regulatory Office (WTR-8), 75 Hawthorne Street, San Francisco, California 94105-3901

B.F. Sisk Dam Corrective Action Project

Delineation of Waters of the United States

B.F. Sisk Dam Central Valley Project, California



Draft March 2010



U.S. Department of the Interior Bureau of Reclamation



State of California Department of Water Resources

Mission of the Bureau of Reclamation

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Department of Water Resources Mission Statement

To manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments.

B.F. Sisk Dam Corrective Action Project

Delineation of Waters of the United States

B.F. Sisk Dam Central Valley Project, California

Prepared by:



North State Resources, Inc. 5000 Bechelli Lane, Suite 203 Redding, CA 96002

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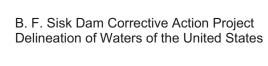
Including Wetlands

Chapter 1 Summary

On behalf of the U.S. Bureau of Reclamation (Reclamation), North State Resources, Inc. (NSR) conducted a delineation of waters of the United States occurring within the 2,578.80-acre B.F. Sisk Dam Corrective Action Project site (study area). The study area is located on lands surrounding the B.F. Sisk Dam, San Luis Reservoir, and O'Neill Forebay, approximately 12 miles west of the city of Los Banos, Merced County, California.

The field delineation was conducted by NSR between August 31 and September 18, 2009. A total of 921.813 acres of waters of the United States were mapped within the study area. Waters of the United States occur as lacustrine (891.000 acres), ephemeral and intermittent streams (0.335 acre, 6,401.77 linear feet), ditches (1.656 acres, 15,149.17 linear feet), fresh emergent wetlands (16.559 acres), and seasonal wetlands (12.169 acres).

This delineation of waters of the United States is subject to verification by the U.S. Army Corps of Engineers (Corps). NSR advises all parties to treat the information contained herein as preliminary until the Corps provides written verification of the boundaries of its jurisdiction.



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Chapter 2 Project Location

The study area is located approximately 12 miles west of the city of Los Banos, California on State Route (SR) 152 (Figure 1). It is in the *San Luis Dam, California* 7.5-minute U.S. Geological Survey (USGS) quadrangle, Township 10S, Range 8E, Sections 13, 27, 28, 33, and 34 Mount Diablo Base and Meridian, and portions of the Gonzaga land grant (Figure 2). The center of the study area is located at approximately UTM 10 S 672239m E, 4101640m N (NAD 83 datum).

2.1 Acreage

The study area encompasses 2,578.80 acres.

2.2 Proximity to Major Highways and Streets

The study area corresponds to the area surrounding the B.F. Sisk Dam, which is a large dam visible from miles to the east. To reach the site, exit Interstate Highway 5 at SR 152 and head west. Travel on SR 152 for approximately 2.5 miles to the SR 33/Gonzaga Road intersection. From the SR 152 exit ramp, turn left, then right at the stop sign and follow Gonzaga Road west. Pass through the intersection with Basalt Hill Road and proceed forward to the security booth. Authorization to proceed on site is required. Contacts include: Mandeep Bling [(209) 827-5110; Department of Water Resources], Lee Sencenbaugh [(209) 826-1197; Department of Parks and Recreation], and Patti Clinton [(559) 487-5127, Reclamation].

2.3 USGS Hydrologic Unit

The study area is located within the *Panoche-San Luis Reservoir* USGS Hydrologic Map Unit (Cataloging Unit Number 18040014).

Figure 1 Project Vicinity

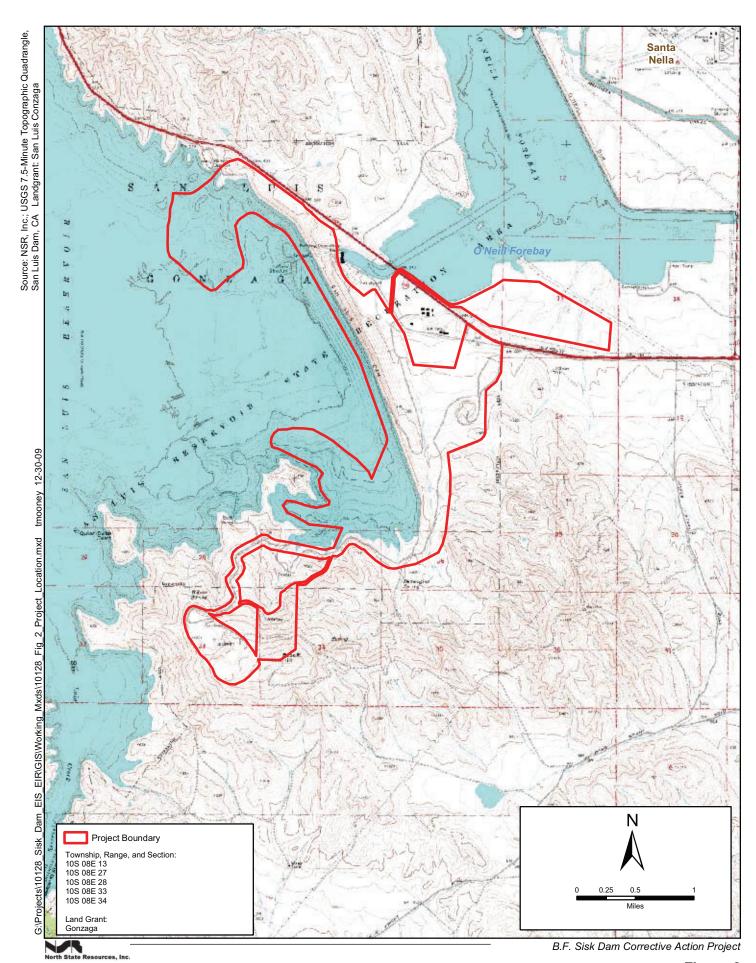
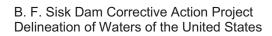


Figure 2 Project Location



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Chapter 3 Environmental Setting

3.1 Current/Recent Land Use

The San Luis Reservoir functions as an out-of-channel water storage/hydropower generation facility. Waters are pumped into the reservoir from the California Aqueduct for agricultural or power generation uses when needed. Aquatic recreation, such as windsurfing, fishing, and motor boating, occurs on the reservoir. Camping, hunting, picnicking, and other land-based uses occur as allowable within the state and federally owned and managed lands surrounding the reservoir. Sisk Dam is part of the San Luis Joint-Use Complex, which is owned by Reclamation and is operated and maintained by the California Department of Water Resources (DWR).

3.2 Site Topography and Elevation

The topography of the site varies significantly from relatively flat or gently rolling in the northeast sections of the study area, to steep and mountainous in the southwest. The elevation of the study area ranges between 230 feet above mean sea level (msl) near O'Neill Forebay to almost 1,600 feet above msl in the quarry near Basalt Hill.

3.3 Climate

Climate within the study area is as follows:

Type. The study area is characterized by a climate with cool, moist winters and hot or warm, dry summers.

Precipitation. Precipitation in the study area primarily falls as rain. Average annual rainfall is approximately 9.5 inches (Western Regional Climate Center 2009). For the period between August 31, 2008 and August 31, 2009, 7.89 inches of precipitation (rain) was recorded, which is 83 percent of normal; 2009 was the third year of an on-going statewide drought.

Air Temperature. Air temperatures in the study area range between an average January high of 55 degrees Fahrenheit (°F), and an average July high of 96 °F. The year-round average high is approximately 76 °F (Western Regional Climate Center 2009).

Growing Season. The growing season (i.e., 70 percent probability of an air temperature of 28 °F or higher) in the study area is between 200 and 280 days and occurs from February through October. The soil temperature regime is thermic (USDA Soil Conservation Service 1990).

3.4 Hydrology/Hydrologic Features

The study area lies within the San Luis Creek watershed, which historically drained to the San Francisco Bay via the San Joaquin River. Today, however, the hydrology of the watershed has been significantly altered by the development of the B.F. Sisk Dam and O'Neill Forebay. Since completion of San Luis Dam, runoff from San Luis Creek has been captured in San Luis Reservoir and diverted for State Water Project and Central Valley Project purposes.

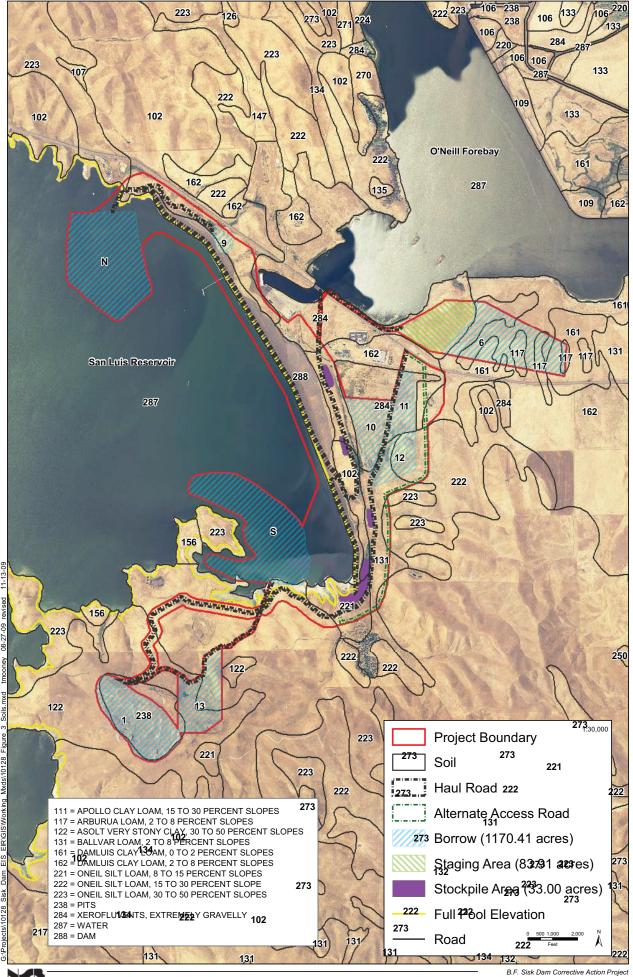
The hydrology in the study area is provided by precipitation events and by leakage of the B.F. Sisk Dam. Through the use of piezometers and comparison of the piezometer data to the level of the San Luis Reservoir, the DWR has established a direct correlation between reservoir level and the ground water level in the riparian and fresh emergent wetland areas just east of the dam (Pam Borba pers. comm.). Dam seepage is the main source of hydrology for the wetland areas within close proximity of the dam.

Although the correlation between reservoir level and ground water level is not as strong in the grassland areas east and west of Basalt Hill Road, dam seepage may influence ground water levels as far as the California Department of Forestry and Fire Protection (CalFire) station east of Basalt Hill Road (Pam Borba pers. comm.). The depressions found in this portion of the study area generally exhibit hydrophytic vegetation and other wetland indicators, suggesting that they pond or at a minimum maintain greater moisture than the surrounding higher terrain. The depressions generally lack stream channels leading to or from them. Data indicating whether the moisture supporting the potential wetland conditions is from precipitation events or high ground water was inconclusive during the field visit.

3.5 Soil Map Units

The soil map units within the study area and vicinity are described in the *Soil Survey of Merced County, California, Western Part* (USDA Soil Conservation Service 1990) and are shown in Figure 3. One of the soil map units (Xerofluvents, extremely gravelly) is identified as a hydric soil (USDA Natural Resources Conservation Service 2007). Descriptive information about each soil map unit follows.

Insert Figure 3



B. F. Sisk Dam Corrective Action Project Delineation of Waters of the United States

Blank back for 11x17 Figure 3.

- 111 Apollo clay loam, 15 to 30 percent slopes. Apollo clay loam, 15 to 30 percent slopes is a deep, well drained soil on low foothills. It was derived from, and is still underlain by, soft, calcareous shale and sandstone; depth to the soft shale and limestone is 40 to 60 inches. Permeability is moderately slow. Available water capacity (the ability of the soil to hold moisture) is high to very high. Effective rooting depth is limited by soft shale or sandstone. The soil is considered non-hydric (USDA Natural Resources Conservation Service 2007). The sub-group taxonomy of the Apollo soil series is *thermic Calcic Haploxerolls*. Apollo clay loam, 15 to 30 percent slope occurs southeast and directly north of the dam (Figure 3).
- 117 Arburua loam, 2 to 8 percent slopes. Arburua loam, 2 to 8 percent slopes is a moderately deep, well drained soil on foothills. It is derived from, and is underlain by, calcareous shale and sandstone at a depth of 20 to 40 inches. Permeability is moderate. Available water capacity is low to moderate. The soil is considered non-hydric (USDA Natural Resources Conservation Service 2007).

Effective rooting depth is limited by the shale or sandstone layer at 20 to 40 inches. The sub-group taxonomy of the Arburua soil series is *thermic Typic Xerorthents*. This soil map unit occurs in small polygons in the northeast section of the study area.

- 122 Asolt very stony clay, 30 to 50 percent slopes. Asolt very stony clay, 30 to 50 percent slopes is a deep, well drained soil on mountains. It is derived from basic volcanic rock. Permeability is slow. Available water capacity is low to moderate. Effective rooting depth is limited by basic volcanic rock at a depth of 40 to 60 inches. The soil surface is 15 to 35 percent stone covered, and the surface layer is a stony clay about 30 inches deep. The depth to the basic volcanic rock is about 40 to 60 inches. The soil is considered non-hydric (USDA Natural Resources Conservation Service 2007). The sub-group taxonomy of the Asolt soil series is *thermic Typic Chromoxererts*. This soil map unit occurs in the southwestern section of the study area near Basalt Hill.
- 131 Ballvar loam, 2 to 8 percent slopes. Ballvar loam, 2 to 8 percent slopes is a very deep, well drained soil on alluvial fans. Permeability is moderately slow. Available water capacity is high. Effective rooting depth is 60 inches or more. It formed in mixed alluvium derived from sedimentary rock. The texture of the upper layer varies from sandy clay loam to clay loam, silty clay loam, very fine sandy loam, or sandy loam. The soil is considered non-hydric (USDA Natural Resources Conservation Service 2007). The sub-group taxonomy of the Ballvar soil series is *thermic Typic Haploxerolls*. This soil map unit occurs east of the southern half of the dam.
- 161 Damluis clay loam, 0 to 2 percent slope; 162 Damluis clay loam, 2 to 8 percent slopes. Damluis clay loam soils are very deep, well drained soils on low terraces. They formed in alluvium derived from various kinds of rock.

Permeability is slow. Available water capacity is high. Effective rooting depth is 60 inches or more. The surface layer is a clay loam to about 22 inches, then, to a depth of 60 inches or more is a gravelly sandy loam. Both map units are considered non-hydric (USDA Natural Resources Conservation Service 2007). The subgroup taxonomy of the Damluis soil series is *thermic Calcic Pachic Argixerolls*. These soil map units occur in the portion of the study area that is east of the dam and south of O'Neill Forebay.

- 221 Oneil silt loam, 8 to 15 percent slopes; 222 Oneil silt loam, 15 to 30 percent slopes; 223 Oneil silt loam, 30 to 50 percent slopes. Oneil silt loam soils are moderately deep, well drained soils found on foothills. The three Oneil silt loam soils that occur within the study area differ primarily by the slope of the hills they occur in. They are all formed in material derived dominantly from calcareous shale and sandstone. The permeability is low to moderate. Effective rooting depth is limited by sandstone or shale at a depth of 20 to 40 inches. The soil texture is a silt loam to the sandstone and shale at depths of 20 to 40 inches. All three map units are considered non-hydric (USDA Natural Resources Conservation Service 2007). The subgroup taxonomy of the Oneil soil series is thermic Calcic Haploxerolls. These soil map units occur in the portion of the study area that is south and east of the south end of the dam.
- 238 Pits. This map unit consists of a basalt rock quarry that provided source material for the Sisk Dam and now contains soil material and rock. The quarry is located on top of Basalt Hill. Large quantities of rock parent material, dumped piles of mined rock debris, and young fine textured wind-blown alluvium are present within the quarry area. Pits are non-hydric (USDA Natural Resources Conservation Service 2007). Pit soils occur in the portion of the study area that is south of the reservoir on the top of Basalt Hill.
- **284 Xerofluvents, extremely gravelly**. Xerofluvents, extremely gravelly soils are a diverse group of very deep, poorly drained to well drained soils in channels, and on old plains in and adjacent to streams on mountains and foothills. They formed from gravelly alluvium derived from various kinds of rock. Permeability is slow to moderately rapid. Available water capacity is very low to low. Effective rooting depth is 60 inches or more. The water table is at a depth of 40 to 72 inches from December through March. This soil is subject to long periods of flooding from January through March, and it is considered a hydric soil for that reason (USDA Natural Resources Conservation Service 2007). It is used as a source for gravel. Xerofluvents are their own subgroup. This soil map unit occurs in two polygons east of the center of the dam.
- **287 Water**. The water soil map unit refers to the inundated soils under the San Luis Reservoir and O'Neill Forebay.
- **288 Dam**. The dam soil map unit refers to the area of the constructed Sisk dam, which primarily consists of rock from the nearby quarry on Basalt Hill.

3.6 Vegetation Communities

The study area includes five vegetative alliances as defined in *Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) and two habitat types per *A Guide to Wildlife Habitats of California* (WHR) (Mayer and Laudenslayer Jr. 1988). California annual grassland is the dominant alliance in the study area. Four alliances are closely associated with the seepage areas and ditches along the toe of Sisk Dam, and portions of the full-bank reservoir shorelines: Big Saltbush Shrubland, Coyote Bush Shrubland, Mixed Willow Woodland, and Cattail. All of these alliances are surrounded at least partially by annual grassland alliances. WHR types were used to map barren areas, and a single stand of chaparral-like shrub dominated by a plant uncommon to the region.

3.6.1 California Annual Grassland

California annual grassland is the largest vegetative alliance occurring in the study area and is dominated by non-native annual grasses and forbs. This alliance occurs on all the soil map units and land types present on the site with minor differences in species composition based on location. The dominant non-native grasses include wild oats (Avena barbata – UPL¹), ripgut brome (Bromus diandrus – UPL), and soft chess (Bromus hordeaceus – FACU). The dominant non-native forbs include black mustard (Brassica nigra – UPL) and broadleaved pepperweed (Lepidium latifolium – FACW). These dominants are representative of nearly all of the areas mapped as California annual grassland, except for areas adjacent to and within the seepage wetlands and associated ditches along the toe of Sisk Dam. On the steep hillsides to the south of the reservoir, the native forb, hayfield tarweed (Hemizonia congesta – UPL), is also relatively abundant.

The annual grassland along the toe of Sisk Dam has the greatest diversity of native plants, and also the greatest concentration of broad-leaved pepperweed. Non-natives present in these more mesic areas include Mediterranean barley (Hordeum murinum – FAC), curly dock (Rumex crispus – FACW), horehound (Marrubium vulgare - FAC), and cocklebur (Xanthium strumarium – FAC). Native grasses and forbs were a very minor component within the annual grassland as a whole, but were most abundant within the more mesic areas mentioned above. These natives include, vinegar weed (Trichostema lanceolatum – UPL), salt heliotrope (Heliotropium curassavicum – OBL), purple needle grass (Nassella pulchra – UPL), and gum plant (Grindelia camporum – FACU).

Wetland indicator status for plant species is based on *National List of Plant Species That Occur in Wetlands: California (Region 0)* (Reed 1988) and includes the following categories:

Obligate Wetland (OBL) – Plants that occur almost always in wetlands

Facultative Wetland (FACW) – Plants that usually occur in wetlands, but also occur in non-wetlands (i.e., uplands)

Facultative (FAC) – Plants with a similar likelihood of occurring in both wetlands and uplands

Facultative Upland (FACU) – Plants that usually occur in uplands, but also occur in wetlands

Obligate Upland (UPL) – Plants that occur almost always in uplands

Coyote Bush Shrubland

Coyote Bush Shrubland is distinguished by dense stands of coyote bush (Baccharis pilularis - UPL) in upland positions adjacent to the intermittent drainages or the reservoir shorelines (bank full). Big saltbush (Atriplex lentiformis – FAC) is a minor component of this alliance and occurs at the upper and drier edges of the stands. Herbaceous vegetation is largely absent under the shrub canopy, and in some of the stands, broad-leaved pepperweed occurs within canopy gaps and along edges.

Big Saltbush Shrubland

Big Saltbush Shrubland occurs as scattered clusters and as moderately dense linear stands along the intermittent drainages and portions of the reservoir shorelines. In its overall range, big saltbush is associated with riparian zones and the margins of wetlands, but is uncommon as a riparian associate in the Central Valley (Meyer 2005). The largest and densest stand adjacent to the study area is along the southern shoreline (bank full) of San Luis Reservoir. This stand includes hundreds of individuals of big saltbush that are concentrated at the base of a drainage and extend along the reservoir shoreline for approximately a quarter mile. The large stand of big saltbush near the toe of Sisk Dam is associated with adjacent stands of coyote bush and a lone honey mesquite (Prosopis glandulosa ssp. torreyana - UPL). Grasslands adjacent to the Big Saltbush Shrubland stands have higher concentrations of salt heliotrope than the grasslands at large within the study area. Big saltbush, along with salt heliotrope and honey mesquite, are all classified as halophytes.

Mixed Willow Woodland

Mixed Willow Woodland alliance is dominated by native trees associated with riparian woodlands: Fremont cottonwood (Populus fremontii spp. fremontii – FACW), red willow (Salix laevigata - FACW), and black willow (Salix gooddingii – OBL). The dominant shrub in this habitat type is mule fat (Baccharis salicifolia – FACW), which forms dense stands surrounding the cottonwoods and willows.

Cattail Alliance

Cattail Herbaceous Vegetation occurs in seasonal wetlands as inclusions or adjacent to Mixed Willow Woodland. Narrowleaf cattail (Typha angustifolia – OBL) is the dominant species in the Cattail stands, dusky willow (Salix melanopsis – FACW) is subdominant in one of the stands. Dominant nonnatives associated with this alliance are broad-leaved pepperweed and poison hemlock (Conium maculatum – FACW).

Mixed Chaparral

Mixed chaparral habitat is comprised of a single stand of dense shrubs on a steep slope northwest of Borrow Area 1. The dominant shrub in this stand is silver buffaloberry (Shepherdia argentea – UPL). Subdominant shrubs in this stand are blue elderberry (Sambucus mexicana – FAC) and wild rose (Rosa sp.).

Barren

Barren habitat is comprised of the disturbed areas that have less than 2 percent total vegetative cover. A representative Barren site is located on the hilltop quarry located southwest of the dam.

B. F. Sisk Dam Corrective Action Project Delineation of Waters of the United State	

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Chapter 4 Methods

4.1 Field Delineation

The routine delineation of wetlands and "other waters" within the study area was based on field observations of positive indicators for wetland vegetation, hydrology, and soils; and indicators of "other waters." This methodology is consistent with the approach outlined in *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (U. S. Army Corps of Engineers 2006). Taxonomic nomenclature for plant species is in accordance with *The Jepson Manual* (Hickman 1993). Wetland indicator status for plant species was confirmed using Reed (1988), and the "50/20 Rule" was applied to determine plant dominance (U. S. Army Corps of Engineers 2006). The presence of primary and/or secondary wetland hydrology indicators was documented for each wetland feature.

A soil pit was dug in each representative wetland feature. Soil pits were dug to a depth sufficient to document the presence or confirm the absence of hydric soil indicators. Soils were examined in order to assess field indicators of hydric soils. Positive indicators of hydric soils were observed in the field in accordance with the criteria outlined in *Field Indicators of Hydric Soils in the United States* (Hurt, and Vasilas 2006). Soil colors were determined using a Munsell® soil color chart. The hydric status of each soil map unit was reviewed using *Hydric Soils list for Merced County, California Western Part* (USDA Natural Resources Conservation Service 2007). At least one set of paired data points was selected to best represent the wetland feature type and the adjacent uplands. Data points were also placed in suspect areas to confirm wetland or upland status.

Delineation of "other waters" was based on presence of an ordinary high water mark (OHWM) as defined in Corps regulations (33 CFR 328.3 and 33 CFR 328.4). Physical characteristics of an OHWM include a natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, presence of litter and debris, leaf litter disturbed or washed away, scour, deposition, presence of bed and bank, and water staining. At least one set of paired data points was then selected to best represent the "other waters" and adjacent upland conditions for each "other waters" type.

Forty-nine data points representing each feature type and the associated upland were characterized and documented throughout the study area. Field

observations were conducted between August 31 and September 18, 2009. Routine wetland determination data forms are presented in Appendix A. Representative photographs of features delineated are presented in Appendix B.

The boundaries of delineated features and all 3-parameter data point locations were mapped using a Trimble Pathfinder Geo XH Global Positioning System (GPS) capable of sub-foot accuracy. Where the use of the GPS was not practicable, the features were delineated by hand onto ortho-rectified color aerial photographs. After the field delineation, the GPS data were overlain on the ortho-rectified color aerial photograph of the study area to generate a delineation map.

4.2 Evaluation of Federal Jurisdiction

Isolated, non-navigable, intrastate waters are not subject to federal jurisdiction based on guidance issued in response to the U.S. Supreme Court's decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* ("SWANCC decision") (Guzy and Anderson 2001). Additionally, the memorandum providing guidance to implement the U.S. Supreme Court's decision in *Rapanos v. United States* and *Carabell v. United States*, referred to as "Rapanos" (Grumbles and Woodley 2008), was considered in determining federal jurisdiction. Under this guidance, wetland features that are not adjacent to (i.e., bordering, contiguous, or neighboring) a traditional navigable water (TNW) or abutting a relatively permanent water (RPW) are subject to a significant nexus evaluation. In these circumstances, the significant nexus evaluation is used by the Corps (and Environmental Protection Agency) to determine whether a particular wetland or "other water" has a "significant nexus" to a TNW; and is, therefore, subject to regulation under the federal Clean Water Act, (i.e., "waters of the United States").

Approved Jurisdictional Determinations and Preliminary Jurisdictional Determinations are tools used by the Corps to help implement Section 404 of the Clean Water Act. In order to obtain an Approved Jurisdictional Determination, as required to determine a feature as non-jurisdictional, the Corps must conduct a significant nexus evaluation to assess the characteristics and functions of the aquatic features to determine if they significantly affect the chemical, physical, or biological integrity of downstream navigable waters. Alternatively, an applicant can request a Preliminary Jurisdictional Determination in which case the Corps will treat all features as waters of the United States for permitting purposes (Riley 2008).

For the purposes of this wetland delineation, the jurisdictional status of the wetlands and other waters observed in the study area were all considered jurisdictional, and the applicant is requesting a Preliminary Jurisdictional Determination.

4.3 Problematic Vegetation, Soils, and Hydrology

Problematic vegetation, soils, and hydrology were observed at various locations in the study area. In each case, the procedure followed to determine the feature's wetland status was based on the discussion and guidance for problematic vegetation, soils, and hydrology provided in the Manual and/or Manual Supplement. The problematic determinations stem from: (1) the manipulation of the natural flow regime and topography from the construction and operation of the Sisk Dam (starting in 1962); (2) the dry season site visit coupled with the current drought conditions on the site; and (3) sparse vegetative cover, or colonization of some wetland features by upland annual plant species.

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Delineation of Waters of the United States

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Chapter 5 Results

The boundaries and acreages of waters of the United States within the study area are illustrated in the series of figures representing the boundaries of waters of the United States, including wetlands (Figure 4 series – attached in the pocket). Waters of the United States within the study area occupy a total of 921.813 acres and include lacustrine, ephemeral and intermittent streams, ditches, fresh emergent wetland, and seasonal wetland. An acreage summary of the waters of the United States delineated within the study area is presented in Table 1. A detailed tabulation of the acreage (and linear footage – as appropriate) is also presented in the tables on Figures 4b through 4e, Appendix C.

Table 1. Acreage Summary of Jurisdictional Waters of the United States Within the B.F. Sisk Dam Corrective Action Project Study Area, Merced County, California

Waters of the United States	Total Acreage	Total Linear Feet
Wetlands		
Fresh Emergent Wetland	16.559	N/A
Seasonal Wetland	12.169	N/A
Total Wetlands	28.728	N/A
Other Waters		
Lacustrine	891.000	N/A
Ephemeral Drainage	0.298	5,586.77
Intermittent Stream	0.037	815.00
Ditch	1.656	15,149.17
Settling Pond	0.094	N/A
Total Other Waters	893.085	21,550.94
Total Jurisdictional Waters of the United States	921.813	21,550.91

5.1 Characterization of Delineated Features

The following description of the waters of the United States, including wetlands provides details about specific wetland features observed and documented in the study area. In some cases, there were many features of one type (e.g., seasonal wetland), so details typical of the feature type are described. As presented in Table 1, there are two types of wetlands and five types of "other waters".

In some cases, several wetland types combine to create a complex feature. So that this characterization of the delineated features provides a comprehensive description, the feature types associated with specific functions are lumped together. For example, most of the fresh emergent wetlands are associated with dam seepage, but the seepage is then conveyed out of the study area via ditches. As a result, the discussion lumps the features associated with this function as the Seep Wetland Complex.

Each heading in the following discussion identifies the feature type or function, and is followed by representative feature labels from Figures 4b - 4e. References are also made to corresponding data sheets (Appendix A) and to representative photographs (Appendix B).

5.1.1 Lacustrine (LAC 1, LAC2, and LAC3)

The Lacustrine features correspond to the San Luis Reservoir below the full pool elevation, and combined they are the largest (891.000 acres) feature type delineated. The full pool elevation is the elevation at which the DWR considers the reservoir to be full. There is no spillway, but water is pumped into or out of the reservoir via a large pumping system. The marks on the ground corresponding to the full pool elevation include eroded shoreline, shelving, changes in the character of the soil, destruction of terrestrial vegetation, and the presence of fluvial litter and debris. Data point 46 (Figure 4d) documents the lacustrine conditions found in a small inlet of the San Luis Reservoir. During the field visit, the San Luis Reservoir was at historic low levels, but despite the dry conditions, the field indicators of the high water mark in the vicinity of data point 46 and at other locations around the reservoir were obvious.

The reservoir functions as out-of-channel water storage to serve the State Water Project and the Central Valley Project. The natural San Luis Creek drainage is insufficient to fill the reservoir, so water is either pumped into or out of the reservoir from the State Water Project or Central Valley Project canals depending on water need and availability. In addition to supporting agricultural and municipal water needs, the reservoir supports recreation such as boating and fishing.

5.1.2 Seep Wetland Complex (from south to north – ED6, FEW10, FEW7, FEW6, D9, FEW3, FEW8, D7, FEW9, D2, SW4, D3, D6, D5, and D8)

This complex of fresh emergent wetlands, seasonal wetlands, and drainage ditches are formed from, or convey, waters that seep through the dam from the reservoir. A correlation that ties the hydration of the wetland features and ditches to the level of the reservoir has been documented by the DWR (Pam Borba, Pers. Comm.). The hydration of these wetland and ditch features may undergo long- or short- periods of inundation depending on the duration (or lack thereof) of full capacity reservoir height. In addition, if the reservoir has been low for several years, the next time it is full, the dam leaks more at first then slows down over time as the air spaces between soil particles in the dam are

replaced with water. Some hydration of the features also results from precipitation events.

Seep wetland complex features (e.g., FEW9; Photographs 4, 5, and 6) occur in areas with long-duration saturation or inundation creating an anaerobic environment suitable for hydrophytic plants. The features occur in the deeper depressions close to the toe of Sisk Dam where seepage creates long-duration ponding or soil saturation. The length of inundation is dependent on the reservoir level behind the dam; the features are inundated for long-duration when the reservoir is full for a long period of time, or the features may remain dry during years (such as in 2009) when the reservoir level is very low for the whole year. Herbaceous plant species dominate the seep wetland features, although portions of the features are also vegetated by hydrophytic trees and shrubs. Dominant species include: narrowleaf cattail, broad-leaved pepperweed, poison hemlock, Fremont cottonwood, red willow, black willow, and mule fat.

Wetland hydrology criteria are met through the observation of sediment deposits, surface soil cracks, oxidized rhizospheres, and the FAC-neutral test. Soils were mottled with redox features and fit the Redox Depressions (F8) hydric soil indicator description. Seep wetland complex features occur with the most frequency in depressions close to the dam. Data points 5, 6, 9, 12, 14, and 15 are among those documenting the habitats.

The wetlands documented in the seep wetland complex occur on gentle slopes (e.g., FEW10), in depressions (e.g., FEW9), and on flat surfaces (e.g., SW4). The ditches were created to bisect and connect the various wetland features, and the main "drain" of the whole complex is the large, deep ditch (D8; Photograph 10) north of the complex. The primary function of the seep wetland complex is to collect and transport the seepage water. The secondary functions of the complex are: sediment and toxicant retention, flood-flow attenuation, production export, aquatic diversity and abundance, and wildlife diversity and abundance (Schneider, and Sprecher 2000). See Photographs 3–10 (Appendix B) for images of the seep wetland complex.

Other seep wetlands (e.g., FEW15; Photograph 11) occur north of the dam. Although the features exhibit many of the characteristics and serve similar functions as the seep wetland complex described above, they do not drain through the D8 ditch. These wetland and ditch features (e.g., D10; Photograph 12) flow off-site and are presumed to reach O'Neill Forebay.

5.1.3 Seasonal wetlands (SW30, SW31, FEW1, FEW2, SW27, SW5, SW32, SW1, SW2, SW3, SW28, SW26, SW29, SW21, SW22, SW6, SW20, SW45, SW24, SW7, SW25, SW8, SW10, SW11, SW23, SW15, SW14, SW9, SW 19)

The vast majority of the seasonal wetland features mapped within the study area occur east of the seep wetland complex, in the vicinity of Basalt Hill Road. The closer these features are to the dam, the greater likelihood that their hydration is

related to water seepage through the dam during high reservoir periods. However, the correlation between seepage and seasonal wetland hydration gets weaker with distance east of the dam. Because each seasonal wetland occurs in a depression (some very slight, some deep and well pronounced), precipitation is thought to play an important role in the hydration of the features, whether or not they receive seepage from the reservoir.

Most of the features (e.g., SW19, SW24, SW7, SW19) are extensions of the grassland habitats they occur in. The dominant species are marginally hydrophytic (FAC) grasses or herbaceous plant species, and in most cases, the depressions are slight, and the boundaries of the features are gradual. The most reliable boundary indicator observed was the change from upland to wetland vegetation. In these cases, the hydric soil indicators [Redox Depression (Photograph 16)] continue across the wetland – upland boundary due to capillary pull. The most common hydrology indicators are surface soil cracks, sediment deposits, and oxidized rhizospheres.

The weak hydrophytic vegetation parameter (and in some cases the weak wetland hydrology parameter) make it difficult to determine how frequently these features become saturated. Some may only be saturated for long duration during wetter than normal precipitation years, or in years of high precipitation coupled with high reservoir levels (producing contributing soil saturation from seepage and precipitation).

Contrast the shallow depression seasonal wetlands with the deeper depressions (e.g., SW27, SW5, FEW1, FEW2) and the dominant plants become much more hydrophytic, and the indicators of hydric soils and wetland hydrology get much more pronounced. These deeper depression seasonal wetlands occur closer to the dam. The ground water level may be higher in years of high reservoir levels, and the deeper depressions may be closer to that groundwater level. Closer proximity to the groundwater level coupled with normal or above normal precipitation rates likely result in long duration inundation of these features, which produce the stronger wetland indicators.

For the most part, no surface channel was evident that connects these seasonal wetlands to the seep wetland complex ditches. As such, the functions of the features are not related to drainage, but are purely related to more "natural" functions such as: sediment and toxicant retention, flood-flow attenuation, production export, aquatic diversity and abundance, and wildlife diversity and abundance (Schneider, and Sprecher 2000).

Data points 4, 10, 19, 21, 23, 24, 31, 32, 35, 37, 39, and 41 (also see Photographs 13–18) document seasonal wetland features. The dominant plant species found within them consist of hydrophytic grasses such as Mediterranean barley and squirreltail fescue (*Vulpia bromoides* – FACW), and herbaceous species such as broad-leaved pepperweed, salt heliotrope, curly dock, and horehound. In some instances, typically closer to the dam where seepage

appears to play a greater role in the hydration of the features, tree (e.g., Fremont cottonwood) and shrub species (e.g., mule fat) are also present.

The wetland hydrology indicators observed in the seasonal wetland features include water marks, sediment deposits, surface soil cracks, and oxidized rhizospheres. Hydric soil criteria are met through the observation of redox features described under the Redox Depressions hydric soil indicator. Because of the prolonged drought, it is highly possible that these features have not been hydrated for a number of years. But because they lie within depressional microtopography, are dominated by hydrophytes, and have hydric soil indicators, they could not be excluded from the wetland classification.

5.1.4 Ephemeral Drainage (ED13, ED3, ED4, ED9, ED6, ED5)

Ephemeral drainages are features that flow during precipitation events and for short periods following the precipitation (less than 14 days). There is no ground water component adding to the duration of flow after a precipitation event. Most of the natural stream channels found within the study area are considered ephemeral drainages due to the well drained soils on the slopes they are found upon, the low annual precipitation rates, and the lack of wetland conditions at the source of the stream. [Wetlands at the source of a stream might slowly release waters after a storm event and contribute to a longer flow regime within the drainage – an intermittent stream flow regime (see below)].

Data points 43 (Photographs 19 and 20) and 47 (Photograph 21) document representative 2- and 1-foot-wide (respectively) ephemeral drainages. In each case, there is a defined bed and bank, evidence of scour and deposition, the features occur at the bottom of small drainage basins, and they are visible on aerial images. The features are not wetlands because the vegetation parameter is not met; the soils may or may not be met due to their recent deposition or frequent scour. The ephemeral drainages are considered "other waters of the United States." They function largely to concentrate and convey accumulated waters (from precipitation events) from the hills surrounding the study area. There is no influence of seepage waters from the reservoir.

5.1.5 Intermittent Stream (IS1)

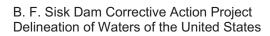
Intermittent streams are features that flow seasonally, but exhibit a groundwater component in addition to the collection and conveyance of precipitation and sheet flow from adjacent slopes. The intermittent streams often have a wetland feature at the source that absorbs and then slowly releases waters, or they are influenced by high ground water. Intermittent streams are characterized as bed and bank features that exhibit evidence of scour and deposition. One intermittent stream (IS1) was mapped within the study area. Although conditions were dry during the site visit, feature IS1 provides drainage for a moderately large seasonal wetland (SW22; 0.668 acres) and wetlands (e.g., SW32, SW21) that are not directly connected (Figure 4c). Feature SW22 and the other upslope seasonal wetlands may be wet during periods of high water in

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the reservoir, which would likely add a ground water component to the flow within IS1.

Chapter 6 Conclusion

A total of 921.813 acres of waters of the United States, including wetlands were delineated within the study area. To support a "preliminary verification," all features identified herein and shown on the Figure 4 series are assumed to be federally jurisdictional. Waters of the United States identified in this report are subject to verification by the Corps. NSR advises all interested parties to treat the information contained herein as preliminary pending written verification of jurisdictional boundaries by the Corps.



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Chapter 7 References

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7.1 Personal Communication

Pam Borba. Hydrologist. San Luis Field Division. California Department of Water Resources. Comments during a site orientation meeting. August 31, 2009.



Data Forms

	North State Resources Wetland Determination Data Form - Arid W	/est Reg	ion		Habitat Type COMPLEY Wetland Type SEASON WILL
	Project/Site:Sisk Dam Corrective Action Project Applicant/Owner:U.S. Bureau of Reclamation Investigator(s):J. Colescott		City/Count	y: Merced	County Sampling Date: 8/31/09 State: CA Sampling Point: 4
	Landform (hillslope, terrace, etc.)	Soi ime of year? cantly distur	il Map Unit I YES bed? Are n	Name: <u>)</u> (If no, explain ormal circum	MUIS CLAY LOAM 2-8% in remarks.) stances present? YES
	Summary of Findings (Attach site map showing Hydrophytic vegetation? 455 Hydric soil? 455 Wetl				
	USACE Jurisdiction Adjacent to Waters X Tributary to Waters X Isolate Explain: DITCH + ADJACENT WEIT	ed (with inter	rstate comn	nerce)	Isolated (non jurisdictional)
	Evaluation of features designated "Ot Indicators: Defined bed and bank Scour Feature Designation: Perennial Intermittent Feature Designation: Patricial Drainage Artificial Drainage	her Wat ≿ Ordin ohemeral	ary High W Blue-lir	ater Mark Ma ne on USGS	pped X DITCH & WETLANDS.
وأزم	Remarks DITCH CHRURES DAM SEEPA THAT WEITHAND CONDITIONS O AS SEASONAL WEIGHTS.				
salicifolia	Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
vininea = B.	3 Total Cover: Sapling/Shrub Stratum (use scientific names) 1. Faccharis Viminea	% Cover	Species?	Status FACW	Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: (AB)
	2. Atriplex lentiformis 3	<u>20 </u>	<u>YES</u>	FA-C	Prevalence Index Worksheet Total % Cover of: Multiply by OBL Species x 1 = FACW Species x 2 =
Baccharis	Herb Stratum (use scientific names) 1. Lepidium latifatium 2. Bromus diandrus 3. Bromus hordeacous	% Cover 60	Species? YES NO	Status FACW UPL FACW	FAC Species
	4				Prevalance Index = B/A = Hydrophytic Vegetation Indicators Dominance Text is >50%

Total Cover: 90

Total Cover:

% Cover of Biotic Crust

% Cover

Species? Status

50%= 45

1. _

2. _

20%=18

20%=

Woody/Vine Stratum (use scientific names)

% Bare Ground in Herb Stratum 10

Prevalence Index is ≤ 3.01

Hydrophytic Vegetation? 4E5

be present.

Morphological Adaptations (provide supporting

data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation¹ (Explain)

1 Indicators of hydric soil and wetland hydrology must

		Æ
Sampling	Point	1

÷ X					Sampling Point	
Soils					<u> </u>	
Profile Description: (Describe to			or or confirm	the absence of in	dicators.	
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist)	% Type	Loc ²	Texture	Remarks	
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6-12 2.5 YR 4/3 60	2.548 5/4	40 RM	m	SAND 9 LO	1000	
			-			
¹ Types: C = Concentration D = Depletion	n RM = Reduced Matrix	² Location:	–	ning RC = Root C	hannel M = Matrix	
Hydric Soil Indicators: (Applica					blematic Hydric Soils3	
Histosol (A1)		Gleyed Matrix (S4)	1 cm M	uck (A9) (LRR C)	
Histic Epipedon (A2)		Redox (S5)		2 cm M	uck (A10) (LRR B)	
Black Histic (A3)	Stripped	d Matrix (S6)		Reduce	ed Vetric (F18)	
Hydrogen Sulfide (A4)	Loamy	Mucky Mineral (F	1)	Red Pa	rent Materials (TF2)	
Stratified Layers (AG) (LRR C	Loamy	Gleyed Matrix (F2)	Vegeta	ted Sand/Gravel Bars	
1 cm Muck (A9) (LRR D)	Deplete	d Matrix (F3)		Other (Explain in Remarks)	
Depleted Below Dark Surface	(A11) Redox [Dark Surface (F6)			*	
Thick Dark Surface (A12)	Deplete	d Dark Surface (F	7)		hydrophytic vegetation and	
Sandy Mucky Mineral (S1)		Depressions (F8)		wettand nydro	ogy must be present.	
	Vernal F	Pools (F9)				
Restrictive Layer (if present): Type:	_	Depth (Inches)	— Hyd	ric Soil? 4F.5	_	
Remarks COLORS + LACK THERE IS AMPLE EVIDE NORMAL CHANNEL.	NCE OF FLOW;	SOILS ARE	COARSE	+ DAIA PO	HYDRIC SOILS. HOW INT 15 WITHIN THE WEL BAR INDICATOR	
Hydrology						
Wetland Indicators Primary Indicators (Any one indicator	is sufficient)			Secondary Indi	cators (2 or more required)	
Surface Water (A1)	Salt Cru	st (B11)		Water N	Marks (B1) (Riverine)	
High Water Table (A2)	400 400 400	rust (B12)			nt Deposits (B2) (Riverine)	
Saturation (A3)		Invertebrates (B1	3)	1.7	posits (B3) (Riverine)	
Water Marks (B1) (Nonriverine)		n Sulfide Odor (C			e Patterns (B10)	
Sediment Deposits (B2) (Nonriv		Rhizospheres (C	•	Dry-Sea	ason Water Table (C2)	
X_ Surface Soil Cracks (B6)		e of Reduced Iron	(C4)	Thin Mu	ick Surface (C7)	
Inundation Visible on	Recent I	ron Reduction in		Crayfish	Burrows (C8)	
Aerial Imagery (B7)		Soils (C6)			on-Visible-on	
Water-Stained Leaves (B9)	Other (E	xplain in Remarks	5)		magery (C9)	
					Aquitard (D3)	
·				FAC-Ne	etural Test (D5)	
Field Observations					✓	
10.424 Miles (App 2014 to 0.00) - 10.444 App (App 2014) - 10.444 App (App 2014)	V		Wetland	Hydrology? Yes	∆_ No	
	No X Depth (inches					
	No Depth (inches		ludes capilla			
Describe Recorded Data (stream DWR GROUND WATER.	WELLS & PER			20 S		
Remarks SUFFICIENT	INDICATORS O	OF WETL	TI CENT	ty Dieocogy	,	

North State Resources Wetland Determination Data Form - Arid V	Vest Rec	ion		Habitat Type ANNUAL GRASSIAN. Wetland Type UP LAND
Project/Site: Sisk Dam Corrective Action Project	7		v. Merceo	
Applicant/Owner: U.S. Bureau of Reclamation		_ 011/1000111	J	State: CA Sampling Point: Z
Investigator(s):				
Landform (hillslope, terrace, etc.)				- Slone % 5 /
Cubracian (LDD) LDD C		Local rei	lei (concave	And I like O. A.Y I A AM D. 8'
Subregion (LRR) <u>LRR-C</u>				
Are climatic/hydrologic conditions on the site typical for this t				
Are vegetation N , soil N , or hydrology N signifi				
Are vegetation N, soil N, or hydrology N natura				
Summary of Findings (Attach site map showing				
Hydrophytic vegetation? 1 Hydric soil? 1 Wet	land hydrold	ogy? N	ls sample	d area a wetland? Nother waters? Nother waters?
USACE Jurisdiction Adjacent to Waters Isolate Explain:	ed (with inte	erstate comm	nerce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour_ Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	Ordir	nary High Wa	ater Mark Mare on USGS	apped Quad
Remarks VPLAND PAIR TO DP 1 Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names) 1	% Cover	Species?		Number of dominant species that are OBL, FACW, or FAC: (A)
2	1			Total number of dominant species across all strata: (B)
50%= Total Cover: Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
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3.				
4.				
50%= Z0%= Total Cover:			hawasana k	FACW Species x 2 =
Herb Stratum (use scientific names)	% Cover	Species?	Status	FAC Species x 3 =
1. Fromus diamdrus	20	465	UPL	FACU Species x4 =
2 Brassica Negra			UPL	UPL Species x 5 =
3. Centaurea golstitialis	7	No	UPL	Column Totals (A)(B)
4.				Prevalance Index = B/A =
5				Hydrophytic Vegetation Indicators Dominance Text is >50%
6		:		Prevalence Index is ≤ 3.01
7	37			Morphological Adaptations ¹ (provide supporting
		Coories	Ctotus	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
Woody/Vine Stratum (use scientific names) 1	% Cover	Species?		Indicators of hydric soil and wetland hydrology must be present.
2.				
50%= Total Cover:	·	. 4	-	Hydrophytic Vegetation? NO
% Bare Ground in Herb Stratum 68 % Cover of Biot				**

	2
Sampling Point	

Profile Description: (Describe to the depth needed to document the indicator or confirm Depth Matrix Redox Features	n the absonce of indicators		
	if the absence of indicators.		
0.8 1048 1/4 100	Texture Remarks		
	GRAVELLY LOTUS		
Types: C = Concentration D = Depletion RM = Reduced Matrix ² Location: PL = Pore Li	ining RC = Root Channel M = Matrix		
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)	Indicators for Problematic Hydric Soils3		
Histosol (A1) Sandy Gleyed Matrix (S4)	1 cm Muck (A9) (LRR C)		
Histic Epipedon (A2) Sandy Redox (S5)	2 cm Muck (A10) (LRR B)		
Black Histic (A3) Stripped Matrix (S6)	Reduced Vetric (F18)		
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1)	Red Parent Materials (TF2)		
Stratified Layers (AG) (LRR C) Loamy Gleyed Matrix (F2)	Vegetated Sand/Gravel Bars		
1 cm Muck (A9) (LRR D) Depleted Matrix (F3)	Other (Explain in Remarks)		
Depleted Below Dark Surface (A11) Redox Dark Surface (F6)			
Thick Dark Surface (A12) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and		
Sandy Mucky Mineral (S1) Redox Depressions (F8)	wetland hydrology must be present.		
Vernal Pools (F9)			
NONE HUDRIC SOILS.			
Hydrology Wetland Indicators	Secondary Indicators (2 or more required		
Hydrology Netland Indicators Primary Indicators (Any one indicator is sufficient)	Secondary Indicators (2 or more required		
Hydrology Vetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11)	Water Marks (B1) (Riverine)		
Hydrology Vetland Indicators rimary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine		
Hydrology Vetland Indicators rimary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)		
Hydrology Vetland Indicators rimary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)		
Hydrology Netland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)		
Hydrology Netland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Presence of Reduced Iron (C4)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7)		
Hydrology Vetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8)		
Hydrology Vetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Presence of Reduced Iron (C4) Recent Iron Reduction in	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7)		
Hydrology Vetland Indicators rimary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Presence of Reduction in Plowed Soils (C6)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on		
Hydrology Vetland Indicators rimary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Presence of Reduction in Plowed Soils (C6)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)		
Primary Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Selic Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in Plowed Soils (C6) Other (Explain in Remarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)		
Hydrology Netland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Pepth (inches) Depth (inches) Wetland	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)		
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Wetland	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)		
Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations Surface Water Present? Yes No Depth (inches) Wetland	Water Marks (B1) (Riverine)Sediment Deposits (B2) (Riverine)Drift Deposits (B3) (Riverine)Drainage Patterns (B10)Dry-Season Water Table (C2)Thin Muck Surface (C7)Crayfish Burrows (C8)Saturation Visible onAerial Imagery (C9)Shallow Aquitard (D3)FAC-Netural Test (D5) Hydrology? Yes No		

North State Resources			Habitat Type 6 RASSLAND
Wetland Determination Data Form - Arid V	Vest Reg	ion	Wetland Type UPLAND
Project/Site:Sisk Dam Corrective Action Project		City/County: Merced	County Sampling Date: 8/31/07
Applicant/Owner:U.S. Bureau of Reclamation			State: <u>CA</u> Sampling Point: <u>3</u>
Investigator(s):J. Colescott			-
Landform (hillslope, terrace, etc.)		Local relief (concave,	, convex, none) NONE Slope % 0-2/s
Subregion (LRR)LRR-C	So	il Map Unit Name: 🗶 🖘	POFLUVENTS, EXTREMELY GRAVELLY
Are climatic/hydrologic conditions on the site typical for this t	ime of year	? 455 (If no, explain	n in remarks.)
Are vegetation N, soil N, or hydrology N signifi	cantly distu	bed? Are normal circum	nstances present? 455
Are vegetation N , soil N , or hydrology N natura	ally problem	atic? (If needed, explain	n any answers in Remarks.)
Summary of Findings (Attach site map showing	sampling p	oint locations, transects,	important features, etc.)
Hydrophytic vegetation? 455 Hydric soil? 10 Wet	land hydrolo	ogy? <u>NO</u> Is sampled	d area a wetland? NO Other waters? NO
USACE Jurisdiction Adjacent to Waters Inbutary to Waters Isolate Explain:	ed (with inte	erstate commerce)	Isolated (non jurisdictional)
	hor Mo	ers of the Unite	od Statos"
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour_			
Feature Designation: Perennial Intermittent E	phemeral _	Blue-line on USGS	Quad
Natural Drainage Artificial Drain	nage	Navigable Water	·
Remarks DATA POINT DOCUME	NTS	UPLAND CON	UDITIONS PRESENT W/1
A SUSPECT WETHOU AREA.	VPL	AND PAIR	NO D? 4
•	. ~	1, 50	1.
Vegetation	Absolute	Dominant Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	% Cover	Species? Status	Number of dominant species that are OBL, FACW, or FAC: (A)
1.		———	
3.			Total number of dominant species 3 (B)
50%= Total Cover:			Percent of dominant species that are OBL, FACW, or FAC: (AB)
Sapling/Shrub Stratum (use scientific names)		Species? Status	are OBL, FACW, or FAC: (AB)
1. Atriplex lentiformis	_5_	MES FAR	Prevalence Index Worksheet
2. Baccharis piluloris	_5_	YES UPL	Total % Cover of: Multiply by
3			OBL Species x1 =
4			FACW Species x2=
50%= Total Cover:	10		FAC Species x3=
Herb Stratum (use scientific names)	% Cover	Species? Status	FACU Species x4 =
1. Lepidium latifolium			UPL Species x5 =
2 Frances diandres			Column Totals (A) (B)
3. Gromus hordeaceus		NO FACU	Prevalance Index = B/A =
4. Bromus inermus	10	NO UPL	Prevalance index = B/A =
5			Hydrophytic Vegetation Indicators
6			Dominance Text is >50%
7.	<u></u>		Prevalence Index is ≤ 3.01 Morphological Adaptations¹ (provide supporting
50%=_5\(\bigcup_\) 20%=_2\(\bigcup_\) Total Cover:	100		data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	% Cover	Species? Status	Problematic Hydrophytic Vegetation ¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must
1			be present.
2			
50%= Total Cover:			Hydrophytic Vegetation? 455
% Bare Ground in Herb Stratum O % Cover of Bio	tic Crust_	_	

	Sampling Point
Soils	.
Profile Description: (Describe to the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the depth needed to document the indicator or confined by the last of the last of the depth needed to document the indicator or confined by the last of the last	rm the absence of indicators.
(inches) Color (moist) % Color (moist) % Type1 Loc2 0-8 10 (R. 4/3 100	2 Texture Remarks GRAVEUM LO +M.
¹ Types: C = Concentration D = Depletion RM = Reduced Matrix ² Location: PL = Pore	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)	Indicators for Problematic Hydric Soils ³
Histosol (A1) Sandy Gleyed Matrix (S4)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2) Sandy Redox (S5)	2 cm Muck (A10) (LRR B)
Black Histic (A3) Stripped Matrix (S6)	Reduced Vetric (F18)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1)	Red Parent Materials (TF2)
Stratified Layers (AG) (LRR C) Loamy Gleyed Matrix (F2)	Vegetated Sand/Gravel Bars Other (Explain in Remarks)
1 cm Muck (A9) (LRR D) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6)	Other (Explain in Remarko)
Thick Dark Surface (A12) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Redox Depressions (F8)	wetland hydrology must be present.
Vernal Pools (F9)	
Restrictive Layer (if present): Type: Depth (Inches) H	lydric Soil? Do
	lydric Soil? Do
Restrictive Layer (if present): Type: Depth (Inches) H	lydric Soil? Do
Restrictive Layer (if present): Type: Depth (Inches) H	lydric Soil? Do
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators	
Restrictive Layer (if present): Type: Depth (Inches) Hydrology	Secondary Indicators (2 or more required)
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient)	Secondary Indicators (2 or more required)
Restrictive Layer (if present): Type: Depth (Inches) Hy Remarks NON IMDRIC SOLLS, Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11)	
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Remarks NON MADRIC SOLLS. Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in Aerial Imagery (B7) Plowed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation-Visible on Aerial Imagery (C9)
Remarks NON MADRIC SOLLS, Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in Aerial Imagery (B7) Plowed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation-Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Oxidized Rhizospheres (C3) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation-Visible on Aerial Imagery (C9)
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in Aerial Imagery (B7) Plowed Soils (C6) Water-Stained Leaves (B9) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation-Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)
Restrictive Layer (if present): Type:	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation-Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Restrictive Layer (if present): Type: Depth (Inches) Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in Aerial Imagery (B7) Plowed Soils (C6) Water-Stained Leaves (B9) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)

North State Resources				Habitat Type /GRASSUND
Wetland Determination Data Form - Arid V	Vest Reg	jion		Wetland Type SEASONAL WETU
Project/Site:Sisk Darn Corrective Action Project		City/Count	v: Merced	County Sampling Date: \$ /\$1/0
Applicant/Owner: U.S. Bureau of Reclamation		_ City/Count	yivieitæd	State: CA Sampling Point: 4
Investigator(s):				- Color Size State Size Size Size Size Size Size Size Siz
		Local rel	ief (concave)	convex none) NONE Slope % 0 - 2;
Landform (hillslope, terrace, etc.) F2AT Subregion (LRR) LRR-C Are climatic/hydrologic conditions on the site typical for this	So	il Map Unit I	Name: X	rofluvents EXTREMELY
Are climatic/hydrologic conditions on the site typical for this	time of year	? 4FS 1	If no, explain	in remarks.) GRAVELLY
Are vegetation N, soil N, or hydrology N signif	icantly distu	rbed? Are n	omal circum	istances present? YES
Are vegetation <u>N</u> , soil <u>N</u> , or hydrology <u>N</u> natur				
Summary of Findings (Attach site map showing	g sampling p	oint location	s, transects,	important features, etc.)
Hydrophytic vegetation? 455 Hydric soil? 455 We	tland hydrolo	ogy? 486	Is sampled	d area a wetland? YPS Other waters? NO
USACE Jurisdiction		50 80		
Adjacent to Waters Tributary to Waters Isolal Explain:	ted (with inte	erstate comm	nerce)	Isolated (non jurisdictional)
Evaluation of features designated "Of	her Wa	ters of t	he Unite	ed States"
Indicators: Defined bed and bank Scour	Ordir	ary High Wa	ater Mark Ma	apped
Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drai	pnemerai _ nage	Navigable	Nater	Quad
Remarks			-	
SEEP AREA VISIBLE ON	AFRI	AC.	WK	ITLAND INDICATORS
odserved.				
			<u> </u>	
Vegetation Tree Stratum (use scientific names)	Absolute		Indicator	Dominance Test Worksheet Number of dominant species
1. Salix larvianta	% Cover	Species?	FACW	that are OBL, FACW, or FAC: (A)
2.		1.02	17	Total number of dominant species 4
3				across all strata:(B)
50%= 2.5 20%= 1 Total Cover.	5			Percent of dominant species that
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	are OBL, FACW, or FAC:
1. Baccharis filularis	15	YES	upi	Prevalence Index Worksheet
2				Total % Cover of: Multiply by
3.				OBL Species/x1=
4 20%= Total Cover:	15			FACW Species x2=
Herb Stratum (use scientific names)	% Cover	Species?	Status	FAC Species x3 =
1. Inoka latifolia	40	YKS	0BL	FACU Species / x4 =
2 Lepidiam latifolium	20	7.000	FACW	UPL Species x 5 =
3. Gratiola ebracteata	10	N	OBL	Column Totals(A)(B)
4. Bromos diandrus		_N_	UPL	Prevalance Index = B/A =
5. B. hordeacous	15	_N_	FACU	Hydrophytic Vegetation Indicators
6				Dominance Text is >50% Prevalence Index is ≤ 3.01
7.				Morphological Adaptations ¹ (provide supporting
50%= 50 20%= 2-6 Total Cover:				data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
Woody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must

20%=_

% Bare Ground in Herb Stratum 6

Total Cover:

% Cover of Biotic Crust_

Hydrophytic Vegetation? YES

Profile Description: (Des Depth Matrix		Redox Features		o midioditor t			
(inches) Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc2	<u>Texture</u>	Remarks
1-8 104R3/z	95	104R2),	_5	_D_	PL	GRAVELLY	LOAM
Types: C = Concentration D =	Depletion R	M = Reduced Matrix	2[Location: PL	= Pore Lin	ing RC = Root Cha	nnel M = Matrix
ydric Soil Indicators:	(Applicable to	all LRRs, unless of	<u>herwise</u> n	oted)		Charles and the control of the contr	ematic Hydric Soils3
Histosol (A1)		Sandy (Gleyed M	atrix (S4)		ATTENDED TO THE PERSON OF THE	ck (A9) (LRR C)
Histic Epipedon (A2)	Sandy F	Sandy Redox (S5)				k (A10) (LRR B)	
Black Histic (A3) Stripped Matrix (S6)					Reduced	Vetric (F18)	
Hydrogen Sulfide (A4)		Loamy	Mucky Mi	ineral (F1)			nt Materials (TF2)
Stratified Layers (AG)	(LRR C)	Loamy	Gleyed M	latrix (F2)		Vegetated	d Sand/Gravel Bars
1 cm Muck (A9) (LRR	D)	Deplete	d Matrix ((F3)		Other (Ex	plain in Remarks)
Depleted Below Dark	Surface (A11) Redox I	Dark Surf	ace (F6)			
Thick Dark Surface (A	12)	Deplete	d Dark Si	urface (F7)			drophytic vegetation and
Sandy Mucky Mineral	(S1)	_X/_ Redox I	Depressio	ns (F8)		wetland hydrolog	gy must be present.
		Vernal F	Pools (F9)			
Remarks FAINT R	Type:			Control of the Contro		ic Soil? <u>YES</u> HYDRIC S	101 LS,
Remarks FARET R Hydrology Wetland Indicators	KDOX	FRATURES		Control of the Contro		HYDRIC S	
Remarks FARET R Hydrology Wetland Indicators	KDOX	FRATURES		Control of the Contro		HYDRIC S	かしく。 tors (2 or more required
Remarks FAIOT R Hydrology Wetland Indicators	KDOX	FRATURES	084	Control of the Contro		HY DRIC 5	
Remarks FAROT R Hydrology Wetland Indicators Primary Indicators (Any one in	KDOX	FFATURES fficient) Salt Cru	084	ERVED		HY DRIC S Secondary Indica Water Ma	tors (2 or more required
Hydrology Wetland Indicators Primary Indicators (Any one in	KDOX	fficient) Salt Cru Biotic Cr	st (B11)	ERVED		Secondary Indica Water Ma Sediment	tors (2 or more required
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2)	MEDOX	fficient) Salt Cru Biotic Cr Aquatic	st (B11) rust (B12) Invertebra	ERVED		Secondary Indica Water Ma Sediment Drift Depo	tors (2 or more required orks (B1) (Riverine) Deposits (B2) (Riverine
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3)	ndicator is su	fficient) Salt Cru Biotic Cru Aquatic Hydroge	st (B11) rust (B12) Invertebra) ates (B13) Odor (C1)		Secondary Indica Water Ma Sediment Drift Depo	tors (2 or more required orks (B1) (Riverine) Deposits (B2) (Riverine osits (B3) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non	ndicator is su	fficient) Salt Cru Biotic Cr Aquatic Hydroge Oxidized	st (B11) rust (B12) Invertebra) ates (B13) Odor (C1)	-	Secondary Indica Water Ma Sediment Drift Depo	tors (2 or more required rks (B1) (Riverine) Deposits (B2) (Riverine osits (B3) (Riverine) Patterns (B10) on Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2)	ndicator is su	fficient) Salt Cru Biotic Cru Aquatic Hydroge Oxidized Presence	st (B11) rust (B12) Invertebra	ates (B13) Odor (C1) heres (C3) uced Iron (C	-	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl	tors (2 or more required rks (B1) (Riverine) Deposits (B2) (Riverine osits (B3) (Riverine) Patterns (B10) on Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B	ndicator is su	fficient) Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presence Recent I	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp	ates (B13) Odor (C1) heres (C3) uced Iron (Contion in	-	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl	tors (2 or more required rks (B1) (Riverine) Deposits (B2) (Riverine osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B	ndicator is su niverine) (Nonniverine	fficient) Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Plowed	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6	ates (B13) Odor (C1) heres (C3) uced Iron (Contion in	-	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish B	tors (2 or more required irks (B1) (Riverine) Deposits (B2) (Riverine) patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on agery (C9)
Hydrology Netland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B1) Inundation Visible on Aerial Imagery (B7)	ndicator is su niverine) (Nonniverine	fficient) Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Plowed	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6	ates (B13) Odor (C1) wheres (C3) uced Iron (Contion in	-	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E Saturation Aerial Im	tors (2 or more required rks (B1) (Riverine) Deposits (B2) (Riverine) posits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on agery (C9) Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B1) Inundation Visible on Aerial Imagery (B7)	ndicator is su niverine) (Nonniverine	fficient) Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Plowed	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6	ates (B13) Odor (C1) wheres (C3) uced Iron (Contion in	-	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E Saturation Aerial Im	tors (2 or more required irks (B1) (Riverine) Deposits (B2) (Riverine) patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on agery (C9)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B1) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves	ndicator is suniverine (Nonniverine 6)	fficient) Salt Cru Biotic Cr Aquatic Hydroge Yesenc Recent I Plowed Other (E	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6	ates (B13) Odor (C1) wheres (C3) uced Iron (Contion in	<i>(</i> = 24)	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E Saturation Aerial Im Shallow A FAC-Netu	tors (2 or more required rks (B1) (Riverine) Deposits (B2) (Riverine) posits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on agery (C9) Aquitard (D3) ural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2 Surface Soil Cracks (B1) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves	ndicator is su niverine) (Nonniverine	fficient) Salt Cru Biotic Cr Aquatic Hydroge Yesenc Recent I Plowed Other (E	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6	ates (B13) Odor (C1) wheres (C3) uced Iron (Contion in E) Remarks)	<i>(</i> = 24)	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E Saturation Aerial Im	tors (2 or more required rks (B1) (Riverine) Deposits (B2) (Riverine) posits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on agery (C9) Aquitard (D3) ural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B1) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves Field Observations Surface Water Present? Yes	ndicator is suniverine (Nonniverine 6)	fficient) Salt Cru Biotic Cru Aquatic Hydroge Oxidized Presenc Recent I Plowed Other (E	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6 explain in	ates (B13) Odor (C1) wheres (C3) uced Iron (Contion in E) Remarks)	<i>(</i> = 24)	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E Saturation Aerial Im Shallow A FAC-Netu	tors (2 or more required rks (B1) (Riverine) Deposits (B2) (Riverine) posits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on agery (C9) Aquitard (D3) ural Test (D5)

Remarks

North State Resources				Habitat Type DITCH
Wetland Determination Data Form - Arid V				Wetland Type EMERGENT WETUN!
Project/Site:Sisk Dam Corrective Action Project		City/Count	v. Mercec	County Sampling Date: 9/1/09
Applicant/Owner:U.S. Bureau of Reclamation		_ Oity/Oodiii	y. <u>IVICIOCO</u>	State: CA Sampling Point: 5
Investigator(s):J. Colescott				
Landform (hillslope, terrace, etc.) DIZH		Local re	ief (concave	convex none) CON CAUE Slope % 0-2%
Subregion (LRR) <u>LRR-C</u>	Sc	il Man I Init I	Vame: B	21/der Loam 2.8 /2
Are climatic/hydrologic conditions on the site typical for this t	ime of year	2 455	(If no explai	in in remarks I
Are vegetation $\stackrel{\sim}{N}$, soil $\stackrel{\sim}{N}$, or hydrology $\stackrel{\sim}{N}$ significant			50 50	
Are vegetation N , soil N , or hydrology N natura				
Summary of Findings (Attach site map showing				
Hydrophytic vegetation? 465 Hydric soil? 465 Wet	and hydrolo	ogy? 4122	ls sample	d area a wetland?
USACE Jurisdiction Adjacent to Waters Tributary to Waters Isolate Explain:	ed (with inte	erstate comm	nerce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot	her Wat	ters of t	he Unite	ed States"
Indicators: Defined bed and bank Scour_				
Feature Designation: Perennial Intermittent E	phemeral	Blue-lir	ne on USGS	Quad
Natural Drainage Artificial Drain				
Remarks SKASONAL EMERGENS				
OAPTURES SEEPALE FROM DA				
PLANT COMPOSITION. BOUNDED) रे	WEST	BH	A STEEP BANK W/ ATRIPLEX.
			- 10	Dominance Test Worksheet
Vegetation Tree Stratum (use scientific names)	Absolute % Cover		Indicator	Number of dominant species Z
1. Salix laevigata			EACU	that are ODL EACINI OF EAC! (A)
2.	75		-1400	
3.				Total number of dominant species across all strata: (B)
50%=2O	40			Descent of dominant angular that
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
1/				30 30 30 30 30 30 30 30 30 30 30 30 30 3
2.				Prevalence Index Worksheet Total % Cover of: Multiply by
3.				OBL Species x1 =
4.	74			
50%= Total Cover:				
Herb Stratum (use scientific names)	% Cover	Species?	Status	7
1. Typha latifolia	35	455	OBL	FACU Species x4=
2 Juneus tenois	20	4/25	FACW	UPL Species x5 =
3. Conyza canadensia	5	100	FAC	Column Tetals(A)(B)
4				Prevalance Index = B/A =
5	M 11501 - 10			Hydrophytic Vegetation Indicators
6				Dominance Text is >50%
7				Prevalence Index is ≤ 3.01
50%=30 20%=12 Total Cover:	60		4 	Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
1		/#####################################		1Indicators of hydric soil and wetland hydrology must
2				be present.
50%= 20%= Total Cover:				Hydrophytic Vegetation? 175
% Bare Ground in Herb Stratum 45 % Cover of Bio				

	_
	-
Sampling Point	0

	Matrix (moist)	%		dox Feature: or (moist)		Tuno1	Loc ²	Texture	Remarks		
nches) Color		<u>~</u> 35		1 (11101St)	15	Type ¹	W.	CLAY LOAM	50		
-12 10TR3		,0	2.54	7. 1	30	D	M	SMODY LO			
1012	<u></u>	AN)			10	C	M	4 . 4			
				70							
ypes: C = Concentra	ation D = Dep	letion	RM = Red	luced Matrix	2	Location: PL	= Pore Lin	ing RC = Root Cha	annel M = Matrix		
ydric Soil Indic									ematic Hydric Soils ³		
Histosol (A1)		noubio	to all Livi			Matrix (S4)		-	ck (A9) (LRR C)		
Histic Epiped			-		Redox (S				ck (A10) (LRR B)		
Black Histic			_		ed Matrix (Vetric (F18)		
Hydrogen St	100000		-	Herrich Affect (lineral (F1)			ent Materials (TF2)		
Stratified Lay		R C)	8 .0	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	my promise and the	Matrix (F2)		10 m	d Sand/Gravel Bars		
1 cm Muck (/			29		ed Matrix				plain in Remarks)		
Depleted Bel		ace (A1	1)		Dark Surf			Outor (2)	piani in la community		
Thick Dark S		000 (/\)	'/ –	No. 10 M		Surface (F7)		3Indicators of hy	drophytic vegetation and		
Sandy Mucky	and Maria	i	-		Depression			³ Indicators of hydrophytic vegetation as wetland hydrology must be present.			
Candy mack	Willional (OT)		_		Pools (F9				er d		
			_	voilidi	1 000 (1 0	·1					
Remarks Hyi	present): Ty		5,		Depth (In	nches)	Hydr	ic Soil? YES			
Hydrology Vetland Indicat	ors	6010			Depth (In	nches)	Hydr		ators (2 or more required		
Hydrology Vetland Indicators (A	ors Any one indic	6010		**********		nches)	Hydr	Secondary Indica	ators (2 or more required		
Hydrology Vetland Indicators (August 1987) Surface Water	ors Any one indic	6010		Salt Cru	ust (B11)		Hydr	Secondary Indica	arks (B1) (Riverine)		
Hydrology Vetland Indicate rimary Indicators (/ Surface Water High Water T	ors Any one indic r (A1) able (A2)	6010		Salt Cru	ust (B11) crust (B12	2)	Hydr	Secondary Indica Water Ma	arks (B1) (Riverine) t Deposits (B2) (Riverine		
Hydrology Vetland Indicators (A Surface Water High Water To Saturation (A)	ors Any one indic r (A1) able (A2)	ator is s		Salt Cru Biotic C	ust (B11) Crust (B12	2) rates (B13)	Hydr	Secondary Indica Water Ma Sediment Drift Depo	arks (B1) (Riverine) t Deposits (B2) (Riverine osits (B3) (Riverine)		
Hydrology Vetland Indicate rimary Indicators (A Surface Water To Saturation (A) Water Marks	ors Any one indic r (A1) able (A2) (B1) (Nonriver	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog	ust (B11) crust (B12 Invertebren Sulfide	e) Prates (B13) Prates (C1)	Hydr	Secondary Indica Water Ma Sediment Drift Depo	arks (B1) (Riverine) t Deposits (B2) (Riverine osits (B3) (Riverine) Patterns (B10)		
Hydrology Vetland Indicators (A Surface Water High Water To Saturation (A) Water Marks Sediment Dep	ors Any one indic r (A1) able (A2) B) (B1) (Nonriver	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog	ust (B11) crust (B12 Invertebr en Sulfide d Rhizosp	e Odor (C1)		Secondary Indica Water Ma Sediment Drift Depo	arks (B1) (Riverine) t Deposits (B2) (Riverine osits (B3) (Riverine) Patterns (B10) con Water Table (C2)		
Hydrology Vetland Indicators (A Surface Water High Water T Saturation (A Water Marks Sediment Dep	ors Any one indic r (A1) able (A2) 8) (B1) (Nonriver posits (B2) (Noracks (B6)	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog Oxidize Presen	ust (B11) Crust (B12 Invertebren Sulfide d Rhizospoe of Red	c) rates (B13) e Odor (C1) pheres (C3) luced Iron (C		Secondary Indicate Water Mater Mate	arks (B1) (Riverine) t Deposits (B2) (Riverine) osits (B3) (Riverine) Patterns (B10) con Water Table (C2) k Surface (C7)		
Hydrology Vetland Indicate Primary Indicators (A. Water Marks Surface Soil C. Inundation Vision (A. Water Soil C. Inundation (A. Water Soi	ors Any one indic r (A1) able (A2) 8) (B1) (Nonriver posits (B2) (Noracks (B6) sible on	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog Oxidize Present	ust (B11) Crust (B12 Invertebren Sulfide d Rhizospice of Red	rates (B13) e Odor (C1) pheres (C3) luced Iron (C		Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Seas Thin Muc	arks (B1) (Riverine) t Deposits (B2) (Riverine osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8)		
Hydrology Vetland Indicators (A Surface Water High Water T Saturation (A Water Marks Sediment Dep	ors Any one indic r (A1) able (A2) B) (B1) (Nonriver posits (B2) (Noracks (B6) sible on y (B7)	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog Oxidize Present Recent	ust (B11) crust (B12 Invertebren Sulfide d Rhizospoe of Red Iron Redu I Soils (Ce	rates (B13) e Odor (C1) pheres (C3) luced Iron (C		Secondary Indicate Water Mater Mate	arks (B1) (Riverine) t Deposits (B2) (Riverine) osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8)		
Hydrology Vetland Indicators (American Marks Surface Water High Water To Saturation (American Marks) Sediment Deposition of the Surface Soil (Inundation Vising Aerial Imager)	ors Any one indic r (A1) able (A2) B) (B1) (Nonriver posits (B2) (Noracks (B6) sible on y (B7)	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog Oxidize Present Recent	ust (B11) crust (B12 Invertebren Sulfide d Rhizospoe of Red Iron Redu I Soils (Co	e Odor (C1) pheres (C3) uced Iron (Cuction in		Secondary Indicate Water Mater Mate	arks (B1) (Riverine) t Deposits (B2) (Riverine osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8)		
Hydrology Vetland Indicators (American Marks Surface Water High Water To Saturation (American Marks) Sediment Deposition of the Surface Soil (Inundation Vising Aerial Imager)	ors Any one indic r (A1) able (A2) B) (B1) (Nonriver posits (B2) (Nonriver posits (B6) sible on y (B7)	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog Oxidize Present Recent	ust (B11) crust (B12 Invertebren Sulfide d Rhizospoe of Red Iron Redu I Soils (Co	e Odor (C1) pheres (C3) uced Iron (Cuction in		Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Seas Thin Muc Crayfish I Saturation Aerial Im	arks (B1) (Riverine) t Deposits (B2) (Riverine) osits (B3) (Riverine) Patterns (B10) con Water Table (C2) k Surface (C7) Burrows (C8) n Visible on tagery (C9)		
Hydrology Vetland Indicators (American Marks Surface Water High Water To Saturation (American Marks) Sediment Deposition of the Surface Soil (Inundation Vising Aerial Imager)	ors Any one indic r (A1) able (A2) 8) (B1) (Nonriver cosits (B2) (Noracks (B6) sible on y (B7) I Leaves (B9)	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog Oxidize Present Recent	ust (B11) crust (B12 Invertebren Sulfide d Rhizospoe of Red Iron Redu I Soils (Co	e Odor (C1) pheres (C3) uced Iron (Cuction in		Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Seas Thin Muc Crayfish I Saturation Aerial Im	arks (B1) (Riverine) t Deposits (B2) (Riverine) osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on agery (C9) Aquitard (D3)		
Aydrology Vetland Indicators (Aydrology Vetland Indicators (Aydrology Surface Water High Water To Saturation (Aydrology Water Marks Sediment Deposition Surface Soil (Aydrology) Inundation Vis Aerial Imager Water-Stained	ors Any one indic r (A1) able (A2) B) (B1) (Nonriver posits (B2) (Noracks (B6) sible on y (B7) I Leaves (B9)	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog Oxidize Present Recent	ust (B11) Crust (B12 Invertebren Sulfide d Rhizospee of Red Iron Redu I Soils (Co	c) rates (B13) e Odor (C1) pheres (C3) uced fron (Cuction in 6) Remarks)	:4)	Secondary Indicate Water Mater Drift Deposition of the Indicate Material Important Material Indicate Material Important Material Indicate Material Indicat	arks (B1) (Riverine) t Deposits (B2) (Riverine) osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on tagery (C9) Aquitard (D3) ural Test (D5)		
Hydrology Vetland Indicators (American Marks Surface Water High Water To Saturation (American Marks) Sediment Deposition of Surface Soil (Inundation Visible Aerial Imager Water-Stained Marks)	ors Any one indic r (A1) able (A2) B) (B1) (Nonriver posits (B2) (Noracks (B6) sible on y (B7) I Leaves (B9)	ator is s	sufficient)	Salt Cru Biotic C Aquatic Hydrog Oxidize Presenc Recent Plowed Other (E	ust (B11) Crust (B12) Invertebren Sulfided Rhizospece of Red Iron Redu I Soils (Context) Explain in	c) rates (B13) e Odor (C1) pheres (C3) uced fron (Cuction in 6) Remarks)	:4)	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Seas Thin Muc Crayfish I Saturation Aerial Im	arks (B1) (Riverine) t Deposits (B2) (Riverine) osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on tagery (C9) Aquitard (D3) ural Test (D5)		
Hydrology Vetland Indicators (Annual Indicators (A	ors Any one indic r (A1) able (A2) 8) (B1) (Nonriver cosits (B2) (Noracks (B6) sible on y (B7) I Leaves (B9)	ator is s ine) onriverir	ne)	Salt Cru Biotic C Aquatic Hydrog Oxidize Present Recent Plowed Other (E	ust (B11) Crust (B12) Invertebren Sulfided Rhizospece of Redulton Redulton Redulton Redulton Redulton Redulton Incomplete (CExplain in Section 2)	c) rates (B13) e Odor (C1) pheres (C3) uced fron (Cuction in 6) Remarks)	:4)	Secondary Indicate Water Mater Mater Mater Mater Mater Mater Mater Mater Mater Drift Deporture Dry-Sease Thin Much Crayfish Material Importure Shallow Attraction Aerial Importure Shallow Attraction Aerial Importure Shallow Attraction Shallow Attraction Aerial Importure Shallow Attraction Shallow Shallo	arks (B1) (Riverine) t Deposits (B2) (Riverine) osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on tagery (C9) Aquitard (D3) ural Test (D5)		

North State Resources		91		Habitat Type DTCH
Wetland Determination Data Form - Arid V		5		Wetland Type EMERGENT WL
Project/Site: Sisk Dam Corrective Action Project Applicant/Owner: U.S. Bureau of Reclamation		_ City/Count	y: Merced	County Sampling Date: 9/1/09 State: CA Sampling Point: 6
Investigator(s): J. Colescott				-
Landform (hillslope, terrace, etc.)		Local rel	ef (concave,	convex, none) CON CAVE Slope % 3-2/2
Subregion (LRR)				
Are climatic/hydrologic conditions on the site typical for this	3.5			그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그
Are vegetation No, soil NO, or hydrology No signifi				
Are vegetation No, soil NG hydrology NO natura	ally problem	atic? (If nee	eded, explain	any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation? YES Hydric soil? YES Wet	sampling p land hydrok	oint location ogy? YES	s, transects, Is sampled	important features, etc.) area a wetland? 4ES Other waters? 100
USACE Jurisdiction Adjacent to Waters Tributary to Waters Isolate Explain:	ed (with inte	erstate comm	erce)	Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour_Feature Designation: Perennial Intermittent E	Ordir phemeral	nary High Wa	eter Mark Ma e on USGS	pped NO DEFINED BED Quad 4 BANK IN 1415
Natural Drainage Artificial Drain	nage	Navigable \	Water	SECTION OF WEILAND
Remarks EAST BOUNDARY OF L	MRUE	"SEE(DITC	H" WETCAND.
Vegetation Tree Stratum (use scientific names) 1. Populus fremontii	Absolute % Cover	Dominant Species?		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
2. Salix lacvigata 3.		4	FACu	Total number of dominant species 4 (B)
50%=_20 20%=_6 Total Cover: Sapling/Shrub Stratum (use scientific names)		Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
1				Prevalence Index Worksheet Total % Cover of: Multiply by
3				OBL Species x1 =
50%= 20%= Total Cover:			—— I	FACW Species x2 =
Herb Stratum (use scientific names)	% Cover	Species?	Status	FAC Species x3 =
1. Tucha latifolia		755	OBL	FACU Species x 4 =
2. Hordern leporinom			FAC	UPL Species x 5 =
3. Polypogon Monspeliensis		N	FACW	Column Totals (A)(B)
4. Cokuza canadensis				Prevalance Index = B/A =
5	_			Hydrophytic Vegetation Indicators
6			[Dominance Text is >50%
7				Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting
50%= Total Cover:	100			data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)		Species?	Status	Problematic Hydrophytic Vegetation¹ (Explain)
1				¹ Indicators of hydric soil and wetland hydrology must be present.
2				2 1 a 1
50%=			214	Hydrophytic Vegetation? 4ES
% Bare Ground in Herb Stratum % Cover of Bio	uc Crust _			

Soils						vê.
Profile Description: (Describe to the Depth Matrix	depth needed to doc Redox Features		e indicator o	or confirm	the absence of	findicators.
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc2	<u>Texture</u>	Remarks
0-4 104R 1/4 95	7.57R 4/6	5	e_	M	GRAVELL	4 CLAY LOAM
4-10 104R 7/4 70	7.54R 4/6	25	<u></u>	M		n 4
	(LEY 1 4/10GY	5	_D_	<u>M</u>	n	n h
¹ Types: C = Concentration D = Depletion R	RM = Reduced Matrix	_ 2[Location: PL	= Pore Lin	ing RC = Roo	t Channel M = Matrix
Hydric Soil Indicators: (Applicable to	all LRRs, unless of	herwise n	oted)		Indicators for F	Problematic Hydric Soils3
Histosol (A1)	Sandy (Gleyed M	atrix (S4)		1 cm	Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy I	Redox (S	5)		2 cm	Muck (A10) (LRR B)
Black Histic (A3)	Stripped	d Matrix (S6)		Redu	uced Vetric (F18)
Hydrogen Sulfide (A4)	Loamy	Mucky M	ineral (F1)		Red	Parent Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy	Gleyed M	latrix (F2)		Vege	etated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Deplete	d Matrix	(F3)		Othe	r (Explain in Remarks)
Depleted Below Dark Surface (A11) Redox [Dark Surf	ace (F6)			
Thick Dark Surface (A12)	Deplete	d Dark Si	urface (F7)		3Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox [Depressio	ons (F8)		wetland hyd	Irology must be present.
	Vernal F	Pools (F9)			
Hydrology		_				
Wetland Indicators Primary Indicators (Any one indicator is su	fficient)				Secondary Ir	ndicators (2 or more required)
Surface Water (A1)	Salt Cru	st (B11)			Wate	er Marks (B1) (Riverine)
High Water Table (A2)		rust (B12)	ì			ment Deposits (B2) (Riverine)
Saturation (A3)			ates (B13)			Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)			Odor (C1)		Drair	nage Patterns (B10)
Sediment Deposits (B2) (Nonriverine			heres (C3)		***************************************	Season Water Table (C2)
Surface Soil Cracks (B6)			aced Iron (C	(4)	Thin	Muck Surface (C7)
Inundation Visible on		ron Redu			Cray	fish Burrows (C8)
Aerial Imagery (B7)	Plowed	Soils (C6)	46 14 1901	Satu	ration-Visible-on,
Water-Stained Leaves (B9)	Other (E	xplain in	Remarks)		Aeria	al Imagery (C9)
					Shall	ow Aquitard (D3)
			E-1 110	91	FAC-	Netural Test (D5)
Field Observations	1					N
Surface Water Present? Yes No_		5)		Wetland I	Hydrology? Yes	s_ <u>×</u> No
Water Table Present? Yes No _	2	3)				4
Saturation Present? Yes No _				les capillar		· · · · · ·
Describe Recorded Data (stream gau	ige, monitoring well, as	erial photos	s, and previo	us inspecti	ons), if available	e:

Remarks WATUND HYDROLOGY.

North State Resources Wetland Determination Data Form - Arid V	Noet Bon	ion		Habitat Type CRASSUMS Wetland Type UPLAND
Project/Site: Sisk Dam Corrective Action Project			v: Merced	, ,
Applicant/Owner: U.S. Bureau of Reclamation		,	7	State: CA Sampling Point:
Investigator(s):				
Landform (hillslope, terrace, etc.)		Local rel	ief (concave	convex, fone) Slope % O - >
Landform (hillslope, terrace, etc.) Subregion (LRR)	So	il Mao Unit I	Name: Po	11 vay Loam 2-8/8
Are climatic/hydrologic conditions on the site typical for this	time of year	459	(If no explain	n in remarks I
Are vegetation N , soil N , or hydrology N signif				
Are vegetation $\stackrel{\triangleright}{\sim}$, soil $\stackrel{\triangleright}{\sim}$, or hydrology $\stackrel{\triangleright}{\sim}$ natural				
Summary of Findings (Attach site map showing				
Hydrophytic vegetation? No Hydric soil? NO Wel				
USACE Jurisdiction Adjacent to Waters Isolate Explain:	ted (with inte	erstate comn	nerce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Of Indicators: Defined bed and bank Scour Feature Designation: Perennial Intermittent Endured Drainage Artificial Drainage	Ordin	nary High Wa	ater Mark Ma ne on USGS	apped Quad
Vegetation	Absolute		Indicator	Dominance Test Worksheet Number of dominant species
Tree Stratum (use scientific names) 1.	% Cover	Species?	Status	that are OBL, FACW, or FAC: (A)
2				
/				Total number of dominant species μ
				Total number of dominant species 4 (B)
50%= Total Cover:	===			across all strata:(B)
apling/Shrub Stratum (use scientific names)	% Cover	Species?		
apling/Shrub Stratum (use scientific names)	% Cover		JAL	across all strata:
apling/Shrub Stratum (use scientific names)	% Cover			across all strata: (B) Percent of dominant species that
capling/Shrub Stratum (use scientific names)	% Cover		JAL	across all strata:
apling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis	% Cover		JAL	across all strata:
apling/Shrub Stratum (use scientific names)	% Cover 3 3		JAL	across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species D X2 = 0 The factor of the fact
apling/Shrub Stratum (use scientific names) Acai (19 50 Atriplex Tentiformis 50%= 3 20%= 1,2 Total Cover: erb Stratum (use scientific names)	% Cover		FAC	across all strata: Percent of dominant species that are OBL, FACW, or FAC: So (AB) Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species Multiply by x1 = O x2 = O The species of
apling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover: erb Stratum (use scientific names) Hordeum Jeporinum	% Cover 3 / % Cover 3.5	у.	FAC	across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FAC Species FAC Species FAC Species FACU Species
apling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1,2 Total Cover: erb Stratum (use scientific names) Hordeum Jeporinum Bronus Nordeacous	% Cover 3 / % Cover 3.5	у.	FAC Status FAC FACU	across all strata: 7 (B) Percent of dominant species that are OBL, FACW, or FAC: 50 (AB) Prevalence Index Worksheet Total % Cover of: Multiply by OBL Species
apling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover: erb Stratum (use scientific names) Hordeum Jeporinum Bromus Nordeacous Centaurea solstitialis	% Cover 3 3 % Cover 3.5 3.5	у.	Status FAC VFACU UPL	across all strata: Percent of dominant species that are OBL, FACW, or FAC: So (AB) Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FAC Species FACU Species UPL Species Column Totals Multiply by Multiply by Autority Au
apling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover. erb Stratum (use scientific names) Hordeum Jeporinum Bronus Nordeacous Centaurea solstitia)is Grindelia Cumporum	% Cover 3 3 % Cover 3.5 3.5 3.5	у.	Status FAC FACU FACU FACU FACU	across all strata: 7 (B) Percent of dominant species that are OBL, FACW, or FAC: 50 (AB) Prevalence Index Worksheet Total % Cover of: Multiply by OBL Species
apling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover. erb Stratum (use scientific names) Hordeum Jeporinum Bronus Nordeacous Centaurea solstitia)is Grindelia Cumporum	% Cover 3 3 % Cover 3.5 3.5	Species?	Status FAC VFACU UPL	across all strata: Percent of dominant species that are OBL, FACW, or FAC: So (AB) Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FAC Species FACU Species So (AB) Wultiply by Co (AB) FACU Species FACW Species FACU Spec
Sapling/Shrub Stratum (use scientific names) Acaicia Sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover: Jerb Stratum (use scientific names) Hordeum Jeporinum Bromus Nordeacous Centaurea solstitia);	% Cover 3 3 % Cover 3.5 3.5 5 15	Species?	Status FAC FACU FACU FACU FACU	across all strata:
Sapling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover. Jerb Stratum (use scientific names) Hordeum Jeporinum Bromus Nordeacous Centaurea solstitia); Grindelia Cumporum Avena barbata	% Cover 3 -3 % Cover 3.5 -3.5 -15 -10	Species?	Status FAC FACU FACU FACU FACU	across all strata:
sapling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover. erb Stratum (use scientific names) Hordeum Jeporinum Bromus Nordeacous Centaurea solstitialis Grindelia cumporum Avena barbata	% Cover 3 -3 % Cover 3.5 -3.5 -15 -10	Species?	Status FAC FACU FACU FACU FACU	across all strata:
Sapling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover. Jerb Stratum (use scientific names) Hordeum Jeporinum Bromus Nordeacous Centaurea golstitia); s Grindelia Cumporum Avena barbata Total Cover.	% Cover 3 -3 % Cover 3.5 -3.5 -15 -10	Species?	Status FAC FACU FACU UPL VPL	across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FACU Species FACU Species D D D D D D D D D D D D D
Sapling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover. Brown Jeparinum Brown Jeparinum Brown Mordeacous Centaurea solstitialis Grindelia Cumporum Avena barbata 50%= 50 20%= 20 Total Cover. Voody/Vine Stratum (use scientific names)	% Cover 3 3 % Cover 3.5 3.5 15 10	Species?	Status FAC FACU FACU UPL VPL	across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FACU Species FACU Species UPL Species Column Totals Description Totals Total
Sapling/Shrub Stratum (use scientific names) Acaicia sp Atriplex Tentiformis 50%= 3 20%= 1.2 Total Cover. Jerb Stratum (use scientific names) Hordeum Jeporinum Bromus Nordeacous Centaurea solstitia); Grindelia Cumporum Avena barbata Total Cover.	% Cover 3 3 % Cover 3.5 3.5 15 10	Species?	Status FAC FACU FACU UPL VPL	across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FACU Species FACU Species D D D D D D D D D D D D D

*

Profile Description: (Describe to the dep Depth Matrix	th needed to document the Redox Features	ne indicator or con	nfirm the absence of indicators.
	Color (moist) %	Type ¹ Lo	oc ² Texture Remarks
0-6 10484/3 100		<u> </u>	- GRAVELLY LOAM
1Types: C = Concentration D = Depletion RM =	Reduced Matrix	2 Location: PL = Po	ore Lining RC = Root Channel M = Matrix
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise	noted)	Indicators for Problematic Hydric Soils3
Histosol (A1)	Sandy Gleyed I	Matrix (S4)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy Redox (S	35)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Stripped Matrix	(S6)	Reduced Vetric (F18)
Hydrogen Sulfide (A4)	Loamy Mucky N	fineral (F1)	Red Parent Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy Gleyed I	Matrix (F2)	Vegetated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Depleted Matrix		Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Sur		2
Thick Dark Surface (A12)	Depleted Dark S		³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
Sandy Mucky Mineral (S1)	Redox Depress Vernal Pools (F		Weband Hydrology maet be present
		·	173
Restrictive Layer (if present): Type:	Depth (I	nches)	Hydric Soil? NO
Remarks NON HYDRIC	50,15		
Hydrology			
Wetland Indicators			
Primary Indicators (Any one indicator is suffici	ent)		Secondary Indicators (2 or more required
		1.9	Water Marks (B1) (Riverine)
Surface Water (A1)	Salt Crust (B11)		
Surface Water (A1) High Water Table (A2)	Salt Crust (B11) Biotic Crust (B12)		
High Water Table (A2)	Biotic Crust (B12	2)	Sediment Deposits (B2) (Riverine
High Water Table (A2) Saturation (A3)	Biotic Crust (B12	2) rates (B13)	Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
High Water Table (A2)	Biotic Crust (B12	2) rates (B13) e Odor (C1)	Sediment Deposits (B2) (Riverine
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide	rates (B13) e Odor (C1) pheres (C3)	Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos	rates (B13) e Odor (C1) pheres (C3) duced Iron (C4)	Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Plowed Soils (C	rates (B13) e Odor (C1) pheres (C3) duced Iron (C4) uction in 6)	Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation-Visible on
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec	rates (B13) e Odor (C1) pheres (C3) duced Iron (C4) uction in 6)	Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Plowed Soils (C	rates (B13) e Odor (C1) pheres (C3) duced Iron (C4) uction in 6)	Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation-Visible on

_ (includes capillary fringe)

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

No__

Saturation Present?

North State Resources	Vaat Danian		Wetland Type UPGAD
Wetland Determination Data Form - Arid V Project/Site: Sisk Dam Corrective Action Project			100 March 112
Applicant/Owner:U.S. Bureau of Reclamation Investigator(s):J. Colescott			State: CA Sampling Point: 8
Landform (hillslope, terrace, etc.) アルハ	L	ocal relief (concave,	convex, none) CONUVEX Slope % 2-5
Are climatic/hydrologic conditions on the site typical for this to the site typical for this typical for the site typical for this typical for this typical for the site typical for the site typical for this typical for the site typical for	time of year? _	(If no, explain	in remarks.)
Are vegetation N, soil N, or hydrology N natura	ally problematic?	(If needed, explain	any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation? Hydric soil? 455 Wet			
USACE Jurisdiction Adjacent to Waters Tributary to Waters Isolate Explain:	ed (with interstat	e commerce)	Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour_ Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	Ordinary phemeral	High Water Mark Ma Blue-line on USGS	pped Quad
Remarks UPLAND PAIR TO			
Vegetation Tree Stratum (use scientific names) 1 2 3		ominant Indicator oecies? Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: 2 (A) Total number of dominant species across all strata: (B)
50%= Total Cover: Sapling/Shrub Stratum (use scientific names) 1. Atropley lent. Formis 2	% Cover Sp		Percent of dominant species that are OBL, FACW, or FAC: (AB) Prevalence Index Worksheet Total % Cover of: Multiply by
3			OBL Species
1. Hordeum leporinum 2. Browns hordeacous	25	ecies? Status FAC FACU	FACU Species x 4 = UPL Species x 5 =
DOVE WEED & CENTRAL CUMPOURM	20	Y FACH	Column Totals (A) (B) Prevalance Index = B/A =
6. Lepid um latifolium 7.	15 _	N FACE	Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.01 Hydrophytic Vegetation Indicators
50%= 50 20%= 28 Total Cover: Woody/Vine Stratum (use scientific names) 1		ecies? Status	Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present.
2 20%= Total Cover: % Bare Ground in Herb Stratum % Cover of Bio		-	Hydrophytic Vegetation? NO

Sampling Point	8
----------------	---

Soils										
Profile Descriptio	n: (Describe	to the de	epth needed to doo Redox Features		e indicator o	or confirm	the abser	nce of inc	icators.	
(inches) Color (r		6	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	2	Ren	narks
0-8 104R 4	14 8	<u>~</u> 1	04R3/Z	10		M	GRA	15. CC4	LOAM	
			54R5/2	5	_D_	M	<u> </u>		h	
Types: C = Concentrati	on D = Deple	ion RM	I = Reduced Matrix	21	Location: PL	= Pore Lir	nina RC	= Root Ch	annel M	= Matrix
Hydric Soil Indica										ydric Soils3
Histosol (A1)	1010 <u>: 1/19511</u>	oublo to		Gleyed M			maioator		ick (A9) (L	
Histic Epipedo	n (A2)			Redox (S			- SE		ick (A10)	
Black Histic (A	100		1 - Alexander 1 - 7	ed Matrix (2500		8 8		d Vetric (F	58 16
Hydrogen Sulf					ineral (F1)		-			ials (TF2)
Stratified Laye		C)	5-11(5-1)(T	fatrix (F2)		-			Gravel Bars
1 cm Muck (AS		0)		ed Matrix			> <u>=</u>	_		Remarks)
Depleted Below		ne (Δ11)		Dark Surf	70 374			- Carlor (2	rqoidiii iii i	
Thick Dark Sur		,,,,,			urface (F7)		3Indica	ators of h	vdrophytic	c vegetation an
Sandy Mucky			X Redox							be present.
ound) muony	millioral (O1)		,	Pools (F9						
Restrictive Layer (if p				Depth (In	iches)	_ Hydi	ric Soil?	YF5	- 20	
Remarks 50M	FE 1414I			Depth (In	iches)			<u>165</u>		
Remarks 50M	F 1441	PRIC	501L IN	Depth (In	iches)		ENT.	-	ators (2 o	r more require
Remarks 50M Hydrology Wetland Indicato	rs ny one indicat	PRIC	SOIL IVO	Depth (In	iches)		Second	ary Indic	*	r more require
Hydrology Wetland Indicators (Ar	rs ny one indicate (A1)	PRIC	SOIL (V) icient) Salt Cru	Depth (In	iches)		Second	ary Indic	arks (B1)	
Hydrology Wetland Indicators (Ar	rs ny one indicat (A1) ble (A2)	PRIC	SOIL IVO	Depth (In	nches)		Second	ary Indic Water M Sedimer	arks (B1) nt Deposit	(Riverine)
Hydrology Wetland Indicato Primary Indicators (Ar Surface Water High Water Tat Saturation (A3)	rs ny one indicat (A1) ble (A2)	ORIC	SOIL IVO	Depth (In) ates (B13)		Second	ary Indic Water M Sedimer Drift Dep	arks (B1) nt Deposit	(Riverine) s (B2) (Riverin) (Riverine)
Hydrology Wetland Indicato Primary Indicators (Ar Surface Water High Water Tal	rs by one indicate (A1) ble (A2)	or is suff	icient) Salt Cru Biotic C Aquatic Hydroge	Depth (In D CA)) ates (B13) Odor (C1)	PRESI	Second	ary Indic Water M Sedimer Drift Dep Drainage	arks (B1) nt Deposit posits (B3 e Patterns	(Riverine) s (B2) (Riverin) (Riverine)
Hydrology Wetland Indicato Primary Indicators (Ar Surface Water High Water Tal Saturation (A3) Water Marks (E	rs ny one indicat (A1) ble (A2) (A1) (Nonriverin	or is suff	icient) Salt Cru Biotic C Aquatic Hydroge Oxidize	Depth (In D A)) ates (B13) Odor (C1)	PRESI	Second	ary Indic Water M Sedimer Drift Der Drainage Dry-Sea	arks (B1) nt Deposit posits (B3 e Patterns	(Riverine) s (B2) (Riverin) (Riverine) s (B10) r Table (C2)
Hydrology Wetland Indicator Primary Indicators (Ar Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo	rs y one indicat (A1) ble (A2) (B1) (Nonriverin sits (B2) (Nor acks (B6)	or is suff	icient) Salt Cru Biotic C Aquatic Hydroge Oxidize Presence	Depth (In D A)) rates (B13) Poheres (C3) uced Iron (C	PRESI	Second	ary Indic Water M Sedimer Drift Dep Drainago Dry-Sea Thin Mu	arks (B1) at Deposit posits (B3 e Patterns son Wate	(Riverine) s (B2) (Riverine) (Riverine) s (B10) r Table (C2) e (C7)
Hydrology Wetland Indicators (Arr Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo	rs ny one indicat (A1) ble (A2) (A1) (Nonriverin sits (B2) (Nori acks (B6) ble on	or is suff	icient) Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent	Depth (In D CA) ust (B11) crust (B12) Invertebre en Sulfide d Rhizosp ce of Redu) ates (B13) Odor (C1) Oheres (C3) uced Iron (Cuction in	PRESI	Second	ary Indic Water M Sedimer Drift Dep Drainage Dry-Sea Thin Mu Crayfish	arks (B1) It Deposit Cosits (B3) Patterns Son Wate Ck Surface	(Riverine) s (B2) (Riverin) (Riverine) s (B10) r Table (C2) e (C7) (C8)
Hydrology Wetland Indicator Primary Indicators (Ar Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo	rs y one indicat (A1) ble (A2) (B1) (Nonriverin sits (B2) (Nori acks (B6) ble on (B7)	or is suff	icient) Salt Cru Biotic C Aquatic Hydroge Oxidize Present Recent Plowed	Depth (In D CA) ust (B11) crust (B12) Invertebra en Sulfide d Rhizosp ce of Redu Iron Redu I Soils (C6)) ates (B13) Odor (C1) Oheres (C3) uced Iron (Cuction in	PRESI	Second	ary Indic Water M Sedimer Drift Dep Drainage Dry-Sea Thin Mu Crayfish Saturation	arks (B1) at Deposit cosits (B3) e Patterns son Wate ck Surface Burrows on Visible nagery (C	(Riverine) s (B2) (Riverine) (Riverine) s (B10) r Table (C2) e (C7) (C8)
Hydrology Wetland Indicators (Arr Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo	rs y one indicat (A1) ble (A2) (B1) (Nonriverin sits (B2) (Nori acks (B6) ble on (B7)	or is suff	icient) Salt Cru Biotic C Aquatic Hydroge Oxidize Present Recent Plowed	Depth (In D CA) ust (B11) crust (B12) Invertebra en Sulfide d Rhizosp ce of Redu Iron Redu I Soils (C6)) ates (B13) c Odor (C1) oheres (C3) uced Iron (Cuction in	PRESI	Second	ary Indic Water M Sedimer Drift Der Drainage Dry-Sea Thin Mu Crayfish Saturatio Aerial Ir Shallow	arks (B1) at Deposit posits (B3) Patterns son Wate ck Surface Burrows on Visible nagery (C	(Riverine) s (B2) (Riverine) (Riverine) s (B10) r Table (C2) e (C7) (C8) on (D3)
Hydrology Wetland Indicator Primary Indicators (Ar Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo	rs y one indicat (A1) ble (A2) (B1) (Nonriverin sits (B2) (Nori acks (B6) ble on (B7)	or is suff	icient) Salt Cru Biotic C Aquatic Hydroge Oxidize Present Recent Plowed	Depth (In D CA) ust (B11) crust (B12) Invertebra en Sulfide d Rhizosp ce of Redu Iron Redu I Soils (C6)) ates (B13) c Odor (C1) oheres (C3) uced Iron (Cuction in	PRESI	Second	ary Indic Water M Sedimer Drift Der Drainage Dry-Sea Thin Mu Crayfish Saturatio Aerial Ir Shallow	arks (B1) at Deposit cosits (B3) e Patterns son Wate ck Surface Burrows on Visible nagery (C	(Riverine) s (B2) (Riverine) (Riverine) s (B10) r Table (C2) e (C7) (C8) on (D3)
Hydrology Wetland Indicator Primary Indicators (Ar Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo	rs y one indicat (A1) ble (A2) (B1) (Nonriverin sits (B2) (Nori acks (B6) ble on (B7) Leaves (B9)	or is suff	icient) Salt Cru Biotic C Aquatic Hydroge Oxidize Present Recent Plowed	Depth (In DICA) ust (B11) crust (B12) Invertebra en Sulfide d Rhizosp ce of Redu Iron Redu I Soils (C6) ates (B13) c Odor (C1) oheres (C3) uced Iron (Cuction in	PRESI	Second	ary Indic Water M Sedimer Drift Der Drainage Dry-Sea Thin Mu Crayfish Saturation Aerial Ir Shallow FAC-Ne	arks (B1) at Deposit cosits (B3) e Patterns son Wate ck Surface Burrows on Visible nagery (C Aquitard tural Test	(Riverine) s (B2) (Riverine) s (B10) r Table (C2) e (C7) (C8) on (D3) (D5)
Hydrology Wetland Indicator Primary Indicators (Ar Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Surface Soil Cr Inundation Visit Aerial Imagery Water-Stained	rs y one indicat (A1) ble (A2) (B1) (Nonriverin sits (B2) (Nori acks (B6) ble on (B7) Leaves (B9)	or is suff	SOIL (V) Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent Plowed Other (E	Depth (In DICA) ust (B11) crust (B12) Invertebre en Sulfide d Rhizosp ce of Redu Iron Redu I Soils (C6)) ates (B13) Odor (C1) oheres (C3) uced Iron (Cuction in E) Remarks)	PRESI	Second	ary Indic Water M Sedimer Drift Der Drainage Dry-Sea Thin Mu Crayfish Saturation Aerial Ir Shallow FAC-Ne	arks (B1) at Deposit cosits (B3) e Patterns son Wate ck Surface Burrows on Visible nagery (C Aquitard tural Test	(Riverine) s (B2) (Riverine) s (B10) r Table (C2) e (C7) (C8) on (D3) (D5)
Hydrology Wetland Indicator Primary Indicators (Ar Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Surface Soil Cr Inundation Visil Aerial Imagery Water-Stained	rs by one indicate (A1) cole (A2) (A1) (Nonrivering sits (B2) (Norivering sits (B6) cole on (B7) Leaves (B9)	or is suff	icient) Salt Cru Biotic C Aquatic Hydroge Oxidize Present Recent Plowed Other (E	Depth (In D CA) ust (B11) crust (B12) Invertebre en Sulfide d Rhizosp ce of Redu Iron Redu I Soils (C6) Explain in) ates (B13) Odor (C1) Oheres (C3) uced Iron (Cuction in S) Remarks)	PRESI	Second	ary Indic Water M Sedimer Drift Der Drainage Dry-Sea Thin Mu Crayfish Saturation Aerial Ir Shallow FAC-Ne	arks (B1) at Deposit cosits (B3) e Patterns son Wate ck Surface Burrows on Visible nagery (C Aquitard tural Test	(Riverine) s (B2) (Riverine) s (B10) r Table (C2) e (C7) (C8) on (D3) (D5)

North State Resources				Habitat Type GROSSUND
Wetland Determination Data Form - Arid V	_			Wetland Type EMERG. WETTAND
Project/Site: Sisk Dam Corrective Action Project		City/Count	y: Merced	County Sampling Date: 9/1/09
Applicant/Owner:U.S. Bureau of Reclamation				State: <u>CA</u> Sampling Point: <u>9</u>
Investigator(s):J. Colescott				
Landform (hillslope, terrace, etc.)		_ Local rel	ief (concave,	convex, none) CON CAUE Slope % 0-2
Subregion (LRR)LRR-C	So	il Map Unit I	Name: <u>Xe</u>	roflorents, EXTEMELY GENELY
Are climatic/hydrologic conditions on the site typical for this t	time of year?	455	(If no, explain	in remarks.)
Are vegetation N , soil N , or hydrology N significant	cantly distur	bed? Are n	ormal circum	stances present? MES_
Are vegetation N, soil N, or hydrology N natura	ally problema	atic? (If ne	eded, explain	any answers in Remarks.)
Summary of Findings (Attach site map showing	sampling p	oint location	s, transects,	important features, etc.)
Hydrophytic vegetation? M Hydric soil? M Wet	land hydrolo	gy? <u>Y</u>	ls sampled	area a wetland? 15 Other waters?
USACE Jurisdiction Adjacent to Waters Isolate	ed (with inte	rstate comm	nerce)	Isolated (non jurisdictional)
Explain:	1 10/- /			d Otata all
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour_				
Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	phemeral _	Blue-lir	ne on USGS	Quad
Remarks ANOTHER " SEEP W	FILM	D"	THAT	MYDRATES FROM DAM
LEAKAGE WHEN RES. 1	4 FU	LL.		
·				
Vegetation	Absolute		Indicator	Dominance Test Worksheet Number of dominant species
Tree Stratum (use scientific names) 1. Populus fremon +:	% Cover	Species?	FACW	that are OBL, FACW, or FAC:(A)
			FACW	Total number of dominant species
2. Salix laevigata			17/00-	across all strata: (B)
50%=Y	8			Device of device at anotice that
Sapling/Shrub Stratum (use scientific names)		Species?	Status	Percent of dominant species that(AB)
1				
2				Prevalence Index Worksheet Total % Cover of: Multiply by
3				OBL Species x 1 =
4]	FACW Species x2=
50%= Total Cover:				FAC Species x3 =
Herb Stratum (use scientific names)	% Cover	Species?	Status	FACU Species x4=
1. Typha latifolia	35	_	081	UPL Species x5=
2 Conyza canadensis	30	· <u>-</u>	FAC	Column Totals (A) (B)
3. Grindelia amporom	15_	2	FACU	Prevalance Index = B/A =
4. Lepidorom latitolia	_D	<u>P</u>	FACW	M Control of the Cont
5				Hydrophytic Vegetation Indicators Dominance Text is >50%
6				Prevalence Index is ≤ 3.01
7. 50%= 47,5 20%= 19 Total Cover:	95			Morphological Adaptations ¹ (provide supporting
	WWW.LEO	Consider?	Status	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
Woody/Vine Stratum (use scientific names)	% Cover	Species?	Status	1Indicators of hydric soil and wetland hydrology must
2	- 1			be present.
50%= 20%= Total Cover:	-]	Hydrophytic Vegetation? 455
% Bare Ground in Herb Stratum 5:10% % Cover of Rio		_		- A

	ز	1
Sampling Point _		L

Soils					·
Profile Description: (Describe to the Depth Matrix	he depth needed to docu Redox Features	ment the indicator	or confirm t	he absence of indi	cators.
(inches) Color (moist) %	Color (moist)	% Type ¹	Loc ²	<u>Texture</u>	Remarks
0-10" 104R 4/4 80	GLEY 1 5/104	5 D	M	GRAVELUS	Latre
	7,51R 4/6	15 0	M	· į	
	·				
¹ Types: C = Concentration D = Depletion	RM = Reduced Matrix	² Location: P	L = Pore Lini	ng RC = Root Cha	annel M = Matrix
Hydric Soil Indicators: (Applicable	e to all LRRs, unless oth	erwise noted)		Indicators for Probl	lematic Hydric Soils3
Histosol (A1)	Sandy G	Gleyed Matrix (S4)		1 cm Mu	ck (A9) (LRR C)
Histic Epipedon (A2)	Sandy R	Redox (S5)		2 cm Mu	ck (A10) (LRR B)
Black Histic (A3)	Stripped	Matrix (S6)		Reduced	l Vetric (F18)
Hydrogen Sulfide (A4)	Loamy N	Mucky Mineral (F1)		Red Pare	ent Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy C	Gleyed Matrix (F2)		Vegetate	d Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Depleted	d Matrix (F3)		Other (Ex	xplain in Remarks)
Depleted Below Dark Surface (A	A11) Redox D	ark Surface (F6)			
Thick Dark Surface (A12)	Depleted	Dark Surface (F7))		drophytic vegetation and
Sandy Mucky Mineral (S1)	Redox D	epressions (F8)		wetland hydrolo	gy must be present.
	Vernal P	ools (F9)			
Restrictive Layer (if present): Type: _		Depth (Inches)	Hydri	c Soil? YES	
Remarks HYDRIC S	50115				
Hydrology				· -	
Wetland Indicators Primary Indicators (Any one indicator is	sufficient)			Secondary Indica	ators (2 or more required)
Surface Water (A1)	Salt Crus	st (B11)		Water Ma	arks (B1) (Riverine)
High Water Table (A2)	Biotic Cru	ust (B12)		Sedimen	t Deposits (B2) (Riverine)
Saturation (A3)	Aquatic I	nvertebrates (B13)		Drift Dep	osits (B3) (Riverine)
Water Marks (B1) (Nonrivenne)	Hydroger	n Sulfide Odor (C1))	Drainage	Patterns (B10)
X_ Sediment Deposits (B2) (Nonrive	rine) Oxidized	Rhizospheres (C3))	Dry-Seas	son Water Table (C2)
Surface Soil Cracks (B6)	Presence	e of Reduced Iron (C4)	Thin Muc	k Surface (C7)
Inundation Visible on	Recent Ir	on Reduction in		Crayfish	Burrows (C8)
Aerial Imagery (B7)	Plowed	Soils (C6)		Saturatio	n Visible on
Water-Stained Leaves (B9)	Other (E)	kplain in Remarks)		Aerial Im	nagery (C9)
				Shallow A	Aquitard (D3)
				FAC-Net	ural Test (D5)
Field Observations					,
Surface Water Present? Yes N	lo Depth (inches)	Wetland I	Hydrology? Yes 🗘	✓ No
Water Table Present? Yes N	lo Depth (inches))			
	lo Depth (inches)		ides capillary		
Describe Recorded Data (stream	gauge, monitoring well, aer	rial photos, and previ	ous inspection	ons), if available:	

HYDROLOGY

Remarks WETUND

North State Resources Wetland Determination Data Form - Arid W	Vest Red	ijon		Habitat Type MEADOW Wetland Type SEASOWT WL
Project/Site: Sisk Dam Corrective Action Project		City/Count		
Investigator(s):J. Colescott				
Landform (hillslope, terrace, etc.) FLAT Subregion (LRR)LRR-C	90	Local rel	ief (concave	convex, none Slope %
Are climatic/hydrologic conditions on the site typical for this t	ime of year	? 4ES	(If no, explain	n in remarks.)
Are vegetation $\frac{\cancel{N}}{\cancel{YES}}$, soil $\frac{\cancel{N}}{\cancel{N}}$, or hydrology $\frac{\cancel{N}}{\cancel{N}}$ significant significant specification $\frac{\cancel{YES}}{\cancel{N}}$ soil $\frac{\cancel{N}}{\cancel{N}}$, or hydrology $\frac{\cancel{N}}{\cancel{N}}$ natural	cantly distu	rbed? Are n	ormal circun	nstances present? YES
Are vegetation YES soil N, or hydrology natura	ally problem	atic? (If nee	eded, explai	n any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation? 45 Hydric soil? 45 Wet				
USACE Jurisdiction Adjacent to WatersX Tributary to WatersX Isolate Explain:	ed (with inte	erstate comm	nerce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bear and bank Scour Feature Designation: Perennial Intermittent El Natural Drainage Artificial Drain	Ordir	nary High Wa	ater Mark Mark Mare on USGS	apped Quad
Remarks HICH PERCENTAGE	OF 9	BARTE	GEOUR	D = PROBLEMATIC VEC.
COLONIZATION BY ANNUAL MET, HOWEVER SOILS AND.	UPLAN	D 510	ECIES,	. VEG PARAMETER NOT
MENT, HOWEVER SOILS AND.	14 DRO	LOGY	Suppa	ET WETTAND DETERMINATION.
Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover		Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC:(A)
2				Total number of dominant species 2 (B)
50%= Total Cover: Sapling/Shrub Stratum (use scientific names) 1. Atriflex lentificanis	% Cover	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: [AB]
2				Prevalence Index Worksheet Total % Cover of: OBL Species X 1 =
4				FACW Species
50%=			01.1	FAC Species <u>50</u> x3 = <u>150</u>
Herb Stratum (use scientific names), 1. Hordeom lepori num	% Cover	Species?	FAC	FACU Species _5 x4= _20_
2 Grandelia camporam		P		UPL Species 14 x5= 70
3. Bromus hordedows	5	6	FACU	Column Totals (29 (A) 248 (B)
4. Avena fatua	2	N	UPL	Prevalance Index = B/A = $\frac{240/69}{3.4}$
5				Hydrophytic Vegetation Indicators
6				Dominance Text is >50% Prevalence Index is ≤ 3.01
7	67			Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	% Cover	Species?	Status	✓ Problematic Hydrophytic Vegetation¹ (Explain)
1	3.0000000000000000000000000000000000000			1 Indicators of hydric soil and wetland hydrology must be present.
2				
50%= Total Cover:				Hydrophytic Vegetation? <u>YES</u>

Soils						·
Profile Description: (Describe to the Depth Matrix	depth needed to doo Redox Features		e indicator o	or confirm	the absence of indic	eators.
(inches) Color (moist) %	Color (moist) 10 YR 5/1	<u>%</u>	Type ¹	Loc ²	Texture GRUEUT	Remarks Lotus
	7.54R5/8	5	0_	M		111
¹ Types: C = Concentration D = Depletion F	RM = Reduced Matrix	2	Location: PL	= Pore Lin	ing RC = Root Cha	nnel M = Matrix
Hydric Soil Indicators: (Applicable the Listosol (A1) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (AG) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Sandy Strippe Loamy Loamy Peplete Redox Deplete N Redox	Gleyed M Redox (S d Matrix (Mucky M Gleyed M ed Matrix Dark Surf ed Dark S	latrix (S4) 5) S6) ineral (F1) flatrix (F2) (F3) face (F6) urface (F7) ons (F8)		Red Pare Vegetated Other (Ex	k (A9) (LRR C)
Restrictive Layer (if present): Type:		Depth (In	ches)	Hydr	ic Soil? YES	
Hydrology Wetland Indicators Primary Indicators (Any one indicator is su	Ifficient)				Secondary Indicat	tors (2 or more required)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Biotic Company Aquatic Hydroge Oxidized Presence Recent Plowed	Invertebren Sulfide d Rhizospee of Redd dron Redd Soils (C6	ates (B13) Odor (C1) heres (C3) uced Iron (C	:4)	Sediment Drift Depo Drainage Dry-Seaso Thin Muck Crayfish E Saturation Aerial Ima	Burrows (C8)
Field Observations Surface Water Present? Yes	Depth (inches	s) s)		es capillar		No
Remarks 5 TRONG WE					ons), if available:	

North State Resources	v	• 200		Habitat Type MEADOW
Wetland Determination Data Form - Arid V Project/Site:Sisk Dam Corrective Action Project		City/Count	y: <u>Mercec</u>	Wetland Type Sampling Date: 9 / 1 / 0 9
Applicant/Owner: <u>U.S. Bureau of Reclamation</u> Investigator(s): <u>J. Colescott</u>				State: <u>CA</u> Sampling Point: <u>VI</u>
Landform (hillslope, terrace, etc.) FLAT Subregion (LRR) LRR-C	So	Local reli	ief (concave	eroflovents, Extremely GRAVELLY
Are climatic/hydrologic conditions on the site typical for this t	time of year?	3 JES 1	'If no, explai	in in remarks.)
Are vegetation $\stackrel{\textstyle \sim}{}_{\scriptstyle \sim}$, soil $\stackrel{\textstyle \sim}{}_{\scriptstyle \sim}$, or hydrology $\stackrel{\textstyle \sim}{}_{\scriptstyle \sim}$ signifiance vegetation $\stackrel{\textstyle \sim}{}_{\scriptstyle \sim}$, soil $\stackrel{\textstyle \sim}{}_{\scriptstyle \sim}$, or hydrology $\stackrel{\textstyle \sim}{}_{\scriptstyle \sim}$ natural				
Summary of Findings (Attach site map showing Hydrophytic vegetation? NO Hydric soil? NO Wet	sampling polarical	oint location	s, transects Is sample	important features, etc.) d area a wetland? $\frac{NO}{NO}$ Other waters? $\frac{NO}{NO}$
USACE Jurisdiction Adjacent to Waters Isolate Explain:	ed (with inte	erstate comm	nerce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	Ordin	nary High Wa Blue-lin	ater Mark M	apped Quad
Remarks UPLAND PAIR TO				-
Vegetation Tree Stratum (use scientific names) 1	Absolute % Cover		Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
2				Total number of dominant species across all strata: (B)
50%= Total Cover: Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
1. 2. 3.				Prevalence Index Worksheet Total % Cover of: Multiply by
4.				OBL Species x1 = FACW Species x2 =
50%= Z0%= Total Cover: Herb Stratum (use scientific names)	% Cover	Species?	Status	FAC Species x3 = FACU Species x4 =
1. Browns Nordzacous 2 B. diandrus		<u> </u>	FICH	UPL Species x5 =
3. Grindelia camporum		Y	WPL	Column Totals (A)(B)
4. Croton set, agrus		N	VPL	Prevalance Index = B/A =
5				Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.01
7		-		Morphological Adaptations ¹ (provide supporting
50%= Total Cover: Woody/Vine Stratum (use scientific names) 1	% Cover	Species?	Status	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must
2				be present.
50%= Total Cover: % Bare Ground in Herb Stratum				Hydrophytic Vegetation?

Profile Description: (Describe to the dep Depth	Redox Features		o maioator c		aro abconco or	maioa	
	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture		Remarks
-6 104R 3/4 100			<u></u>		artu Eu	u	LOAM
rpes: C = Concentration D = Depletion RM = rdric Soil Indicators: (Applicable to al Histosol (A1) Histic Epipedon (A2)	LRRs, unless of	herwise n	latrix (S4)	= Pore Lir	Indicators for F	Problem Muck	el M = Matrix natic Hydric Soils ³ (A9) (LRR C) (A10) (LRR B)
Black Histic (A3)		d Matrix (etric (F18)
Hydrogen Sulfide (A4)	Loamy	and the second	1 - 50 manufacture 1		F		Materials (TF2)
Stratified Layers (AG) (LRR C)		2000 SEC. 200	fatrix (F2)				Sand/Gravel Bars
1 cm Muck (A9) (LRR D)		ed Matrix	100 HOA				ain in Remarks)
Depleted Below Dark Surface (A11)	5	Dark Surf	i i i i i i i i i i i i i i i i i i i			i (LA)	an in recommend
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Deplete	ed Dark S Depression	urface (F7) ons (F8)				ophytic vegetation and must be present.
	Vernal	Pools (F9	,				
Remarks UPLAND 4011		- Com 31 Jan 11 11 11 11 11 11 11 11 11 11 11 11 11	nches) _~	Hydi	ric Soil? <u>IN C</u>)	
Remarks UPLAND 4011 Hydrology Wetland Indicators	5	- Com 31 Jan 11 11 11 11 11 11 11 11 11 11 11 11 11		Hydi		ty	rs (2 or more required
Hydrology Vetland Indicators Primary Indicators (Any one indicator is suffice.)	ient)	Depth (In		Hydi	Secondary In	ndicato	
Remarks UPLAND 4011 Hydrology Vetland Indicators rimary Indicators (Any one indicator is suffic Surface Water (A1)	ient)Salt Cru	Depth (In	nches) _~_	Hydi	Secondary In	ndicato er Mark	s (B1) (Riverine)
Hydrology Vetland Indicators rimary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2)	ient) Salt Cru Biotic C	Depth (In	nches) _~_	Hydi	Secondary In Wate Sedir	ndicato er Mark ment D	s (B1) (Riverine) eposits (B2) (Riverine
Remarks UPLAND 4011 Hydrology Vetland Indicators rimary Indicators (Any one indicator is suffic Surface Water (A1) High Water Table (A2) Saturation (A3)	ient) Salt Cru Biotic C	Depth (In) rates (B13)	Hydi	<u>Secondary In</u> Wate Sedir Drift I	ndicato er Mark ment D	s (B1) (Riverine) eposits (B2) (Riverine ts (B3) (Riverine)
Remarks UPLAND 4011 Hydrology Vetland Indicators rimary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	ient) Salt Cru Biotic C Aquatic Hydroge	Depth (In list (B11) rust (B12) Invertebren Sulfide) nates (B13) Odor (C1)	Hydi	Secondary In Wate Sedir Drift I Drain	ndicato er Mark ment D Deposi	s (B1) (Riverine) eposits (B2) (Riverine ts (B3) (Riverine) atterns (B10)
Remarks UPLAND 4011 Hydrology Vetland Indicators Primary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	ient) Salt Cru Biotic C Aquatic Hydroge Oxidize	Depth (In list (B11) rust (B12) Invertebren Sulfide d Rhizosp) rates (B13) e Odor (C1) oheres (C3)		Secondary In Wate Sedir Drift I	ndicato er Mark ment D Deposi nage Pa	s (B1) (Riverine) eposits (B2) (Riverine) ts (B3) (Riverine) atterns (B10) Water Table (C2)
Hydrology Vetland Indicators Primary Indicators (Any one indicator is sufficed to the suffic	ient) Salt Cru Biotic C Aquatic Hydroge Oxidizee Presence	Depth (In list (B11) rust (B12) Invertebren Sulfide d Rhizospee of Redu) rates (B13) c Odor (C1) oheres (C3) uced Iron (C		Secondary In Wate Sedir Drift I Drain Dry-S	er Mark ment D Deposi nage Pa Season Muck S	s (B1) (Riverine) eposits (B2) (Riverine) ts (B3) (Riverine) atterns (B10) Water Table (C2) Surface (C7)
Remarks UPLAND 4011 Hydrology Vetland Indicators Primary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6)	ient) Salt Cru Biotic C Aquatic Hydroge Oxidizee Presence Recent	Depth (In list (B11) rust (B12) Invertebren Sulfide d Rhizosp) ates (B13) c Odor (C1) oheres (C3) uced Iron (Cuction in		Secondary In Wate Sedir Drift I Dry-S Thin Cray	er Mark ment D Deposi nage Pa Season Muck S	s (B1) (Riverine) eposits (B2) (Riverine) ts (B3) (Riverine) atterns (B10) Water Table (C2)
Remarks UPLAND 4012 Hydrology Vetland Indicators rimary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	ient) Salt Cru Biotic C Aquatic Hydroge Oxidizee Present Recent Plowed	Depth (In list (B11) rust (B12) Invertebren Sulfide d Rhizospee of Redu Fron Redu Soils (C6) ates (B13) c Odor (C1) oheres (C3) uced Iron (Cuction in		Secondary In Wate Sedir Drift I Dry-S Thin Crayl	er Mark ment D Deposi nage Pa Season Muck S fish Bu	s (B1) (Riverine) eposits (B2) (Riverine) ts (B3) (Riverine) atterns (B10) Water Table (C2) Surface (C7) rrows (C8)
Remarks UPLAND 4011 Hydrology Vetland Indicators rimary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	ient) Salt Cru Biotic C Aquatic Hydroge Oxidizee Present Recent Plowed	Depth (In list (B11) rust (B12) Invertebren Sulfide d Rhizospee of Redu Fron Redu Soils (C6) rates (B13) rodor (C1) roheres (C3) uced Iron (Cuction in		Secondary In Wate Sedir Drift I Drain Thin Crayl Satur Aeria	er Mark ment D Deposi nage Pa Season Muck S fish Bu ration	s (B1) (Riverine) eposits (B2) (Riverine) ts (B3) (Riverine) atterns (B10) Water Table (C2) Surface (C7) rrows (C8)
Remarks UPLAND 4010 Hydrology Vetland Indicators Frimary Indicators (Any one indicator is sufficed by the s	ient) Salt Cru Biotic C Aquatic Hydroge Oxidizee Present Recent Plowed	Depth (In list (B11) rust (B12) Invertebren Sulfide d Rhizospee of Redu Fron Redu Soils (C6) rates (B13) rodor (C1) roheres (C3) uced Iron (Cuction in		Secondary In Wate Sedir Drift I Dry-S Thin Crayl Satur Aeria	er Mark ment D Deposi nage Pa Season Muck S fish Bu ration V al Imag ow Aqu	s (B1) (Riverine) eposits (B2) (Riverine) ts (B3) (Riverine) atterns (B10) Water Table (C2) Surface (C7) rrows (C8) Visible-on ery (C9)
Remarks UPLAND 4010 Hydrology Vetland Indicators Primary Indicators (Any one indicator is sufficed by the s	ient) Salt Cru Biotic C Aquatic Hydroge Oxidize Presenc Recent Plowed Other (E	Depth (In Just (B11) Just (B12) Invertebre en Sulfide d Rhizosp ee of Redu Jron Redu Soils (C6) ates (B13) Odor (C1) oheres (C3) uced Iron (Cuction in S) Remarks)	24)	Secondary In Wate Sedir Drift I Dry-S Thin Crayl Satur Aeria Shall	er Mark ment D Deposi nage Pa Season Muck S fish Bu ration S al Imag ow Aqu Netura	s (B1) (Riverine) eposits (B2) (Riverine) ts (B3) (Riverine) atterns (B10) Water Table (C2) Surface (C7) rrows (C8) Visible-on ery (C9) uitard (D3) I Test (D5)
Wetland Indicators Primary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations urface Water Present? Yes NoX	ient) Salt Cru Biotic C Aquatic Hydroge Oxidizee Presence Recent Plowed Other (E	Depth (In list (B11) rust (B12) Invertebre en Sulfide d Rhizospe e of Redu Soils (C6 Explain in) ates (B13) Odor (C1) oheres (C3) uced Iron (Cuction in S) Remarks)	24)	Secondary In Wate Sedir Drift I Dry-S Thin Crayl Satur Aeria	er Mark ment D Deposi nage Pa Season Muck S fish Bu ration S al Imag ow Aqu Netura	s (B1) (Riverine) eposits (B2) (Riverine) ts (B3) (Riverine) atterns (B10) Water Table (C2) Surface (C7) rrows (C8) Visible-on ery (C9) uitard (D3)
Remarks UPLAND 401 L Hydrology Netland Indicators Primary Indicators (Any one indicator is sufficed by the sufficient by the sufficed by the sufficient by the sufficed by the sufficient	ient) Salt Cru Biotic C Aquatic Hydroge Oxidizee Presence Recent Plowed Other (E	Depth (In Depth) rates (B13) e Odor (C1) oheres (C3) uced Iron (Cuction in b) Remarks)	24)	Secondary In Wate Sedir Drift I Dry-S Thin Crayl Satur Aeria Shall FAC-	er Mark ment D Deposi nage Pa Season Muck S fish Bu ration S al Imag ow Aqu Netura	s (B1) (Riverine) eposits (B2) (Riverine) ts (B3) (Riverine) atterns (B10) Water Table (C2) Surface (C7) rrows (C8) Visible-on ery (C9) uitard (D3) I Test (D5)

				DAM SIDE +
North State Resources				Habitat Type ROADS I DE
Wetland Determination Data Form - Arid W	lest Reg	ion		Wetland Type EMERGENT WL
Project/Site: Sisk Dam Corrective Action Project		City/Count	y: <u>Mercec</u>	County Sampling Date: 9/1/09
Applicant/Owner: <u>U.S. Bureau of Reclamation</u>				State: <u>CA</u> Sampling Point: <u>1</u>
Landform (hillslope, terrace, etc.) HILSIDE				
Subregion (LRR)LRR-C	So	il Map Unit N	lame:	4M
Are climatic/hydrologic conditions on the site typical for this ti				
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow significant	cantly distur	bed? Are n	ormal circun	nstances present? 4FS
Are vegetation	lly problem	atic? (If nee	eded, explai	n any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation?	sampling p and hydrold	oint location	s, transects, Is sample	d area a wetland? 4ES Other waters? NO
USACE Jurisdiction			<u> </u>	
Adjacent to Waters Tributary to Waters Isolate Explain:	ed (with inte	erstate comm	erce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot	hor Wat	ore of t	ho Unite	od States"
Indicators: Defined bed and bank Scour_				
Feature Designation: Perennial Intermittent Ep	ohemeral _	Blue-lin	e on USGS	Quad
Natural Drainage Artificial Drain	iage	Navigable \	Nater	<u> </u>
Remarks SMAL "SEEP" WER	AND	6 40	tu	SLOPE.
Thorne steel voice		7	70, (,
Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	% Cover			Number of dominant species that are OBL, FACW, or FAC:
1				that are OBL, FACW, or FAC:
2				Total number of dominant species 3 (B)
3				across all strata:
50%= Total Cover:				Percent of dominant species that
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	are OBL, FACW, or FAC: 100 (AB)
1. Salix exigua	50	765	OBL	D
2				Prevalence Index Worksheet Total % Cover of: Multiply by
3			<u> </u>	OBL Speciesx1=
4				FACW Species
50%=_25	50			FAC Species x3=
Herb Stratum (use scientific names)	% Cover	Species?	Status	7
1. Jupha latifolia	50	4	OBC	FACU Species / x4 =
2 Loidium latifolium				UPL Species / x5 =
3.				Column Totals (A) (B)
4				Prevalance Index = B/A =
5				It when bedie Versetation Indicators
6				Hydrophytic Vegetation Indicators Dominance Text is >50%
7				Prevalence Index is ≤ 3.0°
50%= 3.5 20%= 14 Total Cover:	70			Morphological Adaptations¹ (provide supporting
	Contract of the contract of th	Species?	Statue	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
	10 COAGI	Species?	Status	Indicators of hydric soil and wetland hydrology must
1	7		<u> </u>	be present.
2		-		Hydrophytic Vegetation? 455
50%= 20%= Total Cover:	77			Try at opiny to 4 ege ta a on 1
% Bare Ground in Herb Stratum % Cover of Biot	ic Crust _		1	

Profile Description: (Describe to the Depth	Redox Feature		ne indicator o	or contirm	and abbonion of m	
inches) Color (moist) %	Color (moist)	<u>%</u>	Type ¹	Loc2	<u>Texture</u>	Remarks
-8" 104R 3/2 90	10 YR 3/2	10		M	CRAVEW	y copy
						500 01.000
ypes: C = Concentration D = Depletion			Location: PL			10.000
ydric Soil Indicators: (Applicable		- AND REAL PROPERTY AND REAL P		_		blematic Hydric Soils3
Histosol (A1)	NAME OF TAXABLE		Matrix (S4)			luck (A9) (LRR C)
Histic Epipedon (A2)		y Redox (S			1872 S	uck (A10) (LRR B)
Black Histic (A3)	100 mm	ed Matrix			in the second	ed Vetric (F18) arent Materials (TF2)
Hydrogen Sulfide (A4)		5) and the	Mineral (F1)			ted Sand/Gravel Bars
Stratified Layers (AG) (LRR C)			Matrix (F2)			
1 cm Muck (A9) (LRR D)		ted Matrix			Other (Explain in Remarks)
Depleted Below Dark Surface (A1					3Indicators of	hydrophytic vegetation and
Thick Dark Surface (A12)			Surface (F7)			logy must be present.
Sandy Mucky Mineral (S1)	100000000000000000000000000000000000000	x Depressi				
	verna	Pools (F	9)			
Remarks 144DRIC 50	1115	Depth (I	nches)	Hydr	ric Soil? <u>YES</u>	
Remarks ITYDRIC 50 Hydrology Wetland Indicators		Depth (Id	nches)	Hydi		cators (2 or more required
Remarks IMDRIC GO Hydrology Wetland Indicators Primary Indicators (Any one indicator is s	sufficient)			Hydr	Secondary India	
Hydrology Netland Indicators Primary Indicators (Any one indicator is s Surface Water (A1)	sufficient)Salt C	rust (B11)		Hydr	Secondary Indi	Marks (B1) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2)	sufficient) Salt C Biotic	rust (B11) Crust (B12	2)	Hydr	Secondary Indi	ent Deposits (B2) (Riverine
Hydrology Netland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3)	sufficient) Salt C Biotic Aquati	rust (B11) Crust (B12 ic Inverteb	2) rates (B13)	Hydr	Secondary India Water M Sedime Drift De	Marks (B1) (Riverine) ent Deposits (B2) (Riverine eposits (B3) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	sufficient) Salt C Biotic Aquati Hydro	rust (B11) Crust (B12 ic Inverteb gen Sulfide	2) rates (B13) e Odor (C1)		Secondary India Water M Sedime Drift De	Marks (B1) (Riverine) ent Deposits (B2) (Riverine eposits (B3) (Riverine) ge Patterns (B10)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	sufficient) Salt C Biotic Aquati Hydro	rust (B11) Crust (B12 ic Inverteb gen Sulfide ed Rhizos	2) rates (B13) e Odor (C1) pheres (C3)		Secondary India Water M Sedime Drift De Drainag	Marks (B1) (Riverine) ent Deposits (B2) (Riverine eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6)	sufficient) Salt C Biotic Aquati Hydro	rust (B11) Crust (B12 ic Inverteb gen Sulfide ed Rhizos nce of Red	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (C		Secondary India Water M Sedime Drift De Drainag Dry-Sea	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) uck Surface (C7)
Hydrology Netland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	Sufficient) Salt C Biotic Aquati Hydro Oxidiz Presei	rust (B11) Crust (B12) ic Inverteb gen Sulfide ed Rhizos nce of Red at Iron Red	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (C		Secondary India Water M Sedime Drift De Drainag Dry-Sea Thin Mt	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8)
Hydrology Netland Indicators Primary Indicators (Any one indicator is so Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	sufficient) Salt C Biotic Aquati Hydro Oxidiz Preser Recen	rust (B11) Crust (B12 ic Inverteb gen Sulfide ed Rhizos nce of Red at Iron Red ed Soils (C	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cuction in 6)		Secondary India Water M Sedime Drift De Drainag Dry-Sea Thin Mt Crayfisl	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) in Burrows (C8) ion Visible on
Hydrology Netland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	sufficient) Salt C Biotic Aquati Hydro Oxidiz Preser Recen	rust (B11) Crust (B12 ic Inverteb gen Sulfide ed Rhizos nce of Red at Iron Red ed Soils (C	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (C		Secondary India Water M Sedime Drift De Drainag Dry-Sea Thin Mu Crayfisl Saturat Aerial I	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8)
Hydrology Netland Indicators Primary Indicators (Any one indicator is so Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	sufficient) Salt C Biotic Aquati Hydro Oxidiz Preser Recen	rust (B11) Crust (B12 ic Inverteb gen Sulfide ed Rhizos nce of Red at Iron Red ed Soils (C	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cuction in 6)		Secondary India Water M Sedime Drift De Drainag Dry-Sea Thin Mi Crayfisl Saturat Aerial I	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) euck Surface (C7) en Burrows (C8) eion Visible on emagery (C9)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	sufficient) Salt C Biotic Aquati Hydro Oxidiz Preser Recen	rust (B11) Crust (B12 ic Inverteb gen Sulfide ed Rhizos nce of Red at Iron Red ed Soils (C	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cuction in 6)		Secondary India Water M Sedime Drift De Drainag Dry-Sea Thin Mi Crayfisl Saturat Aerial I	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) in Burrows (C8) ion Visible on imagery (C9) v Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonnverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	sufficient) Salt C Biotic Aquati Hydro Oxidiz Preser Recen	rust (B11) Crust (B12 ic Inverteb gen Sulfide ed Rhizos nce of Red at Iron Red ed Soils (C (Explain in	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cluction in 6) n Remarks)	(4)	Secondary India Water M Sedime Drift De Drainag Dry-Sea Thin Mi Crayfisl Saturat Aerial I	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) in Burrows (C8) ion Visible on imagery (C9) v Aquitard (D3) etural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Sufficient) Salt C Biotic Aquati Hydro Oxidiz Preset Recen Plowe Other	rust (B11) Crust (B12) ic Invertebrated Rhizos ince of Red at Iron Red ad Soils (C) (Explain in	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cluction in 6) n Remarks)	(4)	Secondary India Water M Sedime Drift De Drainag Dry-Sea Thin Mt Crayfisl Saturat Aerial I Shallow FAC-Ne	Marks (B1) (Riverine) ant Deposits (B2) (Riverine) aposits (B3) (Riverine) ason Water Table (C2) ack Surface (C7) a Burrows (C8) and Visible on amagery (C9) a Aquitard (D3) actural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is so Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations Surface Water Present? Yes No. Water Table Present? Yes No.	Sufficient) Salt C Biotic Aquati Hydro Oxidiz Preset Recen Plowe Other	rust (B11) Crust (B12) ic Inverteb gen Sulfide ed Rhizos nce of Red at Iron Red ed Soils (C (Explain in	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cuction in 6) n Remarks)	(4)	Secondary India Water M Sedime Drift De Drainag Dry-Sea Thin Mt Crayfish Saturat Aerial I Shallow FAC-Ne	Marks (B1) (Riverine) ant Deposits (B2) (Riverine) aposits (B3) (Riverine) ason Water Table (C2) ack Surface (C7) a Burrows (C8) and Visible on amagery (C9) a Aquitard (D3) actural Test (D5)

North State Resources Wetland Determination Data Form - Arid V	Vest Reg	ion		Habitat Type PAR SIDE Wetland Type UPLAND
Are climatic/hydrologic conditions on the site typical for this t	So	Local rel	ief (concave Name: Apa	State: CA Sampling Point: 15 convex, none) Now 5 Slope % 5% Clay Loam 15-30% SLOPS in in remarks.)
Are vegetation N , soil N , or hydrology N significant sides are vegetation N , soil N , or hydrology N natural Summary of Findings (Attach site map showing	ally problem	atic? (If ne	eded, explai	n any answers in Remarks.)
Hydrophytic vegetation? NO Hydric soil? NO Wet USACE Jurisdiction Adjacent to Waters Isolate	land hydrolo	ogy? YE	Ss sample	d area a wetland? NO Other waters? NO
Explain: Evaluation of features designated "Ot Indicators: Defined bed and bank Scour _ Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	Ordir	nary High Wa	ater Mark Mark Mare on USGS	apped Quad
Remarks UPLAND PAIR	67	#	14.	
Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover		Indicator Status	Dominance Test Worksheef Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species (A)
3 Total Cover: Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (B)
2. 3. 4. Sold Sold Sold Sold Sold Sold Sold Sold				Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species X 1 = x 2 =
50%= 20%= Total Cover: Herb Stratum (use scientific names) 1. Si Jusum Marianum 2. Brassica Megra 3. Bromus madritensis	% Cover 40 40	Species?	Status UPL UPL	FAC Species
4				Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting
50%= 20%= Total Cover: Woody/Vine Stratum (use scientific names) 1 2	% Cover	Species?	Status	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present.
50%= Total Cover: % Bare Ground in Herb Stratum % Cover of Biot		_		Hydrophytic Vegetation? NO

						Sampling Point 13
Profile Description: (Describe to the dept	h needed to doo Redox Feature		indicator o	r confirm	the absence of in	dicators.
(inches) Color (moist) %	Color (moist)	<u>%</u> 25	Type ¹ RM	<u>Loc²</u> 	<u>Loam</u>	Remarks
1Types: C = Concentration D = Depletion RM =			ocation: PL			
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (AG) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Sandy Sandy Strippe Loamy Loamy Peplete Redox Redox	Gleyed M Redox (Seed Matrix (Mucky Mi Gleyed M ed Matrix (Dark Surfa	atrix (S4) 5) \$6) neral (F1) latrix (F2) (F3) ace (F6) urface (F7)	,	1 cm M 2 cm M Reduce Reduce Vegeta Other (blematic Hydric Soils³ luck (A9) (LRR C) luck (A10) (LRR B) ed Vetric (F18) arent Materials (TF2) tted Sand/Gravel Bars Explain in Remarks) hydrophytic vegetation and logy must be present.
Restrictive Layer (if present): Type: Remarks COLDES NOT D REDOX FEADRES.		Depth (In		Hydr F-C	ic Soil? NO	INSUFFICIENT
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient	ent)				Secondary Indi	cators (2 or more required)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) X Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Biotic C Aquatic Hydrog Oxidize Present Recent	en Sulfide d Rhizosp	ates (B13) Odor (C1) heres (C3) uced Iron (C oction in	:4)	Sedime Drift De Drainag Dry-See Thin Me Crayfise Aerial	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) th Burrows (C8) ion-Visible on Imagery (C9)

Field Observations

Surface Water Present? Yes ____ No ____ Depth (inches) ____ Wetland Hydrology? Yes _____ No ____

Water Table Present? Yes ___ No ____ Depth (inches) ____ (includes capillary fringe)

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

North State Resources	35		1	Habitat Type DAM SIDE
Wetland Determination Data Form - Arid V	Vest Reg	ion		Wetland Type FRESH FURELEUT WILL
Project/Site: Sisk Dam Corrective Action Project		City/Count	v: Merced	County Sampling Date: 9/1/09
Applicant/Owner: U.S. Bureau of Reclamation		,		State: CA Sampling Point:
Investigator(s):				570 Saturday - 1 S
Landform (hillslope, terrace, etc.) HIUSIDE		Local rel	ief (concave	convex none) NONESlope %_5/2
Subregion (LRR) <u>LRR-C</u>	So	il Man Unit N	Name: AD	Dolo Chan loam 15-30%
Are climatic/hydrologic conditions on the site typical for this t	time of year	2 YES	(If no explain	n in remarks)
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow significant	icently dietu	thod? Are n	omal circum	netances present? YES
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow natura	ally problem	atic? (If nee	eded, explaii	n any answers in Remarks.)
Summary of Findings (Attach site map showing	sampling p	oint location	s, transects,	important features, etc.)
Hydrophytic vegetation? 45 Hydric soil? 45 Wet	land hydrolo	ogy? 4FES	Is sampled	d area a wetland? 465 Other waters? NO
USACE Jurisdiction Adjacent to Waters X Tributary to Waters Isolate Explain:	ed (with inte	erstate comm	nerce)	Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour_ Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	Ordin	nary High Wa	ater Mark Ma ne on USGS	apped Quad
Remarks DP DOCUMENTS TWETT	LAND	3106	EOF	TRANSITIONAL AXBITAT.
Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names) 1	% Cover	Species?	Status	Number of dominant species that are OBL, FACW, or FAC: (A)
2.				Total number of dominant species across all strata: (B)
50%= Total Cover:				Percent of dominant species that 100 (AB)
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	are OBL, FACW, or FAC: (AB)
1. 4				Prevalence Index Worksheet
2				Total % Cover of: Multiply by
3				OBL Species x1 =
4				FACW Species x2=
50%= Total Cover:				FAC Species x3 =
Herb Stratum (use scientific names)	% Cover	Species?	- 1	FACU Species x4 =
1. Lepidium latifolium			FACW	UPL Species x5 =
. 2	1		· <u>- · · · · · · · · · · · · · · · · · ·</u>	Column Totals (A) (B)
3				Prevalence Index = B/A =
4				rievalance index = DIX =
5				Hydrophytic Vegetation Indicators
6				Dominance Text is >50% Prevalence Index is ≤ 3.0¹
7				Morphological Adaptations ¹ (provide supporting
50%= Total Cover:				data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must
1				be present.
2				
50%= Total Cover:		+	15	Hydrophytic Vegetation? <u>YES</u>
% Bare Ground in Herb Stratum % Cover of Bio	-	_		

Profile Description: (Des Depth Matrix	scribe to the				e indicator of	r confirm	the absence of indicators.
Depth Matrix (inches) Color (moist)	%		x Feature (moist)	<u>%</u>	Type ¹	Loc ²	Texture Remarks
0-4" 10 4e 3/z	_	10 YR		5	D	1M	10 AM
Types: C = Concentration D =							ing RC = Root Channel M = Matrix
Hydric Soil Indicators:_(Applicable	to all LRRs				_	Indicators for Problematic Hydric Soils ³
Histosol (A1)				-	fatrix (S4)		1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)		_		Redox (S	•		2 cm Muck (A10) (LRR B)
Black Histic (A3)		-		ed Matrix (Reduced Vetric (F18)
Hydrogen Sulfide (A4)				-	lineral (F1)		Red Parent Materials (TF2)
Stratified Layers (AG)					Matrix (F2)		Vegetated Sand/Gravel Bars
1 cm Muck (A9) (LRR				ed Matrix		` .	Other (Explain in Remarks)
Depleted Below Dark S		1)/	Redox		. ,		3th distance of the described in vocatofian
Thick Dark Surface (A	,		- •		urface (F7)		³ Indicators of hydrophytic vegetation wetland hydrology must be present.
Sandy Mucky Mineral	(S1)			Depression	. ,		Wedalia Hydrology must be present
			Vernal	Pools (F9	3)		
Restrictive Layer (if present):				Depth (Ir	nches) —	Hydr	ic Soil? YES
Restrictive Layer (if present):		- A650	MEN				ic Soil? YES
Remarks SEER W	ATER	ASSO DUE	MED	70	come	FRO	ic Soil? YES M SOBSURFACE, SLOPE (START) OF WHET
Remarks SEEP N WEAK INDICATOR	ATER	ASSO DUR	MED	70	come	FRO	4 50BSORFACE
Remarks SEEP W WEAK INDICATOR Hydrology	ATER	ASSO DOF	MED	70	come	FRO	4 50BSORFACE
Remarks SEEP N WEAK INDICATOR	S OK	DUE	IMED	70	come	FRO	4 50BSORFACE
Remarks SEEP W WELAN INDICATOR Hydrology Wetland Indicators	S OK	DUE	70	70	come	FRO	M SOBSURFACE, SLOPE (START) OF WHET
Remarks SEEP W WELLANDICATOR Hydrology Wetland Indicators Primary Indicators (Any one in	S OK	DUE	_ Salt Cro	GC AT	come	FRO	Secondary Indicators (2 or more requi
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1)	S OK	DUE	Salt Cru Biotic C	ust (B11) Crust (B12	come	FRO	Secondary Indicators (2 or more requi
Remarks SEEP W World (A) Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2)	A TER.	DUE	Salt Cru Biotic C	ust (B11) Crust (B12)	come	FRO	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (River
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3)	ndicator is s	ufficient)	Salt Cru Biotic C Aquatic Hydrog	ust (B11) Crust (B12 Invertebren Sulfide	come	FRO	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non	ndicator is s	ufficient)	Salt Cro Biotic C Aquatic Hydrog Oxidize	ust (B11) Crust (B12 Invertebren Sulfided d Rhizosp	come cas Ai	FRO UP:	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2)	ndicator is s	ufficient)	Salt Cro Biotic C Aquatic Hydrog Oxidize Present	ust (B11) Crust (B12 Invertebren Sulfided d Rhizosp	rates (B13) Odor (C1) oheres (C3) uced Iron (C	FRO UP:	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B6)	ndicator is s	ufficient)	Salt Cro Biotic C Aquatic Hydrog Oxidize Present Recent	ust (B11) Crust (B12: Invertebren Sulfided Rhizospoce of Red	rates (B13) Poheres (C3) uced Iron (Cuction in	FRO UP:	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (Bullinundation Visible on	ndicator is s riverine) () (Nonriverine)	ufficient)	Salt Cro Biotic C Aquatic Oxidize Oxidize Present Recent Plowed	ust (B11) Crust (B12) Invertebren Sulfided Rhizospece of Red Iron Redult Soils (Co	rates (B13) Poheres (C3) uced Iron (Cuction in	7 UP:	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B1) Inundation Visible on Aerial Imagery (B7)	ndicator is s riverine) () (Nonriverine)	ufficient)	Salt Cro Biotic C Aquatic Oxidize Oxidize Present Recent Plowed	ust (B11) Crust (B12) Invertebren Sulfided Rhizospece of Red Iron Redult Soils (Co	course (B13) rates (B13) codor (C1) cheres (C3) uced Iron (Cuction in	7 UP:	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B1) Inundation Visible on Aerial Imagery (B7)	ndicator is s riverine) () (Nonriverine)	ufficient)	Salt Cro Biotic C Aquatic Oxidize Oxidize Present Recent Plowed	ust (B11) Crust (B12) Invertebren Sulfided Rhizospece of Red Iron Redult Soils (Co	course (B13) rates (B13) codor (C1) cheres (C3) uced Iron (Cuction in	7 UP:	Secondary Indicators (2 or more required by the content of the con
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves	ndicator is s riverine) (Nonriverine)	ufficient)	Salt Cro Biotic C Aquatic Oxidize Oxidize Present Recent Plowed	ust (B11) Crust (B12) Invertebren Sulfided Rhizospece of Red Iron Redult Soils (Co	course (B13) rates (B13) codor (C1) cheres (C3) uced Iron (Cuction in	4)	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B1) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves	riverine) (Nonriverine) (B9)	ufficient)	Salt Cru Biotic Co Aquatic Hydrog Oxidize Present Recent _ Plower Other (I	ust (B11) Crust (B12) Invertebrer Sulfided Rhizospece of Reddisoils (Cf. Explain in	course (B13) rates (B13) codor (C1) cheres (C3) uced Iron (Cuction in	4)	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Surface Soil Cracks (B1) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves	riverine) (Nonriverine) (B9)	ufficient)	Salt Cro Biotic C Aquatic Oxidize Present Recent Plowed Other (I	ust (B11) Crust (B12) Invertebrer Sulfided Rhizospece of Reddisoils (Cf. Explain in	course (B13) rates (B13) codor (C1) cheres (C3) uced Iron (Cuction in	4)	Secondary Indicators (2 or more requi Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)

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HYD.

North State Resources				Habitat Type DAM
Wetland Determination Data Form - Arid	West Reg	ion		Wetland Type EMERGENT WILL
			v: Merced	County Sampling Date: 9/1/09
Applicant/Owner:U.S. Bureau of Reclamation		_ Only/Count	y. <u>IVICIOCO</u>	State: CA Sampling Point: 15
Investigator(s);J. Colescott				
Landform (hillslope, terrace, etc.) HILSLOPE		Local rel	ief (concave	convex, none) CON CAVE Slope % 5%
Subregion (LRR)LRR-C	Sc	il Map Unit I	Name: AD	0 110 Clan 1sam 15-30%
Are climatic/hydrologic conditions on the site typical for this	time of year	, YES	(If no, explain	n in remarks.)
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow sign	ificantly distu	rbed? Are n	ormal circun	nstances present? YES
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow natu	rally problem	atic? (If nee	eded, explair	any answers in Remarks.)
Summary of Findings (Attach site map showing	ng sampling p	oint location	s, transects,	important features, etc.)
Hydrophytic vegetation? 455 Hydric soil? 455 We	etland hydrolo	ogy? YES	Is sample	d area a wetland? 465 Other waters? Mo
USACE Jurisdiction Adjacent to Waters Isola Explain:	ated (with inte	erstate comm	nerce)	Isolated (non jurisdictional)
Evaluation of features designated "O	ther Wa	ters of t	he Unite	ed States"
Indicators: Defined bed and bank Scour	Ordin	nary High Wa	ater Mark Ma	apped
Feature Designation Perennial Intermittent Natural Drainage Artificial Dra				
Remarks	amage	INAVIGABLE	vvalei	·
SMALL SEEP WEIGHT	> A-7	BASIE	OF	DAM INFILMAD IS
2000 W/ 20 24 24 24 24 24	TED B	HNE	ARILAN	S WALTUDS). NO PAIR POINT
INSTACCED.	11000 12	>0.0K.> (51,4104	, 0,000,000
Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	% Cover	Species?	Status	Number of dominant species that are OBL, FACW, or FAC: (A)
1	-			1.
2.				Total number of dominant species across all strata: (B)
50%= Z0%= Total Cove				(200 - 10 100)
Sapling/Shrub Stratum (use scientific names)		Species?	Status	Percent of dominant species that are OBL, FACW, or FAC:(AB)
1. /	70.00VCI	opecies:	Olalus	
2.				Prevalence Index Worksheet Total % Cover of: Multiply by
3				OBL Species x1 =
4				FACW Species x2=
50%= Total Cover	r:			FAC Species X3 =
Herb Stratum (use scientific names)	% Cover	Species?		FACU Species x4 =
1. Tupha latitolia	30	4	6BL	UPL Species x 5 =
2 Lepidium latifolium		- 1	FACW	Column Totals (A)(B)
3. Conjum maculatum		$\frac{T}{}$	OBC	Prevalance Index = B/A =
4				79/1967 (2011 04/09 to 6/9 state part 40/09
6	9 / 1			Hydrophytic Vegetation Indicators Dominance Text is >50%
7				Prevalence Index is ≤ 3.01
50%=	100			Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific πames)		Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
1	0.7	7		Indicators of hydric soil and wetland hydrology must
2				be present.
50%= Total Cover	:	(*)	1	Hydrophytic Vegetation?
% Bare Ground in Herb Stratum O % Cover of Bi	otic Crust_			

Sampling Point 15	Sampling	Point	15
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Soils		·
Profile Description: (Describe to the dept		irm the absence of indicators.
Depth Matrix	Redox Features	2 Testing Benedia
	Color (moist) % Type1 Loc	
0-8 104R 3/z 95 7	151R4/6 5 C M	CHANGE COMPC
	<u> </u>	
		
Turney C = Concentration D = Depletion DM =		Lining RC = Root Channel M = Matrix
Types: C = Concentration D = Depletion RM =		
Hydric Soil Indicators: (Applicable to all		Indicators for Problematic Hydric Soils ³
Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy Redox (S5)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Stripped Matrix (S6)	Reduced Vetric (F18)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Red Parent Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy Gleyed Matrix (F2)	Vegetated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present.
	Vernal Pools (F9)	
	· ·	
Restrictive Layer (if present): Type: Remarks HYDRIC SOILS		lydric Soil? 4E5
Remarks HYDRIC SOILS Hydrology		lydric Soil? 4ES
Remarks HYDRIC SOILS		lydric Soil? <u>YES</u> Secondary Indicators (2 or more required)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient	ent)	Secondary Indicators (2 or more required)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficiently surface Water (A1)	ent) Salt Crust (B11)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficiently and the control of the contr	ent) Salt Crust (B11) Biotic Crust (B12)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficiently surface Water (A1) High Water Table (A2) Saturation (A3)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficiently surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonnverine)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficiently surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficiently surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonniverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) XOxidized Rhizospheres (C3) Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonnverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonniverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonnverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonniverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonnverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient of the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) SOxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient of the sufficient of	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Other (Explain in Remarks) Depth (inches) Wetla	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient of the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) SOxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient of the sufficient of	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Other (Explain in Remarks) Depth (inches) Depth (inches) Includes cap	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5) and Hydrology? Yes \(\sum \) No

Remarks WETHND HYDROLOGY

	North State Resources				Habitat Type DITCH
}	Wetland Determination Data Form - Arid V				Wetland Type VECETATED DITCH
- 5	Project/Site: Sisk Dam Corrective Action Project		City/Count	y: Merced	County Sampling Date: 9/1/09
	Applicant/Owner:U.S. Bureau of Reclamation				State: CA Sampling Point: 16
	Investigator(s):J. Colescott				_
	Landform (hillslope, terrace, etc.) DITCH		_ Local reli	ef (concave	convex, none) CON CAUE Slope % 2 %
	Subregion (LRR) LRR-C	So	il Map Unit N	vame: Apa	Mo Clay Loan 15-30%
	Are climatic/hydrologic conditions on the site typical for this	time of year	4EG 1	If no, explai	in remarks.)
	Are vegetation N, soil N, or hydrology R signifi	cantly distur	bed? Are n	ormal circum	istances present? 4ES
	Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow significant signifi	ally problema	atic? (If nee	eded, explaii	any answers in Remarks.)
	Summary of Findings (Attach site map showing	sampling p	oint location	s, transects,	important features, etc.)
	Hydrophytic vegetation? 45 Hydric soil? 45 Wet	land hydrolo	gy? 4 ES	s sample	d area a wetland? <u>4F5</u> Other waters? <u>4F5</u>
	USACE Jurisdiction		4.2		Lata de la constitución de la co
1	Adjacent to Waters Tributary to Waters Isolate Explain:	ed (with inte	rstate comm	nerce)	Isolated (non junsdictional)
	Evaluation of features designated "Ot				
	Indicators: Defined bed and bank Scour _ Feature Designation: Perennial Intermittent E	Ordin	ıary High Wa Blue√lin	ater Mark Ma e on USGS	opped _K
	Natural Drainage Artificial Drain	nage 🔀	Navigable \	Nater	
Ī	Remarks DITCH TO COURCE	DAM	SEI	PAGE	ONLY FLOWS WHEN
	Prs. 15 Four	27116	,,,,	11,000	
	F. 13 1 2007				
1	Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
	Free Stratum (use scientific names)	% Cover	Species?		Number of dominant species that are OBL, FACW, or FAC: (A)
1	l				lilatale obc, raow, orrao.
2	2				Total number of dominant species
3	·				across all strata:(B)
	50%= Total Cover:				Percent of dominant species that
S	Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	are OBL, FACW, or FAC: (AB)
1					Prevalence Index Worksheet
2	· —/				Total % Cover of: Multiply by
3	· / 		-		OBL Species x 1 =
4					FACW Species x 2 =
	50%=		010	04-4	FAC Species x 3 =
	erb Stratum (use scientific names) Polyphaon Monspeliensis	% Cover	Species?	Status	FACU Species x4 =
	Juneus Xiphisides				UPL Species x 5 =
					Column Totals (A)(B)
J.	Typha latifolia			OBL	Prevalance Index = B/A =
4. 5					
					Hydrophytic Vegetation Indicators Dominance Text is >50%
					Prevalence Index is ≤ 3.01
1.	50%=	90			Morphological Adaptations¹ (provide supporting
W		% Cover	Species?	Status	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
- 12			opedes:	Otatus	1Indicators of hydric soil and wetland hydrology must
					be present.
۷.	50%= Total Cover:			1	Hydrophytic Vegetation? <u>YES</u>
0/	Bare Ground in Herb Stratum / O % Cover of Bio		(0)		
70	5/	Grust_e			<i>t</i>

Profile Description: (Describe to the Depth Matrix	Redox Features						
(inches) Color (moist) %	Color (moist)	<u>%</u>	Type ¹	Loc2	<u>Texture</u>		Remarks
0-3 104R 3/2 80	7,54R 4/4	<u>20</u>	<u> </u>	M	COBBLY	LOAM	VERY HARD
							COULD GNZY
							3".
Types: C = Concentration D = Depletion F	RM = Reduced Matrix	2	Location: PL	= Pore Lin		ot Channe	M = Matrix
Hydric Soil Indicators: (Applicable 1	o all LRRs, unless ot	herwise r	noted)		Indicators for	Problema	tic Hydric Soils3
Histosol (A1)	Sandy			_	1 c	m Muck (A	49) (LRR C)
Histic Epipedon (A2)	-	- Redox (S			2 c	n Muck (A	A10) (LRR B)
Black Histic (A3)	•	ď Matrix (•		Re	duced Vet	ric (F18)
Hydrogen Sulfide (A4)		,	ineral (F1)		Re	Parent N	Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy	-			Ve	etated Sa	and/Gravel Bars
1 cm Muck (A9) (LRR D)	-	d Matrix			Other (Explain in Remarks)		
Depleted Below Dark Surface (A1		Dark Surf			,		
Thick Dark Surface (A12)	•		urface (F7)		3Indicators	of hydro	ohytic vegetation and
Sandy Mucky Mineral (S1)	X Redox [, ,		wetland hydrology must be present.		
	,	Pools (F9	• •				
			·				
Restrictive Layer (if present): Type:C	OBBLE	Depth (In	nches) 3	_ Hydr	ric Soil? 🖳	E5	
	CRACKED 50						
Hydrology Wetland Indicators					Secondary	Indicators	(2 or more required)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is se	ufficient)						(2 or more required)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is so	ufficient) X_ Salt Cru	st (B11)	<u> </u>		Wa	er Marks	(B1) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is second control of the co	ufficient)X_ Salt Cru Biotic Cr	st (B11)			Wa	er Marks liment De	(B1) (Riverine) posits (B2) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is so Surface Water (A1) High Water Table (A2) Saturation (A3)	ufficient)X_ Salt Cru Biotic Cr	st (B11) rust (B12 Invertebr	ates (B13)		Wa SecDrif	er Marks liment De t Deposits	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is so Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonnverine)	ufficient) Salt Cru Biotic Cr Aquatic Hydroge	st (B11) rust (B12 Invertebr	rates (B13) Odor (C1)		Wa Sec Drif	er Marks liment De t Deposits inage Pat	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) terns (B10)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is second indicator indicator is second indicator indicator is second indicator indicat	ufficient) Salt Cru Biotic Cr Aquatic Hydroge e) Oxidizec	st (B11) rust (B12 Invertebr en Sulfide d Rhizosp	rates (B13) e Odor (C1) oheres (C3)	4)	WaDrifDra	er Marks liment De t Deposits inage Pat -Season \	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) terns (B10) Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is set Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonniverine) Sediment Deposits (B2) (Nonniverine) X Surface Soil Cracks (B6)	ufficient) Salt Cru Biotic Cr Aquatic Hydroge e) Oxidized Presence	st (B11) rust (B12 Invertebren Sulfide d Rhizospe of Red	rates (B13) Prates (C1) Proheres (C3) Unced Iron (C	4)	WaDrifDraDryThi	ter Marks liment De t Deposits inage Pat Season N	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) terns (B10) Water Table (C2) urface (C7)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is set Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Y Surface Soil Cracks (B6) Inundation Visible on	ufficient) Salt Cru Biotic Cru Aquatic Hydroge e) Oxidized Presence Recent I	st (B11) rust (B12 Invertebr en Sulfide d Rhizosp	rates (B13) Property Odor (C1) Property Odor (C3) Property Odor (C3) Property Odor (C4) P	4)	Wa Sec Drif Dra Dry Thin Cra	er Marks liment De t Deposits inage Pat Season \ Muck St yfish Burr	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) terns (B10) Water Table (C2) urface (C7) ows (C8)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is set Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonniverine) Sediment Deposits (B2) (Nonniverine) X Surface Soil Cracks (B6)	ufficient) Salt Cru Biotic Cru Aquatic Hydroge e) Oxidized Presenc Recent I Plowed	st (B11) rust (B12 Invertebren Sulfide d Rhizospe of Redu fron Redu Soils (C6	rates (B13) Property Odor (C1) Property Odor (C3) Property Odor (C3) Property Odor (C4) P	4)	Wa Sec Drif Dra Dry Thic Cra Sat	er Marks liment De t Deposits inage Pat Season V Muck Su yfish Burr uration Vi	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) terns (B10) Water Table (C2) urface (C7) ows (C8) sible-on
Hydrology Wetland Indicators Primary Indicators (Any one indicator is second primary Indicators (Any one indicator is second primary Indicators (Any one indicator is second primary Indicators (A1) — Surface Water (A1) — High Water Table (A2) — Saturation (A3) — Water Marks (B1) (Nonnverine) — Sediment Deposits (B2) (Nonnverine) — Surface Soil Cracks (B6) — Inundation Visible on — Aerial Imagery (B7)	ufficient) Salt Cru Biotic Cru Aquatic Hydroge e) Oxidized Presenc Recent I Plowed	st (B11) rust (B12 Invertebren Sulfide d Rhizospe of Redu fron Redu Soils (C6	rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in	4)	WaSecDrifDrgThinCraSatAe	er Marks liment De t Deposits inage Pat Season \ Muck St yfish Burr	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) terns (B10) Water Table (C2) urface (C7) ows (C8) sible-on ry (C9)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is second primary Indicators (Any one indicator is second primary Indicators (Any one indicator is second primary Indicators (A1) — Surface Water (A1) — High Water Table (A2) — Saturation (A3) — Water Marks (B1) (Nonnverine) — Sediment Deposits (B2) (Nonnverine) — Surface Soil Cracks (B6) — Inundation Visible on — Aerial Imagery (B7)	ufficient) Salt Cru Biotic Cru Aquatic Hydroge e) Oxidized Presenc Recent I Plowed	st (B11) rust (B12 Invertebren Sulfide d Rhizospe of Redu fron Redu Soils (C6	rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in	4)	WaSecDrifDraDryThinCraSatSha	er Marks liment De t Deposits inage Pat Season V Season V Muck St yfish Burr uration Vi ial Image	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) terns (B10) Water Table (C2) urface (C7) ows (C8) sible-on ry (C9)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is set and indicator (Any one indicator is set and indicator is set and indicator is set and indicator (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	ufficient) Salt Cru Biotic Cru Aquatic Hydroge e) Oxidized Presenc Recent I Plowed	st (B11) rust (B12 Invertebren Sulfide d Rhizospe of Redu fron Redu Soils (C6	rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in	4)	WaSecDrifDraDryThinCraSatSha	er Marks liment De t Deposits inage Pat Season V Season V Muck St yfish Burr uration Vi ial Image	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) sterns (B10) Water Table (C2) urface (C7) ows (C8) sible on ry (C9) tard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is second indicator is second indicator in second indicator is second indicator in second indicator is second indicator indicato	ufficient) Salt Cru Biotic Cru Aquatic Hydroge e) Oxidized Presenc Recent I Plowed	st (B11) rust (B12 Invertebren Sulfide d Rhizospe of Redu ron Redu Soils (Constant)	rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in 6) Remarks)		WaSecDrifDraDryThinCraSatSha	er Marks liment De t Deposits inage Pat Season V Muck St yfish Burr uration Vi ial Image llow Aqui	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) sterns (B10) Water Table (C2) urface (C7) ows (C8) sible on ry (C9) tard (D3) Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is second indicator is second indicator in second indicator is second indicator in second indicator in second indicator is second indicator in second indicator is second indicator in second in secon	ufficient) Salt Cru Biotic Cru Aquatic Oxidized Presence Recent I Plowed Other (E	st (B11) rust (B12) Invertebren Sulfided Rhizospe of Reduron Reduron Reduron in	rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in 6) Remarks)		WaSecDrifDryThinSatShaSha	er Marks liment De t Deposits inage Pat Season V Muck St yfish Burr uration Vi ial Image llow Aqui	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) sterns (B10) Water Table (C2) urface (C7) ows (C8) sible on ry (C9) tard (D3) Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is second indicator (A2) Saturation (A3) Water Marks (B1) (Nonniverine) Sediment Deposits (B2) (Nonniverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations Surface Water Present? Yes No	Salt Cru Biotic Cru Aquatic Hydroge Presence Recent I Plowed Other (E	st (B11) rust (B12 Invertebren Sulfide d Rhizospe of Redu ron Redu Soils (Contact Soils)	rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in 6) Remarks)			er Marks liment De t Deposits inage Pat Season V Muck St yfish Burr uration Vi ial Image llow Aqui	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) sterns (B10) Water Table (C2) urface (C7) ows (C8) sible on ry (C9) tard (D3) Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is second primary Indicators (Any one indicator is second primary Indicators (Any one indicator is second primary Indicators (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonnverine) Sediment Deposits (B2) (Nonnverine) X Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations Surface Water Present? Yes No Water Table Present? Yes No	wifficient) Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presence Recent I Plowed Other (E	st (B11) rust (B12) Invertebren Sulfided I Rhizospe of Redu Fron Redu Soils (Ce Explain in	rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in 6) Remarks)	Wetland es capillar		ter Marks liment De t Deposits inage Pat Season V Season V Muck Su yfish Burr uration Vi ial Image llow Aqui C-Netural	(B1) (Riverine) posits (B2) (Riverine) s (B3) (Riverine) sterns (B10) Water Table (C2) urface (C7) ows (C8) sible on ry (C9) tard (D3) Test (D5)

North State Resources			Habitat Type GRASSUND			
Wetland Determination Data Form - Arid V	Vest Reg	ion	Wetland Type UPUND			
Project/Site: Sisk Dam Corrective Action Project Applicant/Owner: U.S. Bureau of Reclamation		City/County: Merc	ed County Sampling Date: 9/2/09 State: CA Sampling Point: 17			
Investigator(s):		Local relief (conca	ve, convex, none) <u>CFN CTVE</u> Slope % <u>0-2</u>			
Are vegetation $\stackrel{\textstyle \mathcal{N}}{\stackrel{\textstyle \mathcal{N}}}{\stackrel\textstyle {\textstyle \mathcal{N}}}{\stackrel\textstyle {\textstyle \mathcal{N}}}{\stackrel\textstyle {\textstyle \mathcal{N}}}{\stackrel\textstyle {\textstyle \mathcal{N}}}}}}}}}}}}}}}} $	time of year icantly distur	? YES (If no, exp bed? Are normal circ	lain in remarks.) umstances present? 1/25			
Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.) Hydrophytic vegetation? Hydric soil? Wetland hydrology? Is sampled area a wetland? Other waters? NO						
USACE Jurisdiction Adjacent to Waters Isolate Explain:	ed (with inte	rstate commerce)	solated (non jurisdictional)			
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour Feature Designation: Perennial Intermittent Endury Artificial Drain	Ordin	nary High Water Mark Blue-line on USC	Mapped			
Natural Drainage Natificial Drainage Navigable Water Remarks SMALL SHALLOW DEPRESSION - SUSPECT WETTAND. FAILED D WILL T WETTAND PARAMETERS.						
Vegetation Tree Stratum (use scientific names) 1	Absolute % Cover	Dominant Indicator Species? Status	Nearth as of dominant appaign			
2			Total number of dominant species across all strata: (B)			
50%= Total Cover: Sapling/Shrub Stratum (use scientific names)	% Cover	Species? Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)			
2. 3.			Prevalence Index Worksheet Total % Cover of: OBL Species x 1 =			
4 20%= Total Cover:			FACW Species x2= x3=			
Herb Stratum (use scientific names) 1. Marro Sium Waare.		Species? Status Y FAC VPL	FACU Species			
3. Bronus hordeacous 4. B. diandrus	20	y FACU P UPL	Column Totals (A) (B) Prevalance Index = B/A =			
5. Brassica regra		N UPL	Hydrophytic Vegetation Indicators Dominance Text is >50%			
7 Total Cover: Woody/Vine Stratum (use scientific names) 1 *	% Cover	Species? Status	Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present.			
2 Total Cover: % Bare Ground in Herb Stratum — % Cover of Bio			Hydrophytic Vegetation? NO			

Profile Description: (Describe to the Depth Matrix	depth needed to document the indicator or confirm the absence Redox Features	e of indicators.
(inches) Color (moist) % 0~10 104 R 4/3 100	Color (moist) % Type¹ Loc² Texture	LUA-M Remarks
¹ Types: C = Concentration D = Depletion	RM = Reduced Matrix	Root Channel M = Matrix
Hydric Soil Indicators: (Applicable	to all LRRs, unless otherwise noted) Indicators for	for Problematic Hydric Soils3
Histosol (A1)		cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy Redox (S5) 2	cm Muck (A10) (LRR B)
Black Histic (A3)		Reduced Vetric (F18)
Hydrogen Sulfide (A4)		Red Parent Materials (TF2)
Stratified Layers (AG) (LRR C)	A	egetated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)		Other (Explain in Remarks)
Depleted Below Dark Surface (A1	2	et to the constation and
Thick Dark Surface (A12)	repleted 2 and candoo (i. i.)	ors of hydrophytic vegetation and
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)		hydrology must be present.
- 100	Redox Depressions (F8) wetland Vernal Pools (F9)	hydrology must be present.
Sandy Mucky Mineral (S1)	Redox Depressions (F8) wetland Vernal Pools (F9) Depth (Inches) Hydric Soil?	hydrology must be present.
Sandy Mucky Mineral (S1) Restrictive Layer (if present): Type:	Redox Depressions (F8) wetland Vernal Pools (F9) Depth (Inches) Hydric Soil?	hydrology must be present.
Restrictive Layer (if present): Type: Remarks NON HYDRIC	Redox Depressions (F8) wetland Vernal Pools (F9) Depth (Inches) Hydric Soil?	hydrology must be present.
Restrictive Layer (if present): Type: Remarks NON HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indicator is s	Redox Depressions (F8) wetland Vernal Pools (F9) Depth (Inches) Hydric Soil? L Soil S Wetland Wetland Wetland Wetland Secondar	hydrology must be present.
Restrictive Layer (if present): Type: Remarks NON HYDRIC Hydrology Wetland Indicators	Redox Depressions (F8) wetland Vernal Pools (F9) Depth (Inches) Hydric Soil? Note: A secondar wetland Secondar wetland Secondar wetland Secondar wetland Secondar wetland	hydrology must be present. J ry Indicators (2 or more required)
Restrictive Layer (if present): Type: Remarks NON HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1)	Redox Depressions (F8) Vernal Pools (F9) Depth (Inches) Hydric Soil? Sö : LS wetland Method Secondar Secondar Salt Crust (B11) W Biotic Crust (B12) Si	hydrology must be present. J Ty Indicators (2 or more required) Vater Marks (B1) (Riverine)
Restrictive Layer (if present): Type: Remarks NON HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2)	Redox Depressions (F8) wetland	hydrology must be present. J Ty Indicators (2 or more required) Vater Marks (B1) (Riverine) dediment Deposits (B2) (Riverine)
Restrictive Layer (if present): Type: Remarks NON HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3)	Redox Depressions (F8) wetland	hydrology must be present. In Indicators (2 or more required) Vater Marks (B1) (Riverine) Rediment Deposits (B2) (Riverine) Parift Deposits (B3) (Riverine)
Restrictive Layer (if present): Type: Remarks NON HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	Redox Depressions (F8) Vernal Pools (F9) Depth (Inches) Hydric Soil? Wetland Wetland Vernal Pools (F9) Becondar Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Depth (Inches) Hydric Soil? Secondar Secondar Depth (Inches) Hydric Soil? Note of the pool o	ry Indicators (2 or more required) Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10)
Restrictive Layer (if present): Type: Remarks NON HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	Redox Depressions (F8) Vernal Pools (F9) Depth (Inches) Hydric Soil? Wifficient) Secondar Salt Crust (B11) W Biotic Crust (B12) Si Aquatic Invertebrates (B13) D Hydrogen Sulfide Odor (C1) D Oxidized Rhizospheres (C3) D Presence of Reduced Iron (C4) Ti Recent Iron Reduction in C	ry Indicators (2 or more required) Vater Marks (B1) (Riverine) dediment Deposits (B2) (Riverine) derift Deposits (B3) (Riverine) derinage Patterns (B10) dry-Season Water Table (C2)
Restrictive Layer (if present): Type: Remarks NON HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	Redox Depressions (F8) Vernal Pools (F9) Depth (Inches) Hydric Soil? Secondar Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6)	ry Indicators (2 or more required) Vater Marks (B1) (Riverine) Vediment Deposits (B2) (Riverine) Verift Deposits (B3) (Riverine) Verinage Patterns (B10) Very-Season Water Table (C2) In Muck Surface (C7) Verayfish Burrows (C8) Verattion Visible on
Restrictive Layer (if present): Type: Remarks NON HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indicator is s Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	Redox Depressions (F8) Vernal Pools (F9) Depth (Inches) Hydric Soil? Wifficient) Secondar Salt Crust (B11) W Biotic Crust (B12) Si Aquatic Invertebrates (B13) D Hydrogen Sulfide Odor (C1) D Presence of Reduced Iron (C4) Ti Recent Iron Reduction in C Plowed Soils (C6) Si Other (Explain in Remarks)	ry Indicators (2 or more required) Vater Marks (B1) (Riverine) dediment Deposits (B2) (Riverine) orift Deposits (B3) (Riverine) orainage Patterns (B10) ory-Season Water Table (C2) thin Muck Surface (C7) orayfish Burrows (C8)

No_*

Depth (inches)_

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

__ (includes capillary fringe)

Yes

Saturation Present?

North State Resources				Habitat Type 603554ND
Wetland Determination Data Form - Arid V	Vest Reg	ion		Wetland Type UPLAND
Project/Site: Sisk Dam Corrective Action Project Applicant/Owner: U.S. Bureau of Reclamation		City/Count	y: Merced	County Sampling Date: 21/09 State: CA Sampling Point: 18
Investigator(s):	So ime of year cantly distur	il Map Unit I ? YES (rbed? Are n atic? (If nee	Name: DA If no, explair ormal circum eded, explair	min remarks.) stances present? 4ES any answers in Remarks.)
Hydrophytic vegetation? NO Hydric soil? 4F5 Wet				
USACE Jurisdiction Adjacent to Waters Isolate Explain:	ed (with inte	erstate comm	nerce)	Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour_ Feature Designation: Perennial Intermittent Epi Natural Drainage Artificial Drain	Ordin	nary High Wa	ater Mark Ma e on USGS	apped
Remarks OBVIGOS DEPOSITION EROSION. FAILS TO ME WEITHND.	AREJ ET VE	+ FOR	SEDI AMETA	ER AND IS NOT A
Vegetation Tree Stratum (use scientific names) 1	Absolute % Cover	Dominant Species?		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A) Total number of dominant species orresponding tests.
3 Total Cover: Sapling/Shrub Stratum (use scientific names) 1. Aline New Year Cornis	<u>% Cover</u>	Species?	Status FAC	Percent of dominant species that are OBL, FACW, or FAC: State
2. 3. 4				Total % Cover of: Multiply by OBL Species
Herb Stratum (use scientific names) 1. Bromos d'andrus 2. B. hordracous 3. Brassica negra	% Cover 20	Species? <u>YES</u> N	Status UPC FACU VPL UPL	FAC Species
5. Certaurea solstitialis 6. 7.	<u>5</u>	7	UPL	Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting
50%=32.5 20%=13_ Total Cover: Woody/Vine Stratum (use scientific names) 1	% Cover	Species?	Status	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present.
50%= 20%= Total Cover: % Bare Ground in Herb Stratum % Cover of Biot				Hydrophytic Vegetation? NO

Sampling Point	18
* PT 1	

Soils						
Profile Description: (Describe to the dept	h needed to docu Redox Features	ment the	indicator o	r confirm t	he absence o	of indicators.
(inches) Color (moist) % (color (moist) 0 % (color (moist) 0 % (color (moist) 10 % (co	Color (moist)	<u>%</u> ^	Type ¹	<u>Loc²</u>	Texture SANDY	Remarks Lo Am
Types: C = Concentration D = Depletion RM =	Reduced Matrix	26	ocation: PL	= Pore Lini	ng RC = Ro	ot Channel M = Matrix
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (AG) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Restrictive Layer (if present): Type: Remarks 5TRIATED 56)L	Sandy G Sandy R Stripped Loamy M Loamy C Depleted Redox D Redox D Vernal P	Gleyed Ma Redox (S5 Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Surfa Depression Pools (F9)	atrix (S4) (S6) neral (F1) atrix (F2) F3) ace (F6) arface (F7) ns (F8)	Hydri	1 cr 2 cr Red Veg X_Oth	
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient	ent)				Secondary	Indicators (2 or more required)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Aquatic I Hydrogel Oxidized Presence Recent Ir	ust (B12) Invertebra n Sulfide Rhizosph	ced Iron (C ction in		Sed Drift Dry- Thin Cray Aer	er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) i Deposits (B3) (Riverine) inage Patterns (B10) Season Water Table (C2) Muck Surface (C7) yfish Burrows (C8) uration Visible-on ial Imagery (C9) Ilow Aquitard (D3) C-Netural Test (D5)
Field Observations Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No	Depth (inches))	(includ	es capillary	rfringe)	es_X_ No
Describe Recorded Data (stream gauge,	monitoring well, ae	rial photos	, and previo	us inspection	ons), if availab	le:

North State Resources				Habitat Type GRASSUTND
Wetland Determination Data Form - Arid V	Vest Reg	ion		Wetland Type SEKSONAL WILD
Project/Site:Sisk Dam Corrective Action Project		City/County	: Merced	Sampling Date: 9/2/0
Applicant/Owner:U.S. Bureau of Reclamation				State: <u>CA</u> Sampling Point: <u>19</u>
Investigator(s):J. Colescott				-
Landform (hillstope, terrace, etc.) LINEAR DEPE	28.5510	∠ Local relie	ef (concave	, convex, none) CON CAUE Slope % 0 - 2
Subregion (LRR)LRR-C	So	il Map Unit N	ame: X	erofluvents, Extremely GRAVELLY
Are climatic/hydrologic conditions on the site typical for this				563
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow significant	cantly distur	bed? Are no	rmal circum	nstances present? YES
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow natura	ally problema	atic? (If nee	ded, explair	n any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation? YES Hydric soil? YES Wet				
USACE Jurisdiction Adjacent to Waters Tributary to Waters Isolat Explain:	ed (with inte	rstate comm	erce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour_ Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drainage	Ordin phemeral nage	ary High Wa Blue-line Navigable V	ter Mark Ma e on USGS Vater	apped Quad
Remarks DEPRESSIONAL ARM	A 10	J MIS	DLE	of THE MEADOW.
FED BY 56585 70	600 TA	t. DR	AINS	VIA EROSIONAL
Remarks DEPRESSIONAL ARE FED BY SEERS TO OHANDELS TO NORTH. (C	HADDE	is Ar	E BRAI	DEJ NARROW (21'), VEGETATED
Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	% Cover	Species?	Status	Number of dominant species that are OBL, FACW, or FAC:(A)
1				tilat ale ODL, i AON, of i Ao.
2				Total number of dominant species across all strata: (B)
3		-		across all strata:
50%= Z0%= Total Cover: Sapling/Shrub Stratum (use scientific names)		Cassisso	Ctatus	Percent of dominant species that are OBL FACW, or FAC: (AB)
11	% Cover	Species?	Status	are OBL, FACW, or FAC: (AB)
2				Prevalence Index Worksheet Total % Cover of: Multiply by
3				OBL Species x1 =
4				FACW Species x2=
50%= Total Cover:				FAC Species x3 =
Herb Stratum (use scientific names)	% Cover	Species?		FACU Species x4=
1. Hordern Jeporinom	25	7	FAC	UPL Species x5 =
2 ORINdellia camporum	10	<u> 10</u>	FACLE	Column Totals (A) (B)

20%=

20%=

Woody/Vine Stratum (use scientific names)

% Bare Ground in Herb Stratum _

Total Cover: 100

% Cover of Biotic Crust 15

Total Cover:

% Cover

Species? Status

Hydrophytic Vegetation Indicators

Dominance Text is >50%

Prevalence Index is ≤ 3.0¹

Morphological Adaptations¹ (provide supporting

Prevalance Index = B/A =

data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

icators of hydric soil and wetland hydrology must

*Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation? 455

Soils					Sampling Point 19
Profile Description: (Describe to the dependent) Depth	oth needed to docume	nt the indicator of	or confirm the	absence of in	dicators.
(inches) Color (moist) % 0-12 7.5 48 4/4 80 3:		M Type ¹		exture LAVEUY	Remarks CUY, LOAM
	of .				
Types: C = Concentration D = Depletion RM	= Reduced Matrix	² Location: PL	= Pore Lining	RC = Root C	channel M = Matrix
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (AG) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Restrictive Layer (if present): Type: Remarks REDOX FEADVER	Sandy Redo Stripped Ma Loamy Much Loamy Gley Depleted Ma Redox Dark Depleted Da Redox Depre Vernal Pools	trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) rk Surface (F7) essions (F8)		2 cm M Reduce Red Pa Vegeta Other (fuck (A9) (LRR C) fluck (A10) (LRR B) ed Vetric (F18) arent Materials (TF2) sted Sand/Gravel Bars Explain in Remarks) hydrophytic vegetation and logy must be present.
Hydrology			· · · · · · · · · · · · · · · · · · ·		
Wetland Indicators Primary Indicators (Any one indicator is suffice	cient)		<u>S</u>	econdary Indi	cators (2 or more required)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Hydrogen Su X Oxidized Rhi Presence of Recent Iron I Plowed Soils	B12) tebrates (B13) alfide Odor (C1) zospheres (C3) Reduced Iron (C) Reduction in		Sedime Drift De Draina Dry-Se Thin Me Crayfis Saturat Aerial Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) tion Visible on Imagery (C9) v Aquitard (D3) etural Test (D5)
Field Observations Surface Water Present? Yes No _	Depth (inches)			rology? Yes_	.,

Yes

Saturation Present?

Depth (inches) __

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

_ (includes capillary fringe)

North State Resources				Habitat Type GRASSLAND
Wetland Determination Data Form - Arid V	Vest Reg	ion		Wetland Type VPLAND
Project/Site: Sisk Dam Corrective Action Project	-		w Morood	County Sampling Date: 9/2/09
Applicant/Owner: U.S. Bureau of Reclamation		City/Count	y. <u>Ivierce</u>	State: CA Sampling Point: 20
Investigator(s):J. Colescott		-,::		Otate. On Camping Form
Landform (hillslope, terrace, etc.) LINEAR DEPR	560.01) Local ral	iof (concove	CODY OF PARTY SIONE % 0-2
Cubrogian (I BB) LBB C	275107	U Local lei	lei (concave	Colling to Ext Conserved
Subregion (LRR)LRR-C Are climatic/hydrologic conditions on the site typical for this t	50	m map unit i	Name: At	18 TOPENTS, RETURNING
Are cumatic/hydrologic conditions on the site typical for this t	ime of year	1990	it no, expiai	n in remarks.)
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow signifi				
Are vegetation N, soil N, or hydrology N natura	illy problema	atic? (If ne	eded, explai	n any answers in Remarks.)
Summary of Findings (Attach site map showing	sampling p	oint location	s, transects	, important features, etc.)
Hydrophytic vegetation? NO Hydric soil? 455 Wet	land hydrolo	ygy? NO	Is sample	d area a wetland? NO Other waters? NO
USACE Jurisdiction				
Adjacent to Waters Isolate	ed (with inte	rstate comm	nerce)	_ Isolated (non jurisdictional)
Explain:				104-42
Evaluation of features designated "Ot Indicators: / Defined bed and bank Scour_				
Feature Designation: Perennial Intermittent E				
Natural Drainage Artificial Drain				
Remarks UPLAND PAR TO #	19.	LATOS	UL M	COVEMENT OF WATER IN
SOILS LIKELY SUPPORTS THE	0856	DIEN	PET	X EFAURES IN ITTIS
UPLAND SIDE OF THE TRANS	TIONA	LHA	RITHE	NCC + HYDRO NOT MET
		- 1		VICE 4 11 (200 100 1 1001)
Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	% Cover	Species?	Status	Number of dominant species that are OBL, FACW, or FAC:(A)
1				
2				Total number of dominant species 4 (B)
3				across all sucia.
50%=			0	Percent of dominant species that are OBL, FACW, or FAC:
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	are OBL, FACW, or FAC:
1				Prevalence Index Worksheet
2				Total % Cover of: Multiply by
				OBL Species x1=
4 50%= Total Cover:		0 		FACW Species x2=
Herb Stratum (use scientific names)	% Cover	Species?	Status	FAC Species x 3 =
1. Horderm / PAOrinum	30	opedes:	FAC	FACU Species x 4 =
	20	4	UPL	UPL Species x5 =
3. B. Hordeacos	20	M	FACIL	Column Tetals (A) (B)
4. Arena fatua	20	7	UPL	Prevalance Index = B/A =
5. Brassica neara	5	4	JPL	
6. Croton setigerus	5	4	UPL	Hydrophytic Vegetation Indicators Dominance Text is >50%
7			-VI-	Prevalence Index is ≤ 3.01
50%= Total Cover:	160			Morphological Adaptations ¹ (provide supporting
Woody/Vine Stratum (use scientific names)	% Cover	Species?	Statue	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
1	10 COVE	opedes!	Olalus	Indicators of hydric soil and wetland hydrology must
				be present.
50%= 20%= Total Cover:		- - 11 -		Hydrophytic Vegetation? NO

% Bare Ground in Herb Stratum ____

% Cover of Biotic Crust

Shallow Aquitard (D3) FAC-Netural Test (D5)

Wetland Hydrology? Yes __

(includes capillary fringe)

Solls			·	
Profile Description: (Describe to the Depth Matrix	e depth needed to document the Redox Features	e indicator or confirm	the absence of indicators.	
(inches) Color (moist) %	Color (moist) %	Type ¹ Loc ²	Texture Remarks	
0-12 7.57R4/4 80	2,57 4/2 20	DM	GR. CUY LOAM	
				-
1Types: C = Concentration D = Depletion	RM = Reduced Matrix 2	ocation: PL = Pore Li	ning RC = Root Channel M = Matrix	
Hydric Soil Indicators: (Applicable	to all LRRs, unless otherwise n	oted)	Indicators for Problematic Hydric Soils3	
Histosol (A1)	Sandy Gleyed M	atrix (S4)	1 cm Muck (A9) (LRR C)	74
Histic Epipedon (A2)	Sandy Redox (S	5)	2 cm Muck (A10) (LRR B)	
Black Histic (A3)	Stripped Matrix (S6)	Reduced Vetric (F18)	
Hydrogen Sulfide (A4)	Loamy Mucky Mi	neral (F1)	Red Parent Materials (TF2)	
Stratified Layers (AG) (LRR C)	Loamy Gleyed M	latrix (F2)	Vegetated Sand/Gravel Bars	
1 cm Muck (A9) (LRR D)	Depleted Matrix	(F3)	Other (Explain in Remarks)	
Depleted Below Dark Surface (A1	1) Redox Dark Surf	ace (F6)		
Thick Dark Surface (A12)	Depleted Dark Si	urface (F7)	³ Indicators of hydrophytic vegetation	and
Sandy Mucky Mineral (S1)	X Redox Depression	ons (F8)	wetland hydrology must be present.	
20 Section (1995) 20 Call Call Call (1995) 20 Call	Vernal Pools (F9)		
Restrictive Layer (if present): Type:	Depth (In	ches) Hyd	ric Soil? 465	
Remarks SAME SOILS A	5 DP 19 - HYD			
Hydrology				
Wetland Indicators Primary Indicators (Any one indicator is s	sufficient)		Secondary Indicators (2 or more requ	uired)
Surface Water (A1)	Salt Crust (B11)		Water Marks (B1) (Riverine)	
High Water Table (A2))	Sediment Deposits (B2) (Rive	erine)	
Saturation (A3)	ates (B13)	Drift Deposits (B3) (Riverine)		
Water Marks (B1) (Nonriverine)	Odor (C1)	Drainage Patterns (B10)		
Sediment Deposits (B2) (Nonriverir			Dry-Season Water Table (C2))
Surface Soil Cracks (B6)	Presence of Redu	and the first of	Thin Muck Surface (C7)	
Inundation Visible on	Recent Iron Redu		Crayfish Burrows (C8)	
Aerial Imagery (B7)	Plowed Soils (C6		Saturation Visible-on	
Water-Stained Leaves (B9)	Other (Explain in	Remarks)	Aerial Imagery (C9)	

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

Depth (inches)

Depth (inches)

Depth (inches)

No.

Yes

Field Observations

Surface Water Present?

Water Table Present?

Saturation Present?

North State Resources			Habitat Type MEDOCU
Wetland Determination Data Form - Arid W	est Reg	ion	Wetland Type SEASONAL WILD
Project/Site: Sisk Dam Corrective Action Project Applicant/Owner: U.S. Bureau of Reclamation		City/County:Me	erced County Sampling Date: 9/2/29 State: CA Sampling Point: 21
Investigator(s):J. Colescott			
Landform (hillslope, terrace, etc.)		_ Local relief (con	cave, convex, none) (GNOTVE Slope % 0 - 2
Subregion (LRR) <u>LRR-C</u>	Soi	il Map Unit Name:	Kerofluvents, Extremely Coturny
Are climatic/hydrologic conditions on the site typical for this ti			
Are vegetation N, soil N, or hydrology N signific	cantly distur	bed? Are normal o	circumstances present? 1452
Are vegetation N , soil N , or hydrology N natura	lly problema	atic? (If needed, e.	xplain any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation? YES Hydric soil? YES Wetl			
USACE Jurisdiction Adjacent to Waters X Tributary to Waters N Isolate Explain:	ed (with inte	rstate commerce)_	Isolated (non jurisdictional)
Evaluation of features designated "Otl Indicators: Defined bed and bank Scour_ Feature Designation: Perennial Intermittent En Natural Drainage Artificial Drain	Ordin	ary High Water Ma Blue-line on U	rk Mapped SGS Quad
WETUPD SIDE OF BOX	NOM	24 FRO	m upund is wred.
Vegetation	Absolute	Dominant Indica	No description //
Tree Stratum (use scientific names) 1. TOPU US Fremontil	% Cover	Species? Statu YES FAC	
2	i 		Total number of dominant species 4 across all strata: (B)
50%= Total Cover:	10		Percent of dominant species that
Sapling/Shrub Stratum (use scientific names)	% Cover	Species? Statu	700
1			Prevalence Index Worksheet Total % Cover of: Multiply by
3			OBL Species x1 =
4			FACW Species x2=
50%= Total Cover:			FAC Species x3 =
Herb Stratum (use scientific names) 1. Lypidium latifolium	% Cover	Species? Status	FACU Species / X4=
Tupha latifolia	25	1 05	UPL Species x5 =
3. Hordium leporinsm	20	y FA	Column Totals(A)(B)
1. Grindelia camporum	5	N FA	1 6
5			Hydrophytic Vegetation Indicators
j			Dominance Text is >50% Prevalence Index is ≤ 3.01
50%=	100		Morphological Adaptations ¹ (provide supporting
Voody/Vine Stratum (use scientific names)	% Cover	Species? Status	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must
			be present.

Total Cover:

% Cover of Biotic Crust _-

% Bare Ground in Herb Stratum __

Hydrophytic Vegetation? <u>作長S</u>

Soils	_				<u> </u>		
Profile Description: (Description Matrix	cribe to the dep	th neede Redox F			indicator o	or confirm t	the absence of indicators.
(inches) <u>Color (moist)</u> 0 - 6 10 4 R 4/3	<u>%</u> 85 7	Color (mo	oist)	15	Type ¹	Loc ²	Texture Remarks GRANKUY LOMM
1Types: C = Concentration D = D	Depletion RM =	Reduced	Matrix	2 _L	ocation: PL	= Pore Lini	ng RC = Root Channel M = Matrix
Hydric Soil Indicators: (// Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (AG) (1 cm Muck (A9) (LRR D Depleted Below Dark S Thick Dark Surface (A1 Sandy Mucky Mineral (3	LRR C) 0) ourface (A11) 2)		Sandy (Sandy I Stripped Loamy Loamy Deplete Redox I Deplete Redox I	Gleyed Marchart (Standard Matrix (Standard Marchart March	atrix (S4) (S6) neral (F1) atrix (F2) F3) ace (F6) urface (F7) ns (F8)	!	1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vetric (F18) Red Parent Materials (TF2) Vegetated Sand/Gravel Bars Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present.
Restrictive Layer (if present):	Type: -	_		Depth (Inc	ches)	Hydri	c Soil? 🔀
Hydrology	50,15						
Wetland Indicators Primary Indicators (Any one inc	dicator is suffici	ient)					Secondary Indicators (2 or more required)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nontice Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (I	(Nonriverine)		Biotic Ci Aquatic Hydroge Oxidized Presenc Recent I Plowed	n Sulfide I Rhizospi	<u> </u>	(4)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation-Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)
Field Observations Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	No X No X	_ Dept	h (inches h (inches h (inches	s)^	(includ	Wetland H	Hydrology? Yes _X No
Describe Recorded Data	(stream gauge	monitoring	well ae	rial photos	and previo	us inspectio	ons), if available:

North State Resources				Habitat Type	GRASSLAND
Wetland Determination Data Form - Arid V					UPLAND
Project/Site: Sisk Dam Corrective Action Project		City/County:	Merced County		_ Sampling Date: 9/2/0
Applicant/Owner:U.S. Bureau of Reclamation				State:CA	_ Sampling Point: _22
Investigator(s): J. Colescott					
Landform (hillslope, terrace, etc.) VALLEY ROTTO	M	Local relief (co	oncave, convex, no	one) Conca	-UE_ Slope % 0.2
Subregion (LRR)LRR-C	So	il Man Unit Name	XProflu	rents.	EXIR GRAVELLY
Are climatic/hydrologic conditions on the site typical for this t					
Are vegetation , soil , or hydrology , signifi					ř
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow natura	olly problem	otio? (If pooded	ovolain any answ	ore in Romarke	_
Summary of Findings (Attach site map showing	sampling p	oint locations, tran	nsects, important t	eatures, etc.)	
Hydrophytic vegetation? NO Hydric soil? NO Wet	and hydrolo	gy? <u>NO</u> Is s	ampled area a we	tland? NO	Other waters?
USACE Jurisdiction Adjacent to Waters Isolate	ed (with inte	rstate commerce)) Isolated (non jurisdictiona	i)
Explain:			The State of Section 12.		
Evaluation of features designated "Ot				es"	
Indicators: Defined bed and bank Scour _ Feature Designation: Perennial Intermittent E	Ordin	ary High Water M	Mark Mapped		
Natural Drainage Artificial Drain	nage	Navigable Water	r		
Remarks UPLAND PARE TO 2			•		
THE IS D					
Vegetation	Absolute	Dominant India	cotor Domina	ince Test Work	sheet
Tree Stratum (use scientific names)	Absolute % Cover	Dominant Indicates Species? Star	odioi N	of dominant spe	ecies
1	70 0010.	<u> </u>	that are	OBL, FACW, or	FAC: (A)
2.			Total nu	mber of domina	nt species 🔥
3.				all strata:	(B)
50%= Total Cover:			- Dominat	of dominant and	prior that
Sapling/Shrub Stratum (use scientific names)	% Cover			of dominant spe , FACW, or FAC	
1		<u> </u>			
2.				nce Index Worl	ksheet Multiply by
3.				Cover of:	
4	·		OBL Spe	/	x2=
50%= 20%= Total Cover:			FACW S	. //	
Herb Stratum (use scientific names)	% Cover	Species? Stat	FAC Spe	/	x3=
1. Bronus diandrus	80		PL FACUS	. ,	x4=
2. Aweng fatug		N W	- LUDI Co	ecies /	x5=
3. Brassica neara	7	N VA		Totals	(A)(B)
4. Centaurea solstitialis	3		Prevalar	nce Index = B/A	=
5			— Hydrop	hytic Vegetatio ominance Text	n Indicators
6				revalence Index	
50%= Z0%= Total Cover.	100		N	lorphological Ac	laptations1 (provide supporting
		Consider Chat	. 1 /2	ata in Remarks	or on a separate sheet) ophytic Vegetation¹ (Explain)
Woody/Vine Stratum (use scientific names)	% Cover	Species? State	1Indicate	ors of hydric soil	and wetland hydrology must
1			be prese	ent.	
2			Hudron	nytic Vegetatio	2 ND
			nyuropi	Tytic regetation	
% Bare Ground in Herb Stratum % Cover of Bio	tic Crust			Com W	

Soils Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators. Redox Features % (inches) Color (moist) Color (moist) % Type¹ Loc2 Texture Remarks 0-6 1048 4/3 100 (ORAVELLY ¹Types: C = Concentration D = Depletion RM = Reduced Matrix ²Location: PL = Pore Lining RC = Root Channel Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted) Indicators for Problematic Hydric Soils3 Histosol (A1) 1 cm Muck (A9) (LRR C) Sandy Gleyed Matrix (S4) Histic Epipedon (A2) Sandy Redox (S5) 2 cm Muck (A10) (LRR B) Black Histic (A3) Reduced Vetric (F18) Stripped Matrix (S6) Red Parent Materials (TF2) ___ Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (AG) (LRR C) Vegetated Sand/Gravel Bars Loamy Gleyed Matrix (F2) 1 cm Muck (A9) (LRR D) Other (Explain in Remarks) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) 3Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present. Sandy Mucky Mineral (S1) Redox Depressions (F8) Vernal Pools (F9) Hydric Soil? NO Restrictive Layer (if present): Type: Depth (Inches) Remarks UPLANP SOILS Hydrology **Wetland Indicators** Primary Indicators (Any one indicator is sufficient) Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Surface Water (A1) Salt Crust (B11) Sediment Deposits (B2) (Riverine) High Water Table (A2) Biotic Crust (B12) Drift Deposits (B3) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Inundation Visible on Recent Iron Reduction in Crayfish Burrows (C8) Aerial Imagery (B7) Plowed Soils (C6) Saturation Visible on Water-Stained Leaves (B9) Other (Explain in Remarks) Aerial Imagery (C9) Shallow Aguitard (D3) FAC-Netural Test (D5) Field Observations Wetland Hydrology? Yes ____ No X Surface Water Present? Depth (inches) Water Table Present? Depth (inches) Saturation Present? Yes No Depth (inches) (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, and previous inspections), if available:

Remarks

North State Resources		•		Habitat Type GROSSILAND Wetland Type SEASONAL WILD
Wetland Determination Data Form - Arid Westland Determination Determination Data Form - Arid Westland Determination Dete		City/Count	y: <u>Merced</u>	County Sampling Date: 9/2/09
Applicant/Owner: U.S. Bureau of Reclamation				State: <u>CA</u> Sampling Point: <u>23</u>
Landform (hillslope, terrace, etc.) ERRACE Subregion (LRR) LRR-C	So	_ Local reliil Map Unit N	ief (concave, Name: X-e	convex, none) CONCAUE Slope % 2-5
Are climatic/hydrologic conditions on the site typical for this take vegetation , soil , or hydrology significant	ime of year? cantly distur	bed? Are n	<i>If no, explair</i> ormal circum	n in remarks.) astances present? 4FES
Are vegetation N, soil N, or hydrology N natura	illy problema	atic? (If nee	eded, explair	n any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation? YES Hydric soil? YES Wetler				
USACE Jurisdiction Adjacent to Waters Tributary to Waters Isolate Explain:	ed (with inte	rstate comm	nerce)	Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour Feature Designation: Perenpial Intermittent En Natural Drainage Artificial Drain	Ordin	ary High Wa Blue-lin	ater Mark Ma le on USGS	apped Quad
Remarks NO UPLAND PAIR IN (H. leporinum), SEE DP 20 FO	HEN.	WET!	AUD TA.	ENDS W/ HYDROPHYDES
Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
2				Total number of dominant species(B)
50%= Total Cover: Sapling/Shrub Stratum (use scientific names)	10 miles	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC:(AB)
2.				Prevalence Index Worksheet Total % Cover of: Multiply by
3				OBL Species x1 = FACW Species x2 =
50%= Z0%= Total Cover: Herb Stratum (use scientific names)	A	Species?	Status	FAC Species x3 =
1. Hordeum leporinum	85	<u> </u>	FAC	FACU Species
2. Grindelia camporum 3. Lepidium latifolium 4.	10	<u>~~</u>	FACW	Column Totals (A) (B) Prevalance/Index = B/A =
5 6				Hydrophytic Vegetation Indicators Dominance Text is >50%
7				Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting
50%= Total Cover: Woody/Vine Stratum (use scientific names) 1	% Cover	Species?	Status	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must
2				be present. Hydrophytic Vegetation? 465
50%= Total Cover: % Bare Ground in Herb Stratum % Cover of Bio		_		nyulophylic vegetations

30115	
Profile Description: (Describe to the depth needed to document the indicator Depth Redox Features	
(inches) Color (moist) % Color (moist) % Type ¹	Loc ² Texture Remarks
0-10 104R 6/2 65 104R 5/8 35 C	M GRAVELLY CITY LOAM
<u> </u>	
¹ Types: C = Concentration D = Depletion RM = Reduced Matrix ² Location:	PL = Pore Lining RC = Root Channel M = Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)	Indicators for Problematic Hydric Soils ³
Histosol (A1) Sandy Gleyed Matrix (S4)	2 cm Muck (A10) (LRR B)
Histic Epipedon (A2) Sandy Redox (S5)	Reduced Vetric (F18)
Black Histic (A3) Stripped Matrix (S6)	
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1	S=1
Stratified Layers (AG) (LRR C) Loamy Gleyed Matrix (F2)	
1 cm Muck (A9) (LRR D) Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Redox Dark Surface (F6)	3. I'm the affective to the vegetation and
Thick Dark Surface (A12) Depleted Dark Surface (F	 3Indicators of hydrophytic vegetation and wetland hydrology must be present.
Sandy Mucky Mineral (S1) Redox Depressions (F8)	wedalid hydrology must be present
Vernal Pools (F9)	
Restrictive Layer (if present): Type: Depth (Inches)	Hydric Soil? 195
Restrictive Layer (if present): Type: Depth (Inches)	Hydric Soil? 16
Restrictive Layer (if present): Type: Depth (Inches) Remarks +40e/C 50125	Hydric Soil? 16
Remarks HUDEIC SOILS	Hydric Soil? 16
	Hydric Soil? Y
Hydrology Wetland Indicators	
Remarks #4DE/C 50125 Hydrology	Hydric Soil? 1
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient)	Secondary Indicators (2 or more required)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) —— Water Marks (B1) (Riverine) —— Sediment Deposits (B2) (Riverine) —— Drift Deposits (B3) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Hydrogen Sulfide Odor (C Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Hydrogen Sulfide Odor (C) Oxidized Rhizospheres (C) Presence of Reduced Iron	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Recent Iron Reduction in	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Mydrogen Sulfide Odor (C) Surface Soil Cracks (B6) Presence of Reduced Iron Inundation Visible on Aerial Imagery (B7) Plowed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Recent Iron Reduction in	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Mydrogen Sulfide Odor (C) Sediment Deposits (B2) (Nonriverine) Mydrogen Sulfide Odor (C) Sediment Deposits (B2) (Nonriverine) Mydrogen Sulfide Odor (C) Mydrogen Sulfide Odor	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Presence of Reduced Iron Recent Iron Reduction in Plowed Soils (C6) Other (Explain in Remarks	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations Wetland Indicators Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C) Oxidized Rhizospheres (C) Presence of Reduced Iron Recent Iron Reduction in Plowed Soils (C6) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations Surface Water Present? Yes No Depth (inches)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations Surface Water Present? Yes No _X Depth (inches) Water Table Present? Yes No _X Depth (inches) Water Table Present? Yes No _X Depth (inches) Water Table Present? Yes No _X Depth (inches)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)

Remarks WERAND HYDROLOGY

North State Resources				Habitat Type GRASSLAND
Wetland Determination Data Form - Arid V	lest Reg	ion		Wetland Type SETSONAL WILD
Project/Site:Sisk Dam Corrective Action Project		City/County	. Moroad	County Sampling Date: 9/2/09
Applicant/Owner: _U.S. Bureau of Reclamation		City/County	werceu	State: CA Sampling Point: 24
Investigator(s):				State: <u>CA</u> Sampling Point: <u>22.9</u>
Landform (hillslope, terrace, etc.) TERRACE		Local reli	of lannania	- convey none) Our to AUE Slone % 2-5%
Subregion (LRR)LRR-C		Local reli	er (concave,	continuente Externel 4 Cetter
Are climatic/hydrologic conditions on the site typical for this t	50	Map Unit is	rame: // Co	is somethal
Are vegetation N , soil N , or hydrology N signifiant significant significant significant N , soil N , or hydrology N natural significant sig				
Are vegetation, soil, or hydrology natura	lly problema	atic? (If nee	aea, expiail	Tany answers in Remains.)
Summary of Findings (Attach site map showing				
Hydrophytic vegetation? Hydric soil? YES Wet	and hydrolo	gy? YKS	Is sampled	d area a wetland? 4 6 Other waters? NO
USACE Jurisdiction				
Adjacent to Waters Tributary to Waters Isolate	ed (with inte	rstate comm	erce)	Isolated (non jurisdictional)
Explain: VIA DITCHES				
Evaluation of features designated "Ot				
Indicators: Defined bed and bank Scour _ Feature Designation: Pereznial Intermittent Fi	Ordin ohemeral	ary High Wa Blue-lin	iter Mark Ma e on USGS	Ouad
Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	nage	Navigable V	Vater	
Remarks KAMININ SEPRECLI	1 /20	w/ 51	10004	BORDERLINE
Remarks SHALLOW DEPRESSION WETCHND	,,,,		, , ,	FOR MELASTRE, BY FOR STANDARD FOR STANDARD STANDARD STANDARD
2000 : * *				
Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	% Cover	Species?	Status	Number of dominant species that are OBL, FACW, or FAC: (A)
1				
2				Total number of dominant species 3 (B)
3				across all strata:
50%=	The state of the s			Percent of dominant species that are OBL, FACW, or FAC: (AB)
Sapling/Shrub Stratum (use scientific names)	100	Species?	Status	are OBL, FACW, or FAC:(AB)
1.			——	Prevalence Index Worksheet
2				Total % Cover of: Multiply by
3	1			OBL Species x1 =
4				FACW Species x2=
50%= 20%= Total Cover:		0!0	Otatua	FAC Species x3 =
Herb Stratum (use scientific names) 1. Vuldia bromoides	% Cover 40	Species?	FACW	FACU Species / x4 =
2. Heliotropium curassavicom		4	OBL	UPL Species x5 =
3. Bromus diandura	20	v	UPL	Column Totals (A) (B)
4. B. Madritensis		7	UPL	Prevalance Index = B/A =
5. Grindelia camporum		4)	FACIL	
6.			1700	Hydrophytic Vegetation Indicators Dominance Text is >50%
7.				Prevalence Index is < 3.01
50%= Z0%= Total Cover:	100			Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
1	10 OOVE	Oberies!	Julio	1 Indicators of hydric soil and wetland hydrology must
2				be present.
50%= Total Cover:				Hydrophytic Vegetation?
% Bare Ground in Herb Stratum % Cover of Bio		_		

Depth Matrix		Redox Features	0/:	T 1	2	T 4	Domorko
inches) Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks LOAM
1-10 2.5 7 3/3	75	7.54R4/4	25	0	m	STUDY	Lujing
		7.5 10 19					
ypes: C = Concentration D = De	pletion	RM = Reduced Matrix	2 _[Location: PL	= Pore Lini	ng RC = Root	Channel M = Matrix
ydric Soil Indicators: (A	plicable	to all LRRs, unless oth	erwise n	noted)		ndicators for Pr	oblematic Hydric Soils3
Histosol (A1)	001 001	Sandy G	Sleyed M	latrix (S4)		1 cm /	Muck (A9) (LRR C)
Histic Epipedon (A2)		Sandy R	. 73	18 18.		2 cm /	Muck (A10) (LRR B)
Black Histic (A3)		Stripped	Matrix ((S6)		Reduc	ced Vetric (F18)
Hydrogen Sulfide (A4)		Loamy N	Mucky Mi	ineral (F1)		Red P	arent Materials (TF2)
Stratified Layers (AG) (L	RR C).			fatrix (F2)		Veget	ated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	•	Depleted	d Matrix ((F3)		Other	(Explain in Remarks)
Depleted Below Dark Su		10	A CONTRACTOR OF THE PARTY OF TH				20 (1995)
Thick Dark Surface (A12)			urface (F7)		3Indicators of	f hydrophytic vegetation an
Sandy Mucky Mineral (S	1)	X Redox D	epressio	ons (F8)		wetland hydro	ology must be present.
*:	5	Vernal P	ools (F9)			
Restrictive Laver (if present): 1	vpe:		Depth (In	iches)	Hydri	c Soil? Y F	5
Remarks HYDRIC	「ype: らかし		Depth (In	nches)	Hydri	c Soil? YE	ž
Remarks HYDRIC Hydrology Wetland Indicators	5011		Depth (In	nches)	Hydri		
Remarks HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indi	5011	sufficient)		nches)	Hydri	Secondary Inc	dicators (2 or more required
Remarks HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indicators (Any one indicators (A1))	5011	sufficient)Salt Crus	st (B11)		Hydri	Secondary Inc	dicators (2 or more required Marks (B1) (Riverine)
Remarks HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2)	5011	sufficient) Salt Crus Biotic Cru	st (B11) ust (B12))	Hydri	Secondary Inc	dicators (2 or more required Marks (B1) (Riverine) tent Deposits (B2) (Riverine
Remarks HYDRIC Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2) Saturation (A3)	SOIL	sufficient) Salt Crus Biotic Cru Aquatic I	st (B11) ust (B12) nvertebra) ates (B13)	Hydri	Secondary Inc Water Sedim Drift D	dicators (2 or more required Marks (B1) (Riverine) tent Deposits (B2) (Riverine) teposits (B3) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv	SOIL cator is s	sufficient) Salt Crus Biotic Cru Aquatic I	st (B11) ust (B12) nvertebra) ates (B13)	Hydri	Secondary Inc Water Sedim Drift D	dicators (2 or more required Marks (B1) (Riverine) Hent Deposits (B2) (Riverine) Heposits (B3) (Riverine) Heposits (B10)
Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonniv Sediment Deposits (B2) (SOIL cator is s	sufficient) Salt Crus Biotic Cru Aquatic I Hydrogei	st (B11) ust (B12) nvertebra n Sulfide Rhizosp) ates (B13) Odor (C1) oheres (C3)		Secondary Inc Water Sedim Drift D Draina Dry-Se	dicators (2 or more required Marks (B1) (Riverine) tent Deposits (B2) (Riverine) teposits (B3) (Riverine) tage Patterns (B10) teason Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) (Surface Soil Cracks (B6)	SOIL cator is s	sufficient) Salt Crus Biotic Cru Aquatic I Hydroger Dividized Presence	st (B11) ust (B12) nvertebra n Sulfide Rhizosp e of Redu) ates (B13) Odor (C1) oheres (C3) uced Iron (C		Secondary Inc Water Sedim Drift D Draina Dry-Se	dicators (2 or more required Marks (B1) (Riverine) Hent Deposits (B2) (Riverine) Heposits (B3) (Riverine) Hage Patterns (B10) Heason Water Table (C2) Huck Surface (C7)
Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) (Surface Soil Cracks (B6) Inundation Visible on	SOIL cator is s	sufficient) Salt Crus Biotic Cru Aquatic I Hydrogel Oxidized Presence	st (B11) ust (B12) nvertebra n Sulfide Rhizosp e of Redu) ates (B13) c Odor (C1) oheres (C3) uced Iron (C		Secondary Inc Water Sedim Drift D Draina Dry-Se Thin M	dicators (2 or more required Marks (B1) (Riverine) ment Deposits (B2) (Riverine) meposits (B3) (Riverine) mage Patterns (B10) meason Water Table (C2) muck Surface (C7) meason Burrows (C8)
Remarks HUDRIC Hydrology Netland Indicators Primary Indicators (Any one indicators	sort is serine)	sufficient) Salt Crus Biotic Cru Aquatic I Hydroger Doxidized Presence Recent Ir	st (B11) ust (B12) nvertebra n Sulfide Rhizosp e of Redu soils (C6) ates (B13) c Odor (C1) oheres (C3) uced Iron (C		Secondary Inc Water Sedim Drift D Draina Dry-Se Thin M Crayfis	dicators (2 or more required Marks (B1) (Riverine) Hent Deposits (B2) (Riverine) Heposits (B3) (Riverine) Hage Patterns (B10) Heason Water Table (C2) Huck Surface (C7)
Remarks HUDRIC Hydrology Netland Indicators Primary Indicators (Any one indicators	sort is serine)	sufficient) Salt Crus Biotic Cru Aquatic I Hydroger Doxidized Presence Recent Ir	st (B11) ust (B12) nvertebra n Sulfide Rhizosp e of Redu soils (C6) ates (B13) Odor (C1) oheres (C3) uced Iron (C uction in		Secondary Inc Water Sedim Drift D Draina Dry-Se Thin M Crayfis Aerial	dicators (2 or more required Marks (B1) (Riverine) ment Deposits (B2) (Riverine) meposits (B3) (Riverine) mage Patterns (B10) meason Water Table (C2) muck Surface (C7) mich Burrows (C8) mation Visible on
Remarks HUDRIC Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) (Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	sort is serine)	sufficient) Salt Crus Biotic Cru Aquatic I Hydroger Doxidized Presence Recent Ir	st (B11) ust (B12) nvertebra n Sulfide Rhizosp e of Redu soils (C6) ates (B13) Odor (C1) oheres (C3) uced Iron (C uction in		Secondary Inc Water Sedim Drift D Draina Dry-Se Thin M Crayfis Aerial Shallo	dicators (2 or more required Marks (B1) (Riverine) Hent Deposits (B2) (Riverine) Heposits (B3) (Riverine) Heposits (B3) (Riverine) Heposits (B4) Heposits (B
Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrive Sediment Deposits (B2) (Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B	sort	sufficient) Salt Crus Biotic Cru Aquatic I Hydrogei Oxidized Presence Recent Ir Plowed S Other (Ex	st (B11) ust (B12) nvertebra n Sulfide Rhizosp e of Redu ron Redu Soils (C6 xplain in) ates (B13) Odor (C1) oheres (C3) uced Iron (C uction in S) Remarks)	4)	Secondary Inc Water Sedim Drift D Draina Dry-Se Thin M Crayfis Aerial Shallo FAC-M	dicators (2 or more required Marks (B1) (Riverine) Hent Deposits (B2) (Riverine) Heposits (B3) (Riverine) Heposits (B3) (Riverine) Heposits (B4) Heposits (B
Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) (Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B	cator is serine) Nonriverir	Sufficient) Salt Crus Biotic Cru Aquatic I Hydrogel Oxidized Presence Recent Ir Plowed S Other (Ex	st (B11) ust (B12) nvertebra n Sulfide Rhizosp e of Redu ron Redu Soils (C6 xplain in) ates (B13) Odor (C1) oheres (C3) uced Iron (C uction in S) Remarks)	4)	Secondary Inc Water Sedim Drift D Draina Dry-Se Thin M Crayfis Aerial Shallo FAC-M	Marks (B1) (Riverine) Marks (B1) (Riverine) Ment Deposits (B2) (Riverine) Meposits (B3) (Riverine) Mege Patterns (B10) Meason Water Table (C2) Muck Surface (C7) Muck Surface (C7) Much Surface (C8) Mation Visible on
Hydrology Wetland Indicators Primary Indicators (Any one indi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonniv Sediment Deposits (B2) (Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B	cator is serine) Nonriverir	sufficient) Salt Crus Biotic Cru Aquatic I Hydrogei Oxidized Presence Recent Ir Plowed S Other (Ex	st (B11) ust (B12) nvertebra n Sulfide Rhizosp e of Redu ron Redu Soils (C6 xplain in) ates (B13) Odor (C1) oheres (C3) uced Iron (C uction in S) Remarks)	4)	Secondary Inc Water Sedim Drift D Draina Dry-Se Thin M Crayfis Aerial Shallo FAC-M	dicators (2 or more required Marks (B1) (Riverine) Hent Deposits (B2) (Riverine) Heposits (B3) (Riverine) Heposits (B3) (Riverine) Heposits (B4) Heposits (B
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonno Sediment Deposits (B2) (Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B	cator is serine) Nonriverir	Sufficient) Salt Crus Biotic Cru Aquatic I Hydrogel Oxidized Presence Recent Ir Plowed S Other (Ex	st (B11) ust (B12) nvertebra n Sulfide Rhizosp e of Redu soils (C6 xplain in) ates (B13) Odor (C1) Oheres (C3) uced Iron (Cuction in S) Remarks)	4)	Secondary Inc Water Sedim Drift D Draina Dry-Se Thin M Crayfis Satura Aerial Shallo FAC-M	dicators (2 or more required Marks (B1) (Riverine) Hent Deposits (B2) (Riverine) Heposits (B3) (Riverine) Heposits (B3) (Riverine) Heposits (B4) Heposits (B

North State Resources				Habitat Type CRASSUND
Wetland Determination Data Form - Arid V				Wetland Type UPLAND
Project/Site: Sisk Dam Corrective Action Project		City/Count	y: Mercec	Sampling Date: 9/2/09
Applicant/Owner:U.S. Bureau of Reclamation				State: <u>CA</u> Sampling Point: 25
Investigator(s):J. Colescott				
Landform (hillslope, terrace, etc.) TERRICE		Local reli	ef (concave	convex, none) CONVEX Slope % 0-5
Subregion (LRR) <u>LRR-C</u>	So	il Map Unit N	lame: X-	eroflurents. Externey GRAVELL
Are climatic/hydrologic conditions on the site typical for this t				
Are vegetation N , soil N , or hydrology N signifi				
Are vegetation , soil , or hydrology				
Summary of Findings (Attach site map showing Hydrophytic vegetation? 1) Hydric soil? 10 Wet	sampling particles	oint location ogy? NO	s, transects Is sample	d area a wetland? NO Other waters? NO
USACE Jurisdiction Adjacent to Waters Industry to Waters Isolate	ed (with inte	erstate comm	erce)	Isolated (non jurisdictional)
Explain:	oa (wiai iiko	Totalo comin		
Evaluation of features designated "Ot				
Indicators: Defined bed and bank Scour_	Ordin	nary High Wa	ter Mark M	apped
Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	phemeral nage	Blue-lin Navigable \	e on USGS Vater	Quad
Pemarks			Tatol	
UPLAND PAIR TO	DP	24.		
OLONOD LY F	71	- / ,		
Vegetation	Abastata	Denote and	1	Dominance Test Worksheet
Tree Stratum (use scientific names)	Absolute % Cover	Dominant Species?		Number of dominant species
1	10 00101	<u>openior.</u>	Otatao	that are OBL, FACW, or FAC:(A)
2.				Total number of dominant species 4
3.				across all strata:(B)
50%= 20%= Total Cover:				Descent of deminant energies that
Sapling/Shrub Stratum (use scientific names)		Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
1				
2				Prevalence Index Worksheet Total % Cover of: Multiply by
3.				OBL Species x1 =
4				FACW Species /x2=
50%= Total Cover:				
Herb Stratum (use scientific names)	% Cover	Species?	Status	7
1. Bromus diandrus	30	_Y	UPL	FACU Species x4=
2. Bromus hordeacous	20	Ý	FACU	UPL Species x5 =
3. Centaurea sp		4	FACY	Column Totals (A) (B)
4. Brussicu negra	20	M	UPL	Prevalance Index = B/A =
5. Avena fatua	5_	N	UPL	Hydrophytic Vegetation Indicators
6. Browns madritensis	5	N	UPL	Dominance Text is >50%
7				Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting
50%= Total Cover:	100	Allia Value		data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	10000100001	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
1	120 20 2000 2000 200			**Indicators of hydric soil and wetland hydrology must
2			<u></u>	be present.
50%= Total Cover:				Hydrophytic Vegetation?
% Bare Ground in Herb Stratum _ % Cover of Bio				

Profile Description: (Describe to Depth Matrix	Redox Features		or confirm	the absence of	indicators.
inches) Color (moist) %		<u>% Type1</u>	Loc2	<u>Texture</u>	Remarks
-8 104P4/4 100	<u> </u>		_	<u>51004</u>	LOTAL
ypes: C = Concentration D = Depletion	on RM = Reduced Matrix	² Location: PL		ing RC = Roo	t Channel M = Matrix
ydric Soil Indicators: (Applica Histosol (A1)		herwise noted) Gleyed Matrix (S4)		1	Problematic Hydric Soils ³ Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy	Redox (S5)		2 cm	Muck (A10) (LRR B)
Black Histic (A3)	Strippe	d Matrix (S6)		Redu	iced Vetric (F18)
Hydrogen Sulfide (A4)	Loamy	Mucky Mineral (F1)		Red	Parent Materials (TF2)
Stratified Layers (AG) (LRR C	C) Loamy	Gleyed Matrix (F2)		Vege	tated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Deplete	ed Matrix (F3)		Othe	r (Explain in Remarks)
Depleted Below Dark Surface	e (A11) Redox I	Dark Surface (F6)			
Thick Dark Surface (A12)	Deplete	ed Dark Surface (F7)			of hydrophytic vegetation an
Sandy Mucky Mineral (S1)	Redox I	Depressions (F8)		wetland hyd	rology must be present.
	Vernal I	Pools (F9)			
		Depth (Inches)	Hydr	ic Soil? NC)
Remarks NON - 144 De Hydrology Wetland Indicators	eic soils	Depth (Inches)	Hydr		
Restrictive Layer (if present): Type: Remarks NON - ITYDE Hydrology Wetland Indicators Primary Indicators (Any one indicator)	eic soils	Depth (Inches)	Hydr		dicators (2 or more required
Remarks NON - 144 De Hydrology Wetland Indicators	eic soils		Hydr	Secondary In	
Remarks NON - 144 De Hydrology Vetland Indicators Frimary Indicators (Any one indicator	r is sufficient) Salt Cru		Hydr	Secondary In	dicators (2 or more required
Remarks (NON) - (14) Hydrology Vetland Indicators Primary Indicators (Any one indicator Surface Water (A1)	r is sufficient) Salt Cru Biotic C	est (B11)	Hydr	Secondary In Wate Sedir	dicators (2 or more required
Remarks NON - 144 De Hydrology Netland Indicators Primary Indicators (Any one indicator Surface Water (A1) High Water Table (A2)	r is sufficient) Salt Cru Biotic Ci	ist (B11) rust (B12)	Hydr	Secondary In Wate Sedir Drift	dicators (2 or more required r Marks (B1) (Riverine) nent Deposits (B2) (Riverine
Hydrology Netland Indicators Primary Indicators (Any one indicator Surface Water (A1) High Water Table (A2) Saturation (A3)	r is sufficient) Salt Cru Biotic Co Aquatic Hydroge	est (B11) rust (B12) Invertebrates (B13)		Secondary In Wate Sedir Drift I	dicators (2 or more required r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine)
Remarks (NON) - (14) PARTY Primary Indicators (Any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6)	r is sufficient) Salt Cru Biotic Ci Aquatic Hydroge	ist (B11) rust (B12) Invertebrates (B13) en Sulfide Odor (C1)		Secondary In Wate Sedir Drift I Drain Dry-S	dicators (2 or more required r Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) Season Water Table (C2) Muck Surface (C7)
Hydrology Vetland Indicators Primary Indicators (Any one indicator) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6) Inundation Visible on	r is sufficient) Salt Cru Biotic Ci Aquatic Hydroge iverine) Presence Recent	est (B11) rust (B12) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres (C3) ee of Reduced Iron (C) Iron Reduction in		Secondary In Wate Sedir Drift I Drain Thin Crayl	dicators (2 or more required or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) age Patterns (B10) Season Water Table (C2) Muck Surface (C7) ish Burrows (C8)
Remarks (NON) - (14) PARTY Primary Indicators (Any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6)	r is sufficient) Salt Cru Biotic Ci Aquatic Hydroge verine) Presence Recent Plowed	ust (B11) rust (B12) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres (C3) se of Reduced Iron (C		Secondary In Wate Sedir Drift I Drain Crayl	dicators (2 or more required r Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) Season Water Table (C2) Muck Surface (C7)
Hydrology Netland Indicators Primary Indicators (Any one indicator) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	r is sufficient) Salt Cru Biotic Ci Aquatic Hydroge verine) Presence Recent Plowed	est (B11) rust (B12) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres (C3) e of Reduced Iron (Color Reduction in Soils (C6)		Secondary In Wate Sedir Drift I Drain Thin Crayl Satur Aeria	dicators (2 or more required or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) Season Water Table (C2) Muck Surface (C7) ish Burrows (C8) ration-Visible-on
Hydrology Wetland Indicators Primary Indicators (Any one indicator Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	r is sufficient) Salt Cru Biotic Ci Aquatic Hydroge verine) Presence Recent Plowed	est (B11) rust (B12) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres (C3) e of Reduced Iron (Color Reduction in Soils (C6)		Secondary In Wate Sedir Drift I Dry-S Thin Crayl Satur Aeria	dicators (2 or more required or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) age Patterns (B10) Geason Water Table (C2) Muck Surface (C7) fish Burrows (C8) ration-Visible-on al Imagery (C9)
Hydrology Wetland Indicators Primary Indicators (Any one indicator) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	r is sufficient) Salt Cru Biotic Ci Aquatic Hydroge Verine) Oxidized Presence Recent I Plowed Other (E	est (B11) rust (B12) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres (C3) e of Reduced Iron (Cloron Reduction in Soils (C6) Explain in Remarks)	24)	Secondary In Wate Sedir Drift I Dry-S Thin Crayl Satur Aeria Shall	dicators (2 or more required or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) age Patterns (B10) Season Water Table (C2) Muck Surface (C7) sish Burrows (C8) ation-Visible on al Imagery (C9) ow Aquitard (D3) Netural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one indicator Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations urface Water Present? Yes	r is sufficient) Salt Cru Biotic Co Aquatic Hydroge verine) Presence Recent Plowed Other (E	ast (B11) rust (B12) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres (C3) ee of Reduced Iron (Clron Reduction in Soils (C6) Explain in Remarks)	24)	Secondary In Wate Sedir Drift I Dry-S Thin Crayl Satur Aeria	dicators (2 or more required r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) age Patterns (B10) Season Water Table (C2) Muck Surface (C7) fish Burrows (C8) ation-Visible on al Imagery (C9) ow Aquitard (D3) Netural Test (D5)
Hydrology Netland Indicators Primary Indicators (Any one indicator) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	r is sufficient) Salt Cru Biotic Ci Aquatic Hydroge Verine) Oxidized Presence Recent I Plowed Other (E	est (B11) rust (B12) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres (C3) be of Reduced Iron (Claron Reduction in Soils (C6) Explain in Remarks)	24)	Secondary In Wate Sedir Drift I Dry-S Thin Crayl Satur Aeria Shall FAC-	dicators (2 or more required r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) age Patterns (B10) Season Water Table (C2) Muck Surface (C7) fish Burrows (C8) ation-Visible on al Imagery (C9) ow Aquitard (D3) Netural Test (D5)

Remarks UPLAND HYDEOLOGY

North State Resources				Habitat Type
Wetland Determination Data Form - Arid V	_	Christian		Wetland Type VPIANS
Project/Site: Sisk Dam Corrective Action Project		City/County	: Mercec	County Sampling Date: 9/3/89
Applicant/Owner: <u>U.S. Bureau of Reclamation</u>				State: <u>CA</u> Sampling Point: <u>26</u>
Investigator(s):J. Colescott				—
Landform (hillslope, terrace, etc.) Sware		_ Local reli	ef (concave	, convex, none) CONCNE Slope % 25
Subregion (LRR) <u>LRR-C</u>	So	il Map Unit N	lame: <u>Pa</u>	ulvis Clay Loan 2-8%
Are climatic/hydrologic conditions on the site typical for this	time of year	4FES (lf no, explai	n in remarks.)
Are vegetation N, soil N, or hydrology n signifi	cantly distur	bed? Are no	ormal circun	nstances present? ¥ 5 5
Are vegetation N, soil N, or hydrology N natura	ally problema	atic? (If nee	eded, explai	n any answers in Remarks.)
Summary of Findings (Attach site map showing				
Hydrophytic vegetation? NO Hydric soil? NO Wet	land hydrolo	gy? 100	ls sample	d area a wetland? NO Other waters? NO
USACE Jurisdiction Adjacent to Waters Isolate	ed (with inte	rstate comm	erce)	Isolated (non jurisdictional)
Explain:	(11.01			
Evaluation of features designated "Ot				
Indicators: Defined bed and bank Scour Feature Designation: Perennial Intermittent E	Ordin	ary High Wa	ter Mark Mark Mark	apped
Natural Drainage Artificial Drain	nage	Navigable V	Vater	Quad
Remarks SMAU UPUND 9				
SMALL OPUND S	3WIL	E -	NON.	-WEICHOU.
Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	% Cover	Species?	Status	Number of dominant species that are OBL, FACW, or FAC: (A)
1				that are OBL, PACW, or PAC.
2.				Total number of dominant species
3				across all strata: (B)
50%= Total Cover:	Demonstration of the second			Percent of dominant species that
Sapling/Shrub Stratum (use scientific names)		Species?		are OBL, FACW, or FAC: (AB)
1				Prevalence Index Worksheet
2				Total % Cover of: Multiply by
3				OBL Species x1 =
4 50%= Total Cover:				FACW Species x 2 =
Herb Stratum (use scientific names)		Species?	Ctotus	FAC Species x3 =
1. Browns hordeacous				FACU Species x 4 =
2 B. dandrus				UPL Species x 5 =
3. Brassica megra	11)	2	1781	Column Totals (A) (B)
			010	Prevalance Index = B/A =
4 5				the test of Manufacture Indicators
6				Hydrophytic Vegetation Indicators Dominance Text is >50%
7				Prevalence Index is ≤ 3.01
50%= Z0%= Total Cover:				Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	Der Colonia - Colonia -	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
1	5.00	6		1 Indicators of hydric soil and wetland hydrology must
2.				be present.
50%= Z0%= Total Cover:				Hydrophytic Vegetation?
% Bare Ground in Herb Stratum % Cover of Biot		_		

Depth	Matrix		depth needed to door Redox Features						
(<u>inches</u>)	Color (moist) 10 46 3/3	100	Color (moist)		Type ¹	Loc ²	Curr	LOAM	Remarks
Histi Histi Histi Hydi Stra 1 cm Depi		(Applicable to (Applicable to (LRR C) (LRR C) Surface (A11	Stripped Loamy I Loamy I Deplete Redox I Deplete	nerwise n Gleyed M Redox (S I Matrix (Mucky Mi Gleyed M d Matrix (Dark Surfi	atrix (S4) 5) S6) ineral (F1) datrix (F2) (F3) face (F6) urface (F7)		Indicators 1	cm Muck (cm Muck (Reduced Ve Red Parent Vegetated S Other (Explant ors of hydro	atic Hydric Soils ³ (A9) (LRR C) (A10) (LRR B)
			Vernal F	2001S (F.9	,				
Restrictive Remarks Hydrolo Wetland	ogy Indicators	HIDE	C 50165		ches)	Hydri	c Soil? L	- 100 ACC - 20	o /2 or more requires
Restrictive Remarks Hydrolo Vetland Primary Indi Surfa High Satur Wate Sedir Surfa Inunc	bah -	indicator is su inverine) (Nonriverine	Salt Crue Biotic Crue Aquatic Hydroge Oxidized Presence Recent In	st (B11) ust (B12) Invertebra n Sulfide Rhizosp e of Redu Soils (C6	ates (B13) Odor (C1) heres (C3) uced Iron (Contion in		Secondar	ry Indicator Vater Marks rediment De Prift Deposit Prainage Pa	isible-on ery (C9) uitard (D3)

North State Resources				Habitat Type GRASSLAND
Wetland Determination Data Form - Arid V	Vest Reg	ion		Wetland Type UPLAND
Project/Site: Sisk Dam Corrective Action Project		City/Count	v: Merced	County Sampling Date: 9/3/8
Applicant/Owner:U.S. Bureau of Reclamation				0.5
Investigator(s):J. Colescott				_
Landform (hillslope, terrace, etc.) SWILLE		Local rel	ief (concave	convex, none) Conetus Slope % & -5
Subregion (LRR)LRR-C	So	il Map Unit I	Name: Ar	burua Com 2-4%
Are climatic/hydrologic conditions on the site typical for this	time of year	7 4FS	(If no. explain	n in remarks.)
Are vegetation N, soil N, or hydrology N signific	cantly distu	rbed? Are n	ormal circum	stances present? 4K5
Are vegetation , soil , or hydrology natura	ally problem	atic? (If nee	eded, explair	any answers in Remarks.)
Summary of Findings (Attach site map showing	sampling p	oint location	s, transects,	important features, etc.)
Hydrophytic vegetation? NO Hydric soil? 4 63 Wet	land hydrolo	gy? 465	ls sample	d area a wetland? NO Other waters? NO
USACE Jurisdiction Adjacent to Waters Indutary to Waters Isolate Explain:	ed (with inte	erstate comm	nerce)	Isolated (non jurisdictional)
Evaluation of features designated "Ot	hor Wat	tore of t	ho I Inite	od States" NA NEFINED
Indicators: Defined bed and bank Scour	Ordin	ary High Wa	ater Mark Ma	apped BEID + BANK OR
Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	phemeral _	Blue-lin	e on USGS	Quad SCOUR + DEPOSITION
Remarks SUSPECT SWALE = NO	n-ac	SETULI	A Gu	ND NOT AN "OTHER
WATERS"				
office,				
	100			La . T. (W. Johns
Vegetation	Absolute		Indicator	Dominance Test Worksheet Number of dominant species
Tree Stratum (use scientific names) 1	% Cover	Species?	Status	that are OBL, FACW, or FAC:(A)
2				Total number of dominant species
3				across all strata:
50%= 20%= Total Cover:		-		B of dealers and analysis that
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
1		<u> </u>		
2.	1-10-00			Prevalence Index Worksheet Total % Cover of: Multiply by
3.		U		OBL Species x1 =
4.				FACW Species x2=
50%= Total Cover:				- BANKEY
Herb Stratum (use scientific names)	% Cover	Species?	Status	
1. Avena fatoa	50	Y	UPL	FACU Species x4 =
2. Bronus hordeacous		Υ		UPL Species x5 =
3. Bronos d'audros		N	UPL	Column Totals (A)(B)
4. Brassica negra		N	UPL	Prevalance Index = B/A =
5. Rumey erigous		N	FACW	Hydrophytic Vegetation Indicators
6				Dominance Text is >50%
7				Prevalence Index is ≤ 3.01
50%= Total Cover:	100			Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
1				Indicators of hydric soil and wetland hydrology must
2				be present.
50%= Total Cover:			-	Hydrophytic Vegetation? <u>NO</u>
% Bare Ground in Herb Stratum % Cover of Bio	tic Crust		ì	

RC = Root Channel M = Matrix tors for Problematic Hydric Soils³ 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vetric (F18) Red Parent Materials (TF2) Vegetated Sand/Gravel Bars Vother (Explain in Remarks) dicators of hydrophytic vegetation and tland hydrology must be present.
RC = Root Channel M = Matrix tors for Problematic Hydric Soils³ 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vetric (F18) Red Parent Materials (TF2) Vegetated Sand/Gravel Bars V Other (Explain in Remarks) dicators of hydrophytic vegetation and
tors for Problematic Hydric Soils³ 1 cm Muck (A9) (LRR C)2 cm Muck (A10) (LRR B)Reduced Vetric (F18)Red Parent Materials (TF2)Vegetated Sand/Gravel BarsY Other (Explain in Remarks) dicators of hydrophytic vegetation and
tors for Problematic Hydric Soils³ 1 cm Muck (A9) (LRR C)2 cm Muck (A10) (LRR B)Reduced Vetric (F18)Red Parent Materials (TF2)Vegetated Sand/Gravel BarsY Other (Explain in Remarks) dicators of hydrophytic vegetation and
tors for Problematic Hydric Soils³ 1 cm Muck (A9) (LRR C)2 cm Muck (A10) (LRR B)Reduced Vetric (F18)Red Parent Materials (TF2)Vegetated Sand/Gravel BarsV Other (Explain in Remarks) dicators of hydrophytic vegetation and
1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vetric (F18) Red Parent Materials (TF2) Vegetated Sand/Gravel Bars Other (Explain in Remarks) dicators of hydrophytic vegetation and
2 cm Muck (A10) (LRR B) Reduced Vetric (F18) Red Parent Materials (TF2) Vegetated Sand/Gravel Bars Other (Explain in Remarks) dicators of hydrophytic vegetation and
Reduced Vetric (F18) Red Parent Materials (TF2) Vegetated Sand/Gravel Bars Other (Explain in Remarks) dicators of hydrophytic vegetation and
Red Parent Materials (TF2) Vegetated Sand/Gravel Bars Other (Explain in Remarks) dicators of hydrophytic vegetation and
Vegetated Sand/Gravel Bars Other (Explain in Remarks) dicators of hydrophytic vegetation and
✓ Other (Explain in Remarks) dicators of hydrophytic vegetation and
dicators of hydrophytic vegetation and
있으면 COT 및 및 설계 100 COT 및 및 COT () 및 기록 COT COT COT COT COT COT COT () 및 및 전략 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및
tland hydrology must be present.
19 4FS SOIL PROFICE SHOWS
CONSIDERED THEM HY
ondary Indicators (2 or more required)
Water Marks (B1) (Riverine)
Sediment Deposits (B2) (Riverine)
Drift Deposits (B3) (Riverine)
Drainage Patterns (B10)
Dry-Season Water Table (C2)
Thin Muck Surface (C7)
Crayfish Burrows (C8)
Saturation Visible on
Aerial Imagery (C9)
Shallow Aquitard (D3)
FAC-Netural Test (D5)
V
logy? Yes X No
logy? Yes X No

Matland Detarmination Data Come Av	id Wast Day			Wetland Type UPWD
Wetland Determination Data Form - Ar				
Project/Site: Sisk Dam Corrective Action Project		City/Count	y: <u>Mercec</u>	Sampling Date: 115/
Applicant/Owner:U.S. Bureau of Reclamation				State: <u>CA</u> Sampling Point: <u>& B</u>
Investigator(s):J. Colescott			NAME OF THE PARTY	
Landform (hillslope, terrace, etc.) MINON SUM	<u>k</u>	Local reli	ef (concave	c, convex, none) Crocke Slope % 6-1
Subregion (LRR) <u>LRR-C</u>				
Are climatic/hydrologic conditions of the site typical for				
Are vegetation N , soil N , or hydrology N				
Are vegetation N soil N, or hydrology N r	naturally problem	atic? (If nee	eded, explai	n any answers in Remarks.)
Summary of Findings (Attach site map sho				
Hydrophytic vegetation? NO Hydric soil? NO	Wetland hydrolo	gy? NO	Is sample	d area a wetland? NO Other waters? NO
USACE Jurisdiction Adjacent to Waters Inbutary Inbut	Isolated (with inte	rstate comm	erce)	_ Isolated (non jurisdictional)
Evaluation of features designated Indicators: Defined bed and bank So				
Feature Designation: Perennial Intermittent Natural Drainage Artificial	Ephemeral _	Blue-lin	e on USGS	Quad
Remarks				
UPLAND SWALER.				
Vegetation Tree Stratum (use scientific names)	Absolute % Cover	Dominant Species?		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
Tree Stratum (use scientific names) 1	% Cover	Species?	Status	Number of dominant species that are OBL, FACW, or FAC: (A)
Tree Stratum (use scientific names) 1 2	<u>% Cover</u>	Species?	Status	Number of dominant species
Tree Stratum (use scientific names) 1 2 3	<u>% Cover</u>	Species?	Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: (A)
Tree Stratum (use scientific names) 1 2 3	% Cover	Species?	Status	Number of dominant species that are OBL, FACW, or FAC: O (A) Total number of dominant species
Tree Stratum (use scientific names) 1	% Cover	Species?	Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: (A) (B)
Tree Stratum (use scientific names) 1	% Cover	Species? Species?	Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: (AB) Prevalence Index Worksheet
Tree Stratum (use scientific names) 1	% Cover	Species? Species?	Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: (AB) Prevalence Index Worksheet Total % Cover of: Multiply by
Tree Stratum (use scientific names) 1	% Cover	Species? Species?	Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: OBL Species (A) (B) (B) (AB)
Tree Stratum (use scientific names) 1	% Cover	Species? Species?	Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: (AB) Prevalence Index Worksheet Total % Cover of: OBL Species X1 = FACW Species X2 =
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover	Species? Species? Species?	<u>Status</u> <u>Status</u> Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species Multiply by FACW Species X 2 = FAC Species X 3 =
Tree Stratum (use scientific names) 1	% Cover % Cover over: % Cover % Cover	Species? Species? Species?	Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: CAB Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover % Cover % 20	Species? Species? Species?	Status Status Status Status FACU	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: OBL, FACW, or FAC: OBL Species FACW Species FACW Species FAC Species FACU Species VA = UPL Species (A) (B)
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover 50 30 15	Species? Species? Species?	Status Status Status FACU VPC FAC	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: (AB) Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FACW Species FAC Species FACU Species Waltiply by Multiply by FACU Species FACU Specie
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover 15 5	Species? Species? Species? P	Status Status Status FACU VPC FAC VPL	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: OBL, FACW, or FAC: OBL Species FACW Species FACW Species FAC Species FACU Species VA = UPL Species (A) (B)
Tree Stratum (use scientific names) 1. 2. 3. 50%= 20%= Total C Sapling/Shrub Stratum (use scientific names) 1. 2. 3. 4. 50%= 20%= Total C Herb Stratum (use scientific names) 1. Promos Nordeacoss 2. Avenu fatva 3. Hordeam Irporinum 4. Ansirkia menzitsii	% Cover % Cover % Cover % Cover 15 55	Species? Species? YHA P	Status Status Status FACU VPC FAC VPL	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FACW Species FACU Species FACU Species Waltiply by FACU Species FA
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover 15 55	Species? Species? YHA P	Status Status Status FACU VPC FAC VPL	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FACW Species FACU Species F
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover 15 5	Species? Species? YHA Y	Status Status Status FACU VPC FAC VPL	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FACW Species FACU Species Wultiply by FACU Species Waltiply by Waltiply by FACU Species FACU Species Waltiply by FACU Species Waltiply by Waltip
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover 15 5	Species? Species? YHA Y	Status Status Status FACU VPC FAC VPL	Number of dominant species that are OBL, FACW, or FAC:
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover 15 5 over: % Cover	Species? Species? Species?	Status Status Status Status Status Status Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FACW Species FACU Species
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover 50 15 5 over: % Cover	Species? Species? Species? P Species?	Status Status Status FACU VPL Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FACW Species FACU Species FACU Species Wultiply by Multiply by Multiply by FACW Species FACW Species FACW Species FACU Species FA
Tree Stratum (use scientific names) 1	% Cover % Cover % Cover % Cover 50 15 5 over: % Cover	Species? Species? Species? P Species?	Status Status Status FACU VPL Status	Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FACW Species FACU Species

Soils	·
Profile Description: (Describe to the depth needed to document the indicator or confirm to Depth Matrix Redox Features	he absence of indicators.
(inches) Color (moist) % Color (moist) % Type ¹ Loc ² 0 - 6 10 4 12 4/3 100 -	Texture Remarks CONNECT LOAN
1 Types: C = Concentration D = Depletion RM = Reduced Matrix 2 Location: PL = Pore Linit Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted) Histosol (A1) Sandy Gleyed Matrix (S4) Histic Epipedon (A2) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (AG) (LRR C) Loamy Gleyed Matrix (F2) 1 cm Muck (A9) (LRR D) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) Vernal Pools (F9)	ng RC = Root Channel M = Matrix ndicators for Problematic Hydric Soils3 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vetric (F18) Red Parent Materials (TF2) Vegetated Sand/Gravel Bars Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present.
Remarks OPLAND ZOILS Hydrology Wetland Indicators	
Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Mydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)
Field Observations Surface Water Present? Yes No Depth (inches) Wetland H Water Table Present? Yes No Depth (inches) (includes capillary) Saturation Present? Yes No Depth (inches) (includes capillary)	lydrology? Yes No X

North State Resources Wetland Determination Data Form - Arid V	-			Habitat Type CRASS CAND Wetland Type Drich
Project/Site: Sisk Dam Corrective Action Project Applicant/Owner: U.S. Bureau of Reclamation Investigator(s): J. Colescott				State: _CA Sampling Point: _29
Landform (hillslope, terrace, etc.) 1724 Subregion (LRR) LRR-C Are climatic/hydrologic conditions on the site typical for this to the vegetation N, soil N, or hydrology N significant processing significant si	Solution Sol	il Map Unit N ? <u>YES</u> (rbed? Are n	Name: Xe If no, explain ormal circun	proflurents, Extremely gravelly in in remarks.) Instances present? YFES
Summary of Findings (Attach site map showing Hydrophytic vegetation? No Hydric soil? 465 Wet				
USACE Jurisdiction Adjacent to Waters Industry to Waters Isolate Explain:	ed (with inte	rstate comm	ierce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour _ Feature Designation: Perennial Intermittent E Matural Drainage Artificial Drain	Ordin phemeral	ary High Wa	ater Mark Ma e on USGS	apped Quad
Remarks DITCH HABITAT. SOIL BUT PRESUME LACK OF VE 13 FOR INSUFFICIENT DUR	25 + 26 50 4770N	H4 DRO 166 F. S. 10 SU	LD&Y TINI POORT	INDICATORS PRESENT, INDATION OR SATURATION DOMINANT HYDROPHUTIC VEG.
Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover	Dominant Species?		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
2		_		Total number of dominant species across all strata:
50%= Total Cover: Sapling/Shrub Stratum (use scientific names) 1	% Cover	Species?		Percent of dominant species that are OBL, FACW, or FAC: [AB]
3.				Prevalence Index Worksheet Total % Cover of: OBL Species x1 =
4 50%= Total Cover: Herb Stratum (use scientific names) 1 Hordeun leposinom 2 Scomus hordeaeous 3 Bromus madritensis	% Cover 70 20	Species?	Status FAC FACU VPL	FACW Species $x2 = \frac{10}{10}$ FAC Species $\frac{10}{10} \times 3 = \frac{10}{10}$ FACU Species $\frac{10}{10} \times 5 = \frac{50}{10}$ Column Totals $\frac{100}{10} \times 5 = \frac{340}{10} \times \frac{100}{10} \times \frac$
4				Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.01
50%= Z0%= Total Cover: Woody/Vine Stratum (use scientific names) 1				Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present.
2 Total Cover: % Bare Ground in Herb Stratum % Cover of Bio				Hydrophytic Vegetation?

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<u>.</u>	\sim		٠	-
J	О			3

Remarks WETUND HYDROLOGY

Depth Matrix		Redox Feature		_ 1			D due
inches) Color (moist)	<u>%</u>	Color (moist)	25	Type ¹	Loc ²	<u>Texture</u>	Remarks
-8 2.545/3		2.54 3/z	سر عر		RC M	SAND Y	LOAM
		7.578 4/6	5				
ypes: C = Concentration D = De	enletion R	M = Reduced Matrix	2	Location: PL	– Pore Lin	ing PC = Ro	ot Channel M = Matrix
dric Soil Indicators: (A							Problematic Hydric Soils ³
Histosol (A1)	philicapie (C			Matrix (S4)	_		n Muck (A9) (LRR C)
Histic Epipedon (A2)		•	Redox (S				n Muck (A10) (LRR B)
Black Histic (A3)		•	ed Matrix	-			luced Vetric (F18)
Hydrogen Sulfide (A4)		Loamy				_	Parent Materials (TF2)
Stratified Layers (AG) (L	BB C)		•	Matrix (F2)			etated Sand/Gravel Bars
1 cm Muck (A9) (LRR D	•		ted Matrix				er (Explain in Remarks)
Depleted Below Dark Su	-	-	Dark Sur	. ,		Oun	or (Explain in Fromano)
Thick Dark Surface (A12	` '			Surface (F7)		3tndicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S	•		Depressi	٠.,			drology must be present.
candy mucky mineral (c	,,,		Pools (F9	` '			
			(,	-,			
			Depth (In	nches)	Hydr	ic Soil? Y	
Remarks HyDRIC S	50165		Depth (In	nches)	Hydr		
Remarks HyDRIC S	50165		Depth (In	nches)	Hydr		ndicators (2 or more required
Remarks ANDRIC S Hydrology Vetland Indicators	50165	fficient)	Depth (In		Hydr	Secondary I	
Hydrology Vetland Indicators rimary Indicators (Any one ind	50165	fficient) Salt Cr			Hydr	Secondary I	ndicators (2 or more required er Marks (B1) (Riverine)
Remarks ANDRIC S Hydrology Vetland Indicators rimary Indicators (Any one ind Surface Water (A1)	50165	fficient) Salt Cr Biotic (ust (B11) Crust (B12		Hydr	Secondary I	ndicators (2 or more required er Marks (B1) (Riverine)
Hydrology Vetland Indicators Vet	icator is sur	fficient) Salt Cr Biotic (ust (B11) Crust (B12 c Invertebr	2)	Hydr	Secondary I	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine
Hydrology Vetland Indicators rimary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3)	icator is sur	fficient) Salt Cr Biotic (ust (B11) Crust (B12 c Invertebr	2) rates (B13)	Hydr	Secondary I Wate Sed Drift Drai	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine)
Hydrology Vetland Indicators rimary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv	icator is sur	fficient) Salt Cr Biotic G Aquatic Hydrog Oxidize	ust (B11) Crust (B12 c Invertebr gen Sulfide ed Rhizos	2) rates (B13) e Odor (C1)		Secondary I Wat Sedi Drift Drai	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10)
Hydrology Vetland Indicators Frimary Indicators (Any one indicator	icator is sur	fficient) Salt Cr Biotic G Aquatic Hydrog Oxidize	ust (B11) Crust (B12 c Invertebr gen Sulfide ed Rhizos	2) rates (B13) e Odor (C1) pheres (C3) luced Iron (C		Secondary I Wate Sed Drift Drai Dry-	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2)
Remarks Hydrology Vetland Indicators rimary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	icator is sur	fficient) Salt Cr Biotic G Aquatic Hydrog Oxidize Present Recent	ust (B11) Crust (B12 c Invertebrigen Sulfide ed Rhizospice of Red t Iron Red d Soils (Ct	e Odor (C1) pheres (C3) luced Iron (Cuction in		Secondary I Wat Sedi Drift Drai Dry- Thin Cray	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7)
Hydrology Vetland Indicators Vimary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on	icator is sur	fficient) Salt Cr Biotic G Aquatic Hydrog Oxidize Present Recent	ust (B11) Crust (B12 c Invertebrigen Sulfide ed Rhizospice of Red t Iron Red d Soils (Ct	2) rates (B13) e Odor (C1) pheres (C3) luced Iron (C uction in		Secondary I Wate Sed Drift Drai Dry- Thin Cray Aeri	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) vfish Burrows (C8) iration Visible on ial Imagery (C9)
Remarks Hydrology Vetland Indicators rimary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	icator is sur	fficient) Salt Cr Biotic G Aquatic Hydrog Oxidize Present Recent	ust (B11) Crust (B12 c Invertebrigen Sulfide ed Rhizospice of Red t Iron Red d Soils (Ct	e Odor (C1) pheres (C3) luced Iron (Cuction in		Secondary I Wat Sedi Drift Drai Dry- Thin Cray Aeri	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) rfish Burrows (C8) uration Visible on ial Imagery (C9) llow Aquitard (D3)
Remarks Hydrology Vetland Indicators Frimary Indicators (Any one i	icator is sur	fficient) Salt Cr Biotic G Aquatic Hydrog Oxidize Present Recent	ust (B11) Crust (B12 c Invertebrigen Sulfide ed Rhizospice of Red t Iron Red d Soils (Ct	e Odor (C1) pheres (C3) luced Iron (Cuction in		Secondary I Wat Sedi Drift Drai Dry- Thin Cray Aeri	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) rfish Burrows (C8) iration Visible on ial Imagery (C9)
Hydrology Vetland Indicators Primary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B	icator is sur	fficient) Salt Cr Biotic (Aquatic Hydrog Oxidize Present Recent Plowe	ust (B11) Crust (B12 c Invertebrigen Sulfide ed Rhizospice of Red t Iron Red d Soils (Ct	e Odor (C1) pheres (C3) luced Iron (Cuction in	4)	Secondary I Wate Sed Drift Drai Dry- Thin Cray Aeri Shal	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) rish Burrows (C8) gration Visible on ial Imagery (C9) llow Aquitard (D3) -Netural Test (D5)
Hydrology Vetland Indicators Primary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B	icator is sur	fficient) Salt Cr Biotic (Aquatic Hydrog Oxidize Present Recent Plowe	ust (B11) Crust (B12 c Invertebrated Rhizospice of Red t Iron Red d Soils (Co	e Odor (C1) pheres (C3) luced Iron (Cuction in	4)	Secondary I Wate Sed Drift Drai Dry- Thin Cray Aeri Shal	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) rfish Burrows (C8) uration Visible on ial Imagery (C9) llow Aquitard (D3)
Hydrology Vetland Indicators Primary Indicators (Any one ind Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B	icator is sur	fficient) Salt Cr Biotic (Aquatic Hydrog Oxidize Present Recent Plowe Other (ust (B11) Crust (B12) c Invertebrated Rhizospace of Red d Iron Red d Soils (Company) Explain in	e Odor (C1) pheres (C3) luced Iron (Cuction in	4)	Secondary I Wate Sed Drift Drai Dry- Thin Cray Aeri Shal	ndicators (2 or more required er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Ifish Burrows (C8) Irration Visible on ial Imagery (C9) low Aquitard (D3) -Netural Test (D5)

North State Resources	Arid Wast Bas	vion		Habitat Type GRASSLAND Wetland Type UPLAND
Wetland Determination Data Form - A				
				County Sampling Date: 9/3/0°
Applicant/Owner: <u>U.S. Bureau of Reclamation</u>				State: <u>CA</u> Sampling Point: <u>30</u>
Investigator(s): J. Colescott	<u> </u>			MINOR
Landform (hillslope, terrace, etc.) PLAIN		Local relief	(concaye,	convex, none) DEPRESSIONSlope % 0-27.
Subregion (LRR)LRR-C	Sc	oil Map Unit Na	me: Xe	rotiovents, whremply wavely
Are climatic/hydrologic conditions on the site typical				Carlotte (1960 - 1960 -
Are vegetation, soil, or hydrology	_ significantly distu	rbed? Are non	mal circum	nstances present? <u>YRS</u>
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow	naturally problem	atic? (If need	ed, explair	any answers in Remarks.)
Summary of Findings (Attach site map : Hydrophytic vegetation? ND Hydric soil?				
Adjacent to Waters Tributary to Waters	_ Isolated (with inte	erstate commer	rce)	Isolated (non jurisdictional)
Evaluation of features designated Indicators: Define bed and bank Perennial Intermittent	Scour Ordin	nary High Wate	er Mark Ma on USGS	apped
Natural Drainage Artific				ALLET THE PARTY OF THE
DORATION, OR SUFFICIENTY APPROPRIATE VEG. N	TLY INFO	THO.	T)0	MUST BE FOR INSUFFICIENT SUPPORT DOMINANT
Vegetation Tree Stratum (use scientific names) 1.	% Cover	Dominant In Species?		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC:(A)
2.				Total number of dominant species 3 (B)
	200			
	Cover:	Species? S	Status	Percent of dominant species that are OBL, FACW, or FAC:35/. (AB)
Sapling/Shrub Stratum (use scientific names) 1	% Cover			
Sapling/Shrub Stratum (use scientific names) 1	% Cover			Percent of dominant species that are OBL, FACW, or FAC: 33/ (AB)
Sapling/Shrub Stratum (use scientific names) 1 2	<u>% Cover</u>			Prevalence Index Worksheet
Sapling/Shrub Stratum (use scientific names) 1	% Cover			Prevalence Index Worksheet Total % Cover of: OBL Species x 1
Sapling/Shrub Stratum (use scientific names) 1	% Cover			Prevalence Index Worksheet Total % Cover of: OBL Species x 1 FACW Species 2 =
Sapling/Shrub Stratum (use scientific names) 1	% Cover	Species? §	Status	Prevalence Index Worksheet Total % Cover of: Multiply by OBL Species
Sapling/Shrub Stratum (use scientific names) 1	% Cover Cover:	Species? S	Status	Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FAC Species TACU Species Multiply by Multiply by X 1 = X 2 = X 3 = FACU Species X 4 =
Sapling/Shrub Stratum (use scientific names) 1	% Cover	Species? S	Status FAC	Prevalence Index Worksheet Total % Cover of: Multiply by OBL Species x 1 = FACW Species 2 = FAC Species x 3 = FACU Species x 4 = UPL Species x 5 =
Sapling/Shrub Stratum (use scientific names) 1	% Cover Cover:	Species? S	Status FAC FACU VPL	Prevalence Index Worksheet Total % Cover of: Multiply by OBL Species x 1 = FACW Species x 3 = FAC Species x 4 = UPL Species x 5 = Column Totals (A)(B)
Sapling/Shrub Stratum (use scientific names) 1	% Cover Cover:	Species? S	Status FAC	Prevalence Index Worksheet Total % Cover of: Multiply by OBL Species x 1 = FACW Species 2 = FAC Species x 3 = FACU Species x 4 = UPL Species x 5 =
Sapling/Shrub Stratum (use scientific names) 1. 2. 3. 4. 50%= Total Herb Stratum (use scientific names) 1. Hordeum feporinum 2. Bromus horden cous 3. Avana fatua 4. Evodism botrus 5.	Cover:	Species? S	Status FAC ACU VPL VPL	Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FACU Species UPL Species Column Totals Prevalance Index = B/A = Hydrophytic Vegetation Indicators
Sapling/Shrub Stratum (use scientific names) 1	Cover:	Species? S	Status FAC ACU VPL VPL	Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FACU Species UPL Species Column Totals Prevalance Index = B/A = Hydrophytic Vegetation Indicators Dominance Text is >50%
Sapling/Shrub Stratum (use scientific names) 1	% Cover	Species? S	Status FAC ACU VPL VPL	Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FACU Species V4 = UPL Species Column Totals Column Totals Prevalance Index = B/A = UPL Species Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is < 3.01
Sapling/Shrub Stratum (use scientific names) 1	% Cover	Species? S	Status FAC ACU VPL VPL	Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FACU Species UPL Species Column Totals Prevalance Index = B/A = Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.01 Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet)
Sapling/Shrub Stratum (use scientific names) 1	Cover:	Species? S	Status FAC FACU VPL VPL	Prevalence Index Worksheet Total % Cover of: Multiply by OBL Species
Sapling/Shrub Stratum (use scientific names) 1	Cover:	Species? S	Status FAC FACU VPL VPL	Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species FAC Species FACU Species Value VPL Species Column Totals Column Totals Column Totals Prevalence Index = B/A =

-	1	1000
-	711	C
	ЭП	

Depth Matrix	thoract and and	Redox Features	3			the absence of	
(inches) Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc2	<u>Texture</u>	Remarks
0-12 254 6/2	20_	104185/6	26	<u>.</u> C	M	GLAY	LOAM
	6	LEY 1 6/104	_5_	_D_	M		ъ
Types: C = Concentration D = [Depletion R	M = Reduced Matrix	2	Location: PL	= Pore Lir	ning RC = Roo	t Channel M = Matrix
Hydric Soil Indicators: (Applicable to	all LRRs, unless of	herwise n	noted)		Indicators for F	Problematic Hydric Soils ³
Histosol (A1)		Sandy	environmental y estimated	11/10-11/07/07 Land		1 cm	Muck (A9) (LRR C)
Histic Epipedon (A2)			Redox (S	and the second			Muck (A10) (LRR B)
Black Histic (A3)		18 - 16 - 21 - 21 U - 17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	d Matrix (Redu	uced Vetric (F18)
Hydrogen Sulfide (A4)		Loamy	rana av restå	a A separation		Red	Parent Materials (TF2)
Stratified Layers (AG) ((LRR C).	Loamy	50.000			Vege	etated Sand/Gravel Bars
1 cm Muck (A9) (LRR I		Deplete		- (취기보기		Othe	r (Explain in Remarks)
Depleted Below Dark S	-5					Live-Spin-See	TO S. (4) The left of the control of the second control of the con
Thick Dark Surface (A1				urface (F7)		³ Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	X_ Redox				wetland hyd	Irology must be present.
The Depth Association of the State of the St		Vernal					
Restrictive Layer (if present): Remarks CLEAR RE		EAVERS P				ric Soil? X	
Hydrology Wetland Indicators	EDOX P	ietivers f				IC GOILS.	
Hydrology Wetland Indicators Primary Indicators (Any one in	EDOX P	fficient)	227E.			Secondary In	ndicators (2 or more required)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1)	EDOX P	fficient) Salt Cru	e 2 4 2	wT =		Secondary Ir	ndicators (2 or more required) or Marks (B1) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2)	EDOX P	fficient) Salt Cru Biotic C	e5/25.0))		Secondary Water Sedic	ndicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3)	dicator is sur	fficient) Salt Cru Biotic C Aquatic	est (B11) rust (B12) Invertebr	rates (B13)		Secondary Ir Wate Drift	ndicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None	dicator is sur	fficient) Salt Cru Biotic C Aquatic Hydroge	est (B11) rust (B12) Invertebren Sulfide	e) C)	HUDR	Secondary Ir 	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2)	dicator is sur	fficient) Salt Cru Biotic C Aquatic Hydroge) X Oxidized	est (B11) rust (B12) Invertebren Sulfide d Rhizosp	cates (B13) codor (C1) oheres (C3)	HUDR	Secondary Ir Wate Sedii Drift Drair	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6)	dicator is sur	fficient) Salt Cru Biotic C Aquatic Hydroge Oxidized	est (B11) rust (B12) Invertebren Sulfide d Rhizospe of Redu	e Odor (C1) cheres (C3) uced Iron (C	HUDR	Secondary Ir 	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on	dicator is sur	fficient) Salt Cru Biotic C Aquatic Hydroge Presence Recent	est (B11) rust (B12) Invertebren Sulfide d Rhizospe of Redu	cates (B13) codor (C1) coheres (C3) uced Iron (Cuction in	HUDR	Secondary Ir Wate Sedii Drift Drair Dry-S Thin Cray	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) fish Burrows (C8)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6)	dicator is sur	fficient) Salt Cru Biotic C Aquatic Hydroge Y Oxidized Presence Recent Plowed	ust (B11) rust (B12) Invertebren Sulfide d Rhizospe e of Redu fron Redu Soils (C6	cates (B13) codor (C1) coheres (C3) uced Iron (Cuction in	HUDR	Secondary Ir Wate Sedin Drift Drair Dry-S Thin Cray Satur	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	dicator is sur	fficient) Salt Cru Biotic C Aquatic Hydroge Y Oxidized Presence Recent Plowed	ust (B11) rust (B12) Invertebren Sulfide d Rhizospe e of Redu fron Redu Soils (C6	c) rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in	HUDR	Secondary Ir	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) fish Burrows (C8) reation Visible on
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	dicator is sur	fficient) Salt Cru Biotic C Aquatic Hydroge Y Oxidized Presence Recent Plowed	ust (B11) rust (B12) Invertebren Sulfide d Rhizospe e of Redu fron Redu Soils (C6	c) rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in	HUDR	Secondary Ir	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) fish Burrows (C8) ration Visible-on- al Imagery (C9)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	dicator is sur	fficient) Salt Cru Biotic C Aquatic Hydroge Y Oxidized Presence Recent Plowed	ust (B11) rust (B12) Invertebren Sulfide d Rhizospe e of Redu fron Redu Soils (C6	c) rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in	HUDR	Secondary Ir Wate Sedin Drair Drair Dry-S Thin Cray Satur Aeric Shall FAC	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) fish Burrows (C8) ration Visible on al Imagery (C9) ow Aquitard (D3) Netural Test (D5)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (dicator is sur	fficient) Salt Cru Biotic C Aquatic Hydroge Y Oxidized Presence Recent Plowed Other (E	est (B11) rust (B12) Invertebren Sulfide d Rhizospe e of Redu lron Redu Soils (C6)	c) rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in	HUDR	Secondary Ir Wate Sedin Drair Drair Dry-S Thin Cray Satur Aeric Shall FAC	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) fish Burrows (C8) retion Visible-on al Imagery (C9) ow Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (dicator is sur iverine) (Nonriverine)	fficient) Salt Cru Biotic C Aquatic Hydroge Oxidized Presence Recent Plowed Other (E	ast (B11) rust (B12) Invertebren Sulfide d Rhizospe e of Redu Soils (C6 Explain in	c) rates (B13) c Odor (C1) cheres (C3) uced Iron (Cuction in	HUDR	Secondary Ir Wate Sedin Drair Drair Dry-S Thin Cray Satur Aeric Shall FAC	ndicators (2 or more required) or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) fish Burrows (C8) ration Visible on al Imagery (C9) ow Aquitard (D3) Netural Test (D5)

Remarks WEAK WETUND HYDROLOGY INDICATORS.

North State Resources Wetland Determination Data Form - Arid W	/est Reg	ion		Habitat Type GRASSLAND Wetland Type SEASONAL WOLD
Project/Site:Sisk Dam Corrective Action Project Applicant/Owner:U.S. Bureau of Reclamation Investigator(s):J. Colescott Landform (hillslope, terrace, etc.)MINOLDEBLES Subregion (LRR)LRR-C Are climatic/hydrologic conditions on the site typical for this to the regetation	So ime of year	Local reli il Map Unit N ? <u>Y 65</u> (tbed? Are no	ef (concave lame: X e If no, explain	State: CA Sampling Point: SI A, convex, none) CONCAVE Slope % O-Z EVO FJUYENTS, Ext. CRAVE. T in in remarks.) Instances present? Wiss
Summary of Findings (Attach site map showing Hydrophytic vegetation? Hydric soil? Hydric soil? Hydric soil?				
USACE Jurisdiction Adjacent to Waters Tributary to Waters Explain:	ed (with inte	rstate comm	erce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour Feature Designation: Perennial Intermittent Financial Drainage Artificial Drain	Ordin	nary High Wa Blue-lin	ater Mark Mark Mark e on USGS	apped
Remarks SMALL POLYGON WHAT OUT & THE HORDEUM 15 COUSE DP 30 AS UPLAND	EARL	tu TH	E UP	LAND GRASSES FELL T. WEILAND.
Vegetation Tree Stratum (use scientific names) 1. 2. 3. 50%= 20%= Total Cover: Sapling/Shrub Stratum (use scientific names) 1. 2. 2.	% Cover		Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: (B) Percent of dominant species that are OBL, FACW, or FAC: (AB) Prevalence Index Worksheet Total % Cover of: Multiply by
3. 4. 50%= Z0%= Total Cover: Herb Stratum (use scientific names) 1. Hordrum I Perinom 2. 3. 4.	% Cover [Ó0	Species?	Status FAC	OBL Species x 1 = FACW Species x 2 = FAC Species x 4 = UPL Species x 5 = Column Totals (A) Prevalance Index = B/A =
5	% Cover	Species?		Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation?

Soils	
Profile Description: (Describe to the depth needed to document the indicator or confir Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type 1 Loc2 0 - 6 2.59 6/2 50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Texture Remarks GRAVELLY LOAM (HARD
1Types: C = Concentration D = Depletion RM = Reduced Matrix 2Location: PL = Pore Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)	Lining RC = Root Channel M = Matrix Indicators for Problematic Hydric Soils ³
Histosol (A1) Sandy Gleyed Matrix (S4) Histic Epipedon (A2) Sandy Redox (S5) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (AG) (LRR C) Stratified Layers (AG) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Vernal Pools (F9)	1 cm Muck (A9) (LRR C)2 cm Muck (A10) (LRR B)Reduced Vetric (F18) Red Parent Materials (TF2) Vegetated Sand/Gravel Bars Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present.
Hydrology Wetland Indicators	
Primary Indicators (Any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)
Field Observations Surface Water Present? Yes No Depth (inches) Wetland Water Table Present? Yes No Depth (inches) (includes capill Saturation Present? Yes No Depth (inches) (includes capill Describe Recorded Data (stream gauge, monitoring well, aerial photos, and previous inspec	

North State Resources			Habitat Type _ GRASSUM D
Wetland Determination Data Form - Arid W	Vest Rec	ion	Wetland Type SEASONAL WTUS
Project/Site: Sisk Dam Corrective Action Project		NAME OF THE PARTY	
Applicant/Owner: U.S. Purcou of Peolemetics		City/County: Merced	
Applicant/Owner:U.S. Bureau of Reclamation Investigator(s):J. Colescott			State. OA Camping Form.
Landform (hillslope, terrace, etc.) MINOR DEPRES	5/00	Local relief (concesses	CONVEX Slone % 2%
Subregion (LRR)LRR-C	So	il Man Unit Name:	rafluverte Very Gravelly
Are climatic/hydrologic conditions on the site typical for this t	ime of year	MES (If no explain	in in remarks.)
Are vegetation N, soil N, or hydrology N signifi			
Are vegetation N, soil N, or hydrology N natura	ally problem	atic? (If needed, explain	n any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation? YES Hydric soil? YES Wet	sampling p	oint locations, transects	important features, etc.) d area a wetland?
USACE Jurisdiction Adjacent to Waters Isolate Explain:	ed (with inte	erstate commerce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot	her Wat	ters of the Unit	ed States"
Indicators: Defined bed and bank Scour	Ordin	nary High Water Mark M	apped
Feature Designation: Perennial Intermittent E	phemeral	Blue-line on USGS	Quad
	lage	Navigable Water	<u> </u>
Remarks	WER	B THE 2	WETTEND PARAMETERS.
/	1-00.0	17 -11/12 3	pretotion primary.
Vegetation	Absolute	Dominant Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	Absolute % Cover	Dominant Indicator Species? Status	Number of dominant species
1/			that are OBL, FACW, or FAC:(A)
2			Total number of dominant species 3
3			across all strata: (B)
50%= Total Cover:			Percent of dominant species that
Sapling/Shrub Stratum (use scientific names)	% Cover	Species? Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
1			Prevalence Index Worksheet
2			Total % Cover of: Multiply by
3	/ 		OBL Species x1 =
4	-		FACW Species x2=
50%=		0 1 0 0 1	FAC Species x3 =
Herb Stratum (use scientific names) 1. Lepi dium latifolium	% Cover 35	Species? Status	FACU Species x4 =
2 Braws hordeacous			UPL Species / x5 =
3. Heliotropion curassavicum	15	4 086	Column Totals (A)(B)
4. Runex crishes		N FACE	Prevalance Index = B/A =
5. Hordeum leperinom		N FAC	
6		- INC	Hydrophytic Vegetation Indicators Dominance Text is >50%
7.			Prevalence Index is ≤ 3.01
50%= 20%= Total Cover:	2		Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	% Cover	Species? Status	Problematic Hydrophytic Vegetation ¹ (Explain)
1	74	₹.	1 Indicators of hydric soil and wetland hydrology must
2.			be present.
50%= Total Cover:			Hydrophytic Vegetation? 455
% Bare Ground in Herb Stratum — % Cover of Bio			The second state of the se

Depth Matri	(Describe to the		eded to do do dox Feature		e indicator of	r confirm	the absence	of indi	cators.	
inches) Color (mo	ist) %	Col	or (moist)	%	Type ¹	Loc2	Texture		Remarks	<u> </u>
1-4 104R47	3 90	7,5	YR5/6	10	c	m	GLEVE	ur	Why	
1-10 1018 8/2	80	107E		20	D	m	·		4	
ypes: C = Concentration	D = Depletion	RM = Re	duced Matrix	2 _l						To watered
ydric Soil Indicato	rs: (Applicable	e to all LR				_			ematic Hydric	
Histosol (A1)		-	Sandy	Gleyed M	atrix (S4)		A - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1		ck (A9) (LRR	
Histic Epipedon ((A2)	-	Sandy	Redox (S	5)				ck (A10) (LRF	(B)
Black Histic (A3)		-	Strippe	ed Matrix (S6)		(N)		Vetric (F18)	
Hydrogen Sulfide	e (A4)		Loamy	Mucky M	ineral (F1)				ent Materials (
Stratified Layers	(AG) (LRR C)	rs=	Loamy	Gleyed M	latrix (F2)				d Sand/Grave	
1 cm Muck (A9) ((LRR D)	-	Deplet	ed Matrix	(F3)		Ot	her (E	xplain in Rem	arks)
Depleted Below [Oark Surface (A	\11) _	Redox	Dark Surf	ace (F6)		721			52.725
Thick Dark Surface	ce (A12)	£4 <u>-</u>	Deplet	ed Dark S	urface (F7)				drophytic veg	
Sandy Mucky Mir	neral (S1)	-	Redox	Depression	ons (F8)		wetland r	yarolo	gy must be pi	esent.
		-	Vernal	Pools (F9)					
							- 11	-/		
Restrictive Laver (if pre-	sentl. Type.	_		Denth (In	ches) ~	Hvdr	ic Soil? Y	25		
Restrictive Layer (if pre				Depth (In	ches)	Hydr	ic Soil? <u>Y</u>	25		
Remarks HUDE				Depth (In	ches) _ ~	Hydr	ic Soil? <u>Y</u> I	25		
Remarks HUDR	IC SOIL			Depth (In	ches)	Hydr	ic Soil? 4	25		
Remarks HUDE	IC SOIL	۶.)	Depth (In	ches)	Hydr		•	ators (2 or mo	re required
Hydrology Wetland Indicators Primary Indicators (Any of	one indicator is	۶.			ches)	Hydr	Secondary	Indica	ators (2 or mo	
Hydrology Netland Indicators Primary Indicators (Any of Surface Water (A	cone indicator is	۶.	Salt Cr	ust (B11)		Hydr	Secondary W	Indica	arks (B1) (Riv	erine)
Hydrology Wetland Indicators Primary Indicators (Any of the High Water Table	cone indicator is	۶.	Salt Cr Biotic (ust (B11) Crust (B12))	Hydr	Secondary Was	Indica		erine) 2) (Riverine
Hydrology Vetland Indicators Primary Indicators (Any of the Control of the Cont	one indicator is (A2)	۶.	Salt Cr Biotic C	ust (B11) Crust (B12)) ates (B13)	Hydr	Secondary	Indicater Madimen	arks (B1) (Riv t Deposits (B2 osits (B3) (Ri	erine) 2) (Riverine verine)
Hydrology Wetland Indicators Primary Indicators (Any of the High Water Table Saturation (A3) Water Marks (B1)	one indicator is (A2) (Nonriverine)	sufficient	Salt Cr Biotic C Aquatic Hydrog	ust (B11) Crust (B12) c Invertebr) ates (B13) Odor (C1)	Hydr	Secondary Was	Indicater Madimen	arks (B1) (Riv t Deposits (B3 osits (B3) (Ri Patterns (B1	erine) 2) (Riverine verine) 0)
Hydrology Netland Indicators Primary Indicators (Any of the Control of the Cont	one indicator is (A2) (Nonriverine)	sufficient	Salt Cr Biotic C Aquatic Hydrog X Oxidize	ust (B11) Crust (B12) c Invertebr en Sulfide) ates (B13) Odor (C1) oheres (C3)		Secondary Wasses Dr. Dr. Dr.	r Indica ater Ma dimen ift Dep ainage y-Seas	arks (B1) (Riv t Deposits (B3 osits (B3) (Ri Patterns (B1 son Water Tal	erine) 2) (Riverine verine) 0) ble (C2)
Hydrology Wetland Indicators Primary Indicators (Any of the Control of the Cont	one indicator is (A2) (Nonriverine) (S (B2) (Nonriverine) (Ks (B6)	sufficient	Salt Cr Biotic (Aquation Hydrog X Oxidize	ust (B11) Crust (B12) c Invertebra en Sulfide ed Rhizosp ce of Redu) ates (B13) Odor (C1) heres (C3) uced Iron (C		Secondary Wasses Dr Dr Th	r Indica ater Ma dimen ift Dep ainage y-Seas in Mud	arks (B1) (Riv t Deposits (B3 osits (B3) (Ri Patterns (B1 son Water Tal kk Surface (C	erine) 2) (Riverine) verine) 0) ble (C2)
Hydrology Netland Indicators Primary Indicators (Any of the Control of the Cont	one indicator is (A2) (Nonriverine) (S (B2) (Nonriverine) (ks (B6) on	sufficient	Salt Cr Biotic C Aquatic Hydrog X Oxidize Presen Recent	ust (B11) Crust (B12) c Invertebr en Sulfide	odor (C1) cheres (C3) uced Iron (C		Secondary Wasses Dr Dr Th Cr	r Indica ater Ma dimen ift Dep ainage y-Seas in Mud ayfish	arks (B1) (Riv t Deposits (B3) osits (B3) (Ri Patterns (B1 son Water Tal k Surface (C8)	erine) 2) (Riverine verine) 0) ble (C2)
Hydrology Wetland Indicators Primary Indicators (Any of the Control of the Cont	one indicator is (A2) (Nonriverine) s (B2) (Nonriverine) ks (B6) on 7)	sufficient	Salt Cr Biotic C Aquatio Hydrog X Oxidize Presen Recent	ust (B11) Crust (B12) c Invertebraten Sulfide ed Rhizospice of Redu) ates (B13) Odor (C1) heres (C3) uced Iron (C action in		Secondary Wasse Dr Dr Dr Th Cr Sa	r Indica ater Ma dimen ift Dep ainage y-Seas in Muc ayfish turatio	arks (B1) (Riv t Deposits (B3 osits (B3) (Ri Patterns (B1 son Water Tal kk Surface (C	erine) 2) (Riverine verine) 0) ble (C2)
Hydrology Netland Indicators Primary Indicators (Any of the Control of the Cont	one indicator is (A2) (Nonriverine) s (B2) (Nonriverine) ks (B6) on 7)	sufficient	Salt Cr Biotic C Aquatio Hydrog X Oxidize Presen Recent	ust (B11) Crust (B12) c Invertebraten Sulfide ed Rhizospace of Redu fron Redu d Soils (C6) ates (B13) Odor (C1) heres (C3) uced Iron (C action in		Secondary Wase Secondary Secondary The Cr Sa	ater Madimen dimen dinage ainage y-Seas in Mudayfish turation	arks (B1) (Riv t Deposits (B3) osits (B3) (Ri Patterns (B1 son Water Tal k Surface (C Burrows (C8) n Visible on	erine) 2) (Riverine verine) 0) ble (C2)
Hydrology Netland Indicators Primary Indicators (Any of the Control of the Contr	one indicator is (A2) (Nonriverine) s (B2) (Nonriverine) ks (B6) on 7)	sufficient	Salt Cr Biotic C Aquatio Hydrog X Oxidize Presen Recent	ust (B11) Crust (B12) c Invertebraten Sulfide ed Rhizospace of Redu fron Redu d Soils (C6) ates (B13) Odor (C1) heres (C3) uced Iron (C action in		Secondary Wasses Dr Dr Th Cr Aaa	r Indica ater Ma dimen ift Dep ainage y-Seas in Muc ayfish turatio erial In	arks (B1) (Riv t Deposits (B3) osits (B3) (Ri Patterns (B1 on Water Tal sk Surface (C Burrows (C8) n-Visible on nagery (C9)	erine) 2) (Riverine verine) 0) ble (C2) 7)
Hydrology Netland Indicators Primary Indicators (Any of the Control of the Cont	one indicator is (A2) (Nonriverine) (S (B2) (Nonriverine) (S (B6) on (7)) (A2)	sufficient	Salt Cr Biotic C Aquatio Hydrog X Oxidize Presen Recent	ust (B11) Crust (B12) c Invertebraten Sulfide ed Rhizospace of Redu fron Redu d Soils (C6) ates (B13) Odor (C1) heres (C3) uced Iron (C action in		Secondary Wasses Dr Dr Th Cr Aaa	r Indica ater Ma dimen ift Dep ainage y-Seas in Muc ayfish turatio erial In	arks (B1) (Riv t Deposits (B3) osits (B3) (Riv Patterns (B1) son Water Tall sk Surface (C3) Burrows (C8) n Visible on nagery (C9)	erine) 2) (Riverine verine) 0) ble (C2) 7)
Hydrology Wetland Indicators Primary Indicators (Any of the Control of the Cont	one indicator is (A2) (Nonriverine) (S (B2) (Nonriverine) (ks (B6) on (7) aves (B9)	sufficient	Salt Cr Biotic C Aquatio Hydrog X Oxidize Presen Recent	ust (B11) Crust (B12) c Invertebraten Sulfide ed Rhizospace of Redu fron Redu d Soils (C6 Explain in) ates (B13) Odor (C1) heres (C3) uced Iron (C action in	4)	Secondary Wase Secondary Secondary The Draw Cr Sa Ae Sh FA	ater Madimen dimen iff Dep ainage y-Seas in Mud ayfish turation erial In allow	arks (B1) (Riv t Deposits (B3) osits (B3) (Riv Patterns (B1) son Water Tall sk Surface (C3) Burrows (C8) n Visible on nagery (C9)	erine) 2) (Riverine verine) 0) ble (C2) 7)
Hydrology Wetland Indicators Primary Indicators (Any of Surface Water (A. High Water Table Saturation (A3) Water Marks (B1) Sediment Deposite Surface Soil Crack Inundation Visible Aerial Imagery (B. Water-Stained Lease Surface Water Present?	(C Sò (C) cone indicator is cone indicator is (A2) (Nonriverine) (S (B2) (Nonriverine) (S (B6) (Nonriverine) (S (B9) (Nonriverine) (Nonriv	sufficient	Salt Cr Biotic C Aquatio Hydrog X Oxidize Presen Recent Plower Other (ust (B11) Crust (B12) c Invertebraten Sulfide ed Rhizospace of Redu Iron Redu d Soils (C6 Explain in) ates (B13) Odor (C1) heres (C3) uced Iron (C action in	4)	Secondary Wase Secondary Secondary The Draw Cr Sa Ae Sh FA	ater Madimen dimen iff Dep ainage y-Seas in Mud ayfish turation erial In allow	arks (B1) (Riv t Deposits (B3) osits (B3) (Riv Patterns (B1) con Water Tall sk Surface (C3) Burrows (C8) n-Visible on nagery (C9) Aquitard (D3) ural Test (D5)	erine) 2) (Riverine verine) 0) ble (C2) 7)

Remarks WEIUND HYDROLOGY

			Habitat Type GRASSLAND
West Reg	jion		Wetland Type UPUND
	_ City/Count	y: Merced	County Sampling Date: 9/3/89
		-	State: <u>CA</u> Sampling Point: <u>3</u>
_			- NAU 5 Clare 0/ A-2
	Local rel	ief (concave,	convex, none) None Slope % 0 2
So	oil Map Unit N	Name: X-e	TOCTOVENTS, REST. WINTER
nificantly distur	rbed? Are n	ormal circum	nstances present? 163
rally problem	atic? (If nee	eded, explair	n any answers in Remarks.)
			important features, etc.) d area a wetland? NO Other waters? NO
ated (with inte	erstate comm	nerce)	Isolated (non jurisdictional)
ther Wa	ters of t	he Unite	ed States"
r Ordin	nary High Wa	ater Mark Ma	apped
Ephemeral ainage	Navigable \	le on USGS Nater	Quad
			9
Absolute % Cover	Species?	Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
			Total number of dominant species 2 (B)
	=		
	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
			Prevalence Index Worksheet
			Total % Cover of: Multiply by
,			OBL Species x 1 =
			FACW Species x2 =
	Consiss?	Status	FAC Species x 3 =
	Species:		FACU Species x 4 =
	4	The state of the s	UPL Species x 5 =
			Column Totals (A)(B)
5			Prevalance Index = B/A =
			Hydrophytic Vegetation Indicators
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Dominance Text is >50%
			Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting
	40		data in Remarks or on a separate sheet)
O/ Cours	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
% Cover		Cidido	
	F • (10.10. V.	10011001111001	¹ Indicators of hydric soil and wetland hydrology must
% Cover	F • (10.10. V.	10011001111001	Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation?
	stime of year inficantly disturbly problem ing sampling problem in ing samp	Local rel Soil Map Unit Notes time of year? IFS (Inficantly disturbed? Are not urally problematic? (If needing sampling point location detland hydrology? NOT detland hydrology? NOT detland hydrology? NOT detland hydrology? NOT detland hydrology? Notes are not urally problematic? (If needing sampling point location detland hydrology? NOT detla	Local relief (concave Soil Map Unit Name: ** Is time of year? ** If no, explain on inficantly disturbed? Are normal circum urally problematic? (If needed, explain on year) In grampling point locations, transects, in the interestate commerce) Is sampled to the Unite of the Unite of the Unite of Unite

Solis										-		
Depth		Matrix		epth needed to doo Redox Features	S							
(inches)		r (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	<u>Texture</u>	Remarks			
<u>0-6</u> 	1048	- ³ /4						GRAVELL	1 COPU			
¹ Types: C	= Concent	ration D =	Depletion RM	= Reduced Matrix	2	Location: PL	= Pore Lir	ning RC = Root (Channel M = Mat	rix		
Hydric S	oil Indi	cators <u>:</u>	(Applicable to a	all LRRs, unless of	herwise i	noted)		Indicators for Pro	oblematic Hydric S	Soils ³		
Hi	istosol (A1	1)		Sandy	Sandy Gleyed Matrix (S4)				1 cm Muck (A9) (LRR C)			
Hi	istic Epipe	don (A2)		Sandy	Redox (S	35)		2 cm Muck (A10) (LRR B)				
BI	ack Histic	(A3)		Strippe	Stripped Matrix (S6)				Reduced Vetric (F18)			
H	ydrogen S	ulfide (A4)	Loamy	Mucky M	lineral (F1)		Red Parent Materials (TF2)				
St	ratified La	yers (AG)	(LRR C)	Loamy	Gleyed N	Matrix (F2)		Vegetated Sand/Gravel Bars				
1	cm Muck	(A9) (LRR	D)	Deplete	ed Matrix	(F3)		Other (Explain in Remarks)				
_ De	epleted Be	low Dark	Surface (A11)	Redox	Dark Sur	face (F6)						
	ick Dark			1.000		Surface (F7)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present.				
	andy Muck				Depressi							
	•	,	(/		Pools (F							
<u> </u>	<u> </u>											
Restrictiv	e Layer (if present	: Type:		Depth (I	nches)	Hydi	ric Soil? Mo				
Remark	ks No	IN H	4 DRIC	561L5	-				10.00			
	1-0	10 11	(DC)C	, ,								
Hydro	logy							8				
	d Indica		ndicator is suffi	icient)				Secondary Ind	licators (2 or more	e required)		
Çı.	rface Wat	or (A1)		Salt Cr	ıst (B11)			Water	Marks (R1) (Rive	rine)		
Surface Water (A1)			A STATE OF THE PARTY OF THE PAR	rust (B12	N.		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)					
High Water Table (A2)				and the same		*		Drift Deposits (B3) (Riverine)				
Saturation (A3)						rates (B13)						
Water Marks (B1) (Nonriverine)						e Odor (C1)		Drainage Patterns (B10)				
Sediment Deposits (B2) (Nonriverine)					- Ti	pheres (C3)		Dry-Season Water Table (C2)				
Surface Soil Cracks (B6) Presence of Reduced Iron (C4)							C4)		luck Surface (C7)			
Inundation Visible on Recent Iron Reduction in								Crayfish Burrows (C8)				
Aerial Imagery (B7) Plowed Soils (C6) Water-Stained Leaves (B9) Other (Explain in Remarks)							-	Saturation Visible on				
wa	ater-Staine	ed Leaves	(B9)	Other (E	xpiain in	Remarks)		Imagery (C9)				
									w Aquitard (D3)			
	-			<u> </u>			3-3	FAC-N	letural Test (D5)			
Field Ol								2000 83 82 32 868				
Surface Wa	ater Presen	t? Yes_	No		s)		Wetland	Hydrology? Yes	No 🔏			
Water Tabl	e Present?	Yes_	No2	Depth (inche	s)					Ę.		
Saturation I	Present?	Yes_	No_>	Depth (inche	s)	(includ	les capilla	ry fringe)				
Describ	e Recor	ded Da	ta (stream gaug	e, monitoring well, a	erial photo	os, and previo	us inspect	ions), if available:				

Remarks UPUND 1440ROLOCY.

North State Resources				Habitat Type GN+55UND
Wetland Determination Data Form - Arid W	lest Reg	ion		Wetland Type UPLAND
Project/Site: Sisk Dam Corrective Action Project	_		Moroo	
Applicant/Owner:U.S. Bureau of Reclamation		City/County	. <u>wierce</u>	State: CA Sampling Point: 34
				State. OA_ States on the state of the s
Investigator(s):J. Colescott Landform (hillslope, terrace, etc.)P\A\N		Franks-P		- Crain File Slone % 2-5
Landform (nillslope, terrace, etc.)		_ Local reli	et (concave	convex, none) (1700) (2 Stope 16
Subregion (LRR) <u>LRR-C</u> Are climatic/hydrologic conditions on the site typical for this t	Soi	Map Unit N	ame:	Belovens, extremely gravens
Are vegetation , soil , or hydrology signifi				
Are vegetation N, soil N, or hydrology N natura	illy problema	atic? (If nee	ded, explai	n any answers in Remarks.)
Summary of Findings (Attach site map showing	sampling po	oint locations	s, transects	, important features, etc.)
Hydrophytic vegetation? NO Hydric soil? NO Wet	and hydrolo	gy? NO	Is sample	d area a wetland? MO Other waters? MO
USACE Jurisdiction				
Adjacent to Waters Inbutary to Waters Isolate	ed (with inte	rstate comm	erce)	Isolated (non jurisdictional)
Explain:				
Evaluation of features designated "Ot				
Indicators: Defined bed and bank Scour	Ordin	ary High Wa	ter Mark M	apped
Feature Designation: Perennial Intermittent E _I	onemerai nage	Navigable V	e on USGS Vater	Quad
Remarks UPLAND SWALE - NO				ATELL SUPING STORM
EVENTS, BUT CURRENTLY THE				
MEST OR INDICATORS OF FLO		11-12	,,,,	SEE TO TO THE SEE SEE
TO DICTIONS OF FLO				
Vegetation	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	% Cover	Species?		Number of dominant species that are OBL, FACW, or FAC: (A)
1.				that are OBL, FACW, or FAC: (A)
2				Total number of dominant species
3		-		across all strata:(B)
50%= Total Cover:				Percent of dominant species that
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?		are OBL, FACW, or FAC:(AB)
1. Baccharis filularis	_4_	YES	IUPL	Prevalence Index Worksheef
2				Total % Cover of: Multiply by
3.				OBL Species x1 =
4				FACW Species x 2 =
an and an angle and a state of the state of	Standard St		6	FAC Species x 3 =
Herb Stratum (use scientific names)	% Cover	Species?		FACU Species x4 =
1. Bronus hordeacous 2. Hordeum leporinum	25	- N	FAC.	UPL Species x 5 =
3. Bromus madritensis	25-	· · · · · · · · · · · · · · · · · · ·	VPL	Column Totals (A)(B)
4. Bromus diandrus	10	1	UPL	Prevalance Index = B/A =
5. Erodium Dateds	5	N	UPL	
6.			1/10	Hydrophytic Vegetation Indicators Dominance Text is >50%
7.				Prevalence Index is < 3.01
50%= 45 20%= 18 Total Cover:	90	<u> </u>		Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
1	,0 00101	Opooleo:	Julio	1 Indicators of hydric soil and wetland hydrology must
2.				be present.
F00/- 000/ T-1/10				Hydrophytic Venetation? NO

% Bare Ground in Herb Stratum 🙋 % Cover of Biotic Crust ____

rofile Description: (Describe to the Depth Matrix	Redox Features		e maioator c	•			
inches) Color (moist) %	Color (moist)	<u>%</u>	Type ¹	Loc2	<u>Texture</u>		Remarks
1-3 104R 4/3 100				_	GRAVEU	4-101	try
-8 104R 3/4 100						и	
ypes: C = Concentration D = Depletion R			Location: PL				A TOTAL OF WARE
dric Soil Indicators: (Applicable to	o all LRRs, unless of	<u>herwise r</u>	noted)				tic Hydric Soils3
Histosol (A1)	Sandy	Gleyed M	fatrix (S4)		No. 1990/ ₂₀₁	Green en en 1988	49) (LRR C)
Histic Epipedon (A2)	Sandy	Redox (S	55)		100	s 2000 A	410) (LRR B)
Black Histic (A3)	Strippe	d Matrix ((S6)		50	uced Vet	
Hydrogen Sulfide (A4)	Loamy	Mucky M	lineral (F1)				Naterials (TF2)
Stratified Layers (AG) (LRR C)	Loamy	Gleyed M	Matrix (F2)		Veg	etated Sa	and/Gravel Bars
1 cm Muck (A9) (LRR D)	Deplete	ed Matrix	(F3)		Othe	er (Explai	n in Remarks)
Depleted Below Dark Surface (A11	l) Redox	Dark Surf	face (F6)				•
Thick Dark Surface (A12)	Deplete	ed Dark S	Surface (F7)				ohytic vegetation an
Sandy Mucky Mineral (S1)	Redox	Depression	ons (F8)		wetland hyd	irology n	nust be present.
	Vernal	Pools (F9	9)				
Contrictive Lover (if present): Time	-	Danth /In		1.1	Se L clip 2 oi)	
Remarks NOW - HYDRIC		Depth (Ir	nches) _	Hydr	ic Soil? <u>L</u>) É	<u> </u>	
Remarks NON - HYDRIC Hydrology Wetland Indicators	401US	Depth (In	nches)	Hydr		**	(2 or more required
Remarks NON - HYDRIC Hydrology Vetland Indicators rimary Indicators (Any one indicator is su	SOIUS ufficient)		nches)	Hydr	Secondary I	ndicators	(2 or more required
Remarks NOW - HYDRIC Hydrology Vetland Indicators rimary Indicators (Any one indicator is su Surface Water (A1)	ufficient) Salt Cru	est (B11)		Hydr	Secondary I	ndicators er Marks	(B1) (Riverine)
Remarks NON = HYDRIC Hydrology Vetland Indicators rimary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2)	ufficient) Salt Cru Biotic C	ust (B11)	2)	Hydr	Secondary I	ndicators er Marks ment De	(B1) (Riverine) posits (B2) (Riverine
Remarks Hydrology Vetland Indicators rimary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3)	ufficient) Salt Cru Biotic C Aquatic	est (B11) rust (B12 Invertebr	e) rates (B13)	Hydr	Secondary II Wate Sedi	ndicators er Marks ment De Deposits	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine)
Remarks Hydrology Vetland Indicators rimary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	ufficient) Salt Cru Biotic C Aquatic Hydroge	ist (B11) rust (B12 Invertebr	e) rates (B13) e Odor (C1)		Secondary II Wate Sedi Drift Drain	ndicators er Marks ment De Deposits nage Pat	(B1) (Riverine) posits (B2) (Riverine s (B3) (Riverine) terns (B10)
Remarks Hydrology Vetland Indicators Primary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	ufficient) Salt Cru Biotic C Aquatic Hydroge Oxidized	est (B11) rust (B12 Invertebr en Sulfide d Rhizosp	e) Pates (B13) Pates (C1) Pates (C3)		Secondary II Wate Sedi Drift Drait	ndicators er Marks ment De Deposits nage Pat	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Water Table (C2)
Remarks Hydrology Vetland Indicators Primary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6)	ufficient) Salt Cru Biotic C Aquatic Hydroge Oxidized	ist (B11) rust (B12 Invertebr en Sulfide d Rhizosp ee of Red	c) rates (B13) e Odor (C1) oheres (C3) uced Iron (C		Secondary In Water Sedi Drift Drain Dry-	ndicators er Marks ment De Deposits nage Pat Season V	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Water Table (C2) urface (C7)
Hydrology Vetland Indicators Primary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on	ufficient) Salt Cru Biotic C Aquatic Hydroge Oxidized Presence Recent	est (B11) rust (B12 Invertebren Sulfide d Rhizospe of Red	rates (B13) e Odor (C1) oheres (C3) uced Iron (Cuction in		Secondary II Wate Sedi Drift Drait Dry- Thin Cray	ndicators er Marks ment De Deposits nage Pat Season V Muck Su	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Water Table (C2) urface (C7) ows (C8)
Remarks Hydrology Vetland Indicators rimary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6)	ufficient) Salt Cru Biotic C Aquatic Hydroge Oxidized Presenc Recent Plowed	est (B11) rust (B12 Invertebren Sulfide d Rhizospee of Redu fron Redu Soils (C6	e Odor (C1) cheres (C3) uced Iron (Cuction in		Secondary II Wate Sedi Drift Draii Dry- Thin Cray	ndicators er Marks ment De Deposits nage Pat Season V Muck Su fish Burr	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) urface (C7) ows (C8) sible-on
Remarks Hydrology Vetland Indicators rimary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	ufficient) Salt Cru Biotic C Aquatic Hydroge Oxidized Presenc Recent Plowed	est (B11) rust (B12 Invertebren Sulfide d Rhizospee of Redu fron Redu Soils (C6	rates (B13) e Odor (C1) oheres (C3) uced Iron (Cuction in		Secondary II Wate Sedi Drift Draii Dry- Thin Cray Satu	er Marks ment De Deposits nage Pat Season V Muck Su fish Burr ration Vi	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) urface (C7) ows (C8) sible-on
Remarks Hydrology Vetland Indicators rimary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	ufficient) Salt Cru Biotic C Aquatic Hydroge Oxidized Presenc Recent Plowed	est (B11) rust (B12 Invertebren Sulfide d Rhizospee of Redu fron Redu Soils (C6	e Odor (C1) cheres (C3) uced Iron (Cuction in		Secondary II Wate Sedi Drift Drain Thin Cray Satu Aeri	ndicators er Marks ment De Deposits nage Pat Season V Muck Su fish Burr ration Vi al Image	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Water Table (C2) urface (C7) ows (C8) sible-on ry (C9)
Primary Indicators Primary Indicators (Any one indicator is sue Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	ufficient) Salt Cru Biotic C Aquatic Hydroge Oxidized Presenc Recent Plowed	est (B11) rust (B12 Invertebren Sulfide d Rhizospee of Redu fron Redu Soils (C6	e Odor (C1) cheres (C3) uced Iron (Cuction in		Secondary II Wate Sedi Drift Drain Thin Cray Satu Aeri	ndicators er Marks ment De Deposits nage Pat Season V Muck Su fish Burr ration Vi al Image	(B1) (Riverine) posits (B2) (Riverine) terns (B10) Vater Table (C2) urface (C7) ows (C8) sible-on ry (C9) tard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	ufficient) Salt Cru Biotic C Aquatic Hydroge Oxidized Presenc Recent Plowed	est (B11) rust (B12 Invertebren Sulfide d Rhizospe e of Redu fron Redu Soils (C6 explain in	e Odor (C1) cheres (C3) uced Iron (Cuction in	24)	Secondary II Wate Sedi Drift Drain Thin Cray Satu Aeri	er Marks ment De Deposits nage Pat Season V Muck Su fish Burr ration Vi al Image low Aqui Netural	(B1) (Riverine) posits (B2) (Riverine) terns (B10) Vater Table (C2) urface (C7) ows (C8) sible-on ry (C9) tard (D3)
Hydrology Netland Indicators Primary Indicators (Any one indicator is sue Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Jifficient) Salt Cru Biotic C Aquatic Hydroge Oxidized Presenc Recent Plowed Other (E	ast (B11) rust (B12) Invertebren Sulfided Rhizospe of Redultron Redultron Soils (C6) Explain in	e Odor (C1) cheres (C3) uced Iron (Cuction in	24)	Secondary II Wate Sedi Drift Drain Thin Cray Satu Aeri Shal	er Marks ment De Deposits nage Pat Season V Muck Su fish Burr ration Vi al Image low Aqui Netural	(B1) (Riverine) posits (B2) (Riverine) terns (B10) Vater Table (C2) urface (C7) ows (C8) sible-on ry (C9) tard (D3)
Primary Indicators Primary Indicators (Any one indicator is surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	### Depth (inche	est (B11) rust (B12) Invertebren Sulfided Rhizospee of Redu Soils (C6) Explain in	e Odor (C1) cheres (C3) uced Iron (Cuction in S) Remarks)	24)	Secondary II Wate Sedi Drift Draii Cray Satu Aeri Shal FAC	er Marks ment De Deposits nage Pat Season V Muck Su fish Burr ration Vi al Image low Aqui Netural	(B1) (Riverine) posits (B2) (Riverine) terns (B10) Vater Table (C2) urface (C7) ows (C8) sible-on ry (C9) tard (D3)

North State Resources		Habitat Type GRASSLAND
Wetland Determination Data Form - Arid West Region	l W	Vetland Type SEASONAL WILD
		, ,
Project/Site: Sisk Dam Corrective Action Project City/Cou	nty: Merced County	Sampling Date: 47/19/0
Applicant/Owner:U.S. Bureau of Reclamation		State: <u>CA</u> Sampling Point: <u>35</u>
Investigator(s):		0
Landform (hillstope, terrace, etc.) Local	elief (concave, convex, non	e) CONCLUE Slope % 2-4/
Subregion (LRR)LRR-C Soil Map Un	t Name: Xerofluxa	ats Extremely Gravell
Are climatic/hydrologic conditions on the site typical for this time of year? 455	(If no, explain in remarks.)	
Are vegetation N, soil N, or hydrology N significantly disturbed? Are	normal circumstances pres	ent? YKS
Are vegetation N, soil N, or hydrology N naturally problematic? (If r	eeded, explain any answer	s in Remarks.)
Summary of Findings (Attach site map showing sampling point location	one transacts important fea	atures etc.)
Hydrophytic vegetation? 4E5 Hydric soil? 4E5 Wetland hydrology? 4E	S le campled area a wetla	and of FeS Other waters? No
Tryuno son: 11-2 Tryuno son: 11-2 Treliand Tryuno soy: 17-2	is sampled area a work	
USACE Jurisdiction	N. S. VOID-1912-1919	
Adjacent to Waters Tributary to Waters Isolated (with interstate con Explain:	nmerce) Isolated (no	n jurisdictional)
Evaluation of features designated "Other Waters of	the United States	,"
Indicators: Defined bed and bank Scour Ordinary High		
Feature Designation: Perennial Intermittent Ephemeral Blue	line on USGS Quad	
Natural Drainage Artificial Drainage Navigabl	e Water	
Remarks DEPRESSIONAL UNDFORM METE	5 itte 3-	PARAMETER WETCHIN
DETRESSIONAL CINOTORIC MODEL	, 10,12	(-)
TEST.		
	I be to	- Tast Workshoot
	in maiodioi	ce Test Worksheet f dominant species
Tree Stratum (use scientific names) <u>% Cover Species</u> 1	? Status Number of that are O	BL, FACW, or FAC: 3 (A)
2.	Total num	ber of dominant species 4
3.	across all	strata: (B)
50%=	D	deminant energies that
Sapling/Shrub Stratum (use scientific names) % Cover Species	? Status Percent of are OBL.	dominant species that 75 (AB)
1. Atroplex lentifornis 5 Y	FAO	
2.	Prevalence Total % Co	e Index Worksheet over of: Multiply by
3	OBL Spec	
4	FACW Sp	
50%=2.15	FAC Spec	
Herb Stratum (use scientific names)	Status FACU Spec	
1. Hardeum leparinum 40 4ES	PAC 1	411 March 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 Bronus hordeacous 20 4		and a state of the
3. Heliotropion curassavioum 20	O.BL Column To	STANDARD CO ACTUAL CO
4. Grindelia camporum 10 NO	17100	e Index = B/A =
5. Lipidium latifolium 5 N	FACW Hydrophy	tic Vegetation Indicators
6. Gradium botrys 5 N	UP Dor	minance Text is >50% valence Index is ≤ 3.01
7	Pre	rphological Adaptations (provide supporting
50%=_50 20%= 2x Total Cover: 108	dat	a in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names)	Status Pro	blematic Hydrophytic Vegetation¹ (Explain) of hydric soil and wetland hydrology must
1	be present	
2	11-00-400-00-00-00-00-00-00-00-00-00-00-00	
50%= Total Cover:	Hydrophy	tic Vegetation? <u>YES</u>
% Bare Ground in Herb Stratum O % Cover of Biotic Crust 15	1.	

Soils				Sampling Point 35
Profile Description: (Describe to the de	pth needed to document the Redox Features	e indicator or con	firm the absence of ind	icators.
(inches) Color (moist) %	Color (moist) %	Type ¹ Loc	Texture GRAVELLY	Remarks D two
3-8 1042 5/4 97 7	5 YR 5/6 3	C N	<u>n</u>	11
1Types: C = Concentration D = Depletion RM	= Reduced Matrix 2	Location: PL = Por	e Lining RC = Root Ch	annel M = Matrix
Hydric Soil Indicators: (Applicable to a	Ill LRRs, unless otherwise	noted)	Indicators for Prob	lematic Hydric Soils ³
Histosol (A1)	Sandy Gleyed N	Matrix (S4)	1 cm Mu	ck (A9) (LRR C)
Histic Epipedon (A2)	Sandy Redox (S	S5)	2 cm Mu	ck (A10) (LRR B)
Black Histic (A3)	Stripped Matrix	(S6)	Reduced	l Vetric (F18)
Hydrogen Sulfide (A4)	Loamy Mucky M	lineral (F1)	Red Pare	ent Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy Gleyed N	Natrix (F2)	Vegetate	ed Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Depleted Matrix	(F3)	Other (E	xplain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Sur	face (F6)		
Thick Dark Surface (A12)	Depleted Dark S	Surface (F7)		ydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressi	ons (F8)	wetland hydrolo	gy must be present.
•	Vernal Pools (F9	9)		
Restrictive Layer (if present): Type:	- Donth (I	achoo)	lydric Soil? 455	
	Depth (I		<u> </u>	
Remarks WEAK, BUT SC	officient in	DICATOR	S OF MYL	SRIC SOILT,
Hydrology				
Wetland Indicators Primary Indicators (Any one indicator is suffice	vient)		Secondary Indica	ators (2 or more required)
Timaly indicators (2017) one indicator is sum	<u> </u>		Occordary maior	ALDIO (2 OF MOTO TO GAMES)
Surface Water (A1)	Salt Crust (B11)		Water M	arks (B1) (Riverine)
High Water Table (A2)	X]_ Biotic Crust (B12)	Sedimen	t Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Inverteb	ates (B13)	Drift Dep	osits (B3) (Riverine)
Water Marks (B1) (Nonnverine)	Hydrogen Sulfide	Odor (C1)	Drainage	Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizos	oheres (C3)	Dry-Seas	son Water Table (C2)
Surface Soil Cracks (B6)	Presence of Red	uced Iron (C4)	Thin Muc	ok Surface (C7)
Inundation Visible on	Recent Iron Redu	iction in	Crayfish	Burrows (C8)
Aerial Imagery (B7)	Plowed Soils (Co	<u>)</u>	Saturatio	n Visible on
Water-Stained Leaves (B9)	Other (Explain in	Remarks)	Aerial Im	nagery (C9)
A.				Aquitard (D3)
			FAC-Net	urat Test (D5)
Field Observations				<i>f</i>
Surface Water Present? Yes No_X	Depth (inches)	Wetla	and Hydrology? Yes/	No
Water Table Present? Yes No				**
Saturation Present? Yes No _>	Depth (inches)	(includes cap	illary fringe)	

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

North State Resources				Habitat Type Grassland
Wetland Determination Data Form - Arid V	Vest Rea	ion		Wetland Type UPLAND
Project/Site: Sisk Dam Corrective Action Project		City/Coup	he Morooc	County Sampling Date: 9/14/09
Applicant/Owner:U.S. Bureau of Reclamation		City/Couri	lyiviercec	State: CA Sampling Point: 36
Investigator(s):J. Colescott				
Landform (hillslope, terrace, etc.) SWALE	•	Local re	lief (concave	convex none) CONCLUE Slope % 3-5
Subregion (LRR)LRR-C	So	il Man Unit	Name: Xe	roflovents, Extremely Gravelly
Are climatic/hydrologic conditions on the site typical for this t	ime of year	YES	(If no. explai	n in remarks.)
Are vegetation $\stackrel{\begin{subarray}{c} \begin{subarray}{c} s$	cantly distur	bed? Are n	ormal circun	nstances present? YES_
Are vegetation N, soil N, or hydrology N natura				
Summary of Findings (Attach site map showing				
Hydrophytic vegetation? No Hydric soil? 455 Wet	sampling po	onit tocation	le eamnle	d area a wetland? No Other waters? NO
	———	gy: <u>1</u>		74104 0 110141111
USACE Jurisdiction				legisted (non jurisdictional)
Adjacent to Waters Inibutary to Waters Isolate Explain:	ea (with inte	rstate comn	nerce)	. Isolated (not jurisdictional)
Evaluation of features designated "Ot	her Waf	ers of t	he Unite	ed States"
Indicators: Defined bed and bank Scour _	Ordin	ary High W	ater Mark Ma	apped
Feature Designation: Perennial Intermittent Endeature Designation: Perennial Endeature Designation				Quad
Remarks Dewnsterm END				E WATER MUST
FITTER SOAK IN OR SPRE	AN A	3 1 >	EN AIDS	E HUDROPHYTTE VEG.
DISAPPEARS,	7113 00	, ,	5640	1) 10 10 10 10 10 10 10 10 10 10 10 10 10
				I = . T. (Madabasi
Vegetation Tree Stratum (use scientific names)	Absolute % Cover	Dominant Species?	Indicator	Dominance Test Worksheet Number of dominant species
1	% Cover	Species	Status	that are OBL, FACW, or FAC: (A)
2.				Total number of dominant species
3.				across all strata:(B)
50%= Total Cover:				Percent of dominant species that
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?		are OBL, FACW, or FAC:(AB)
1. Atriplex lent; formis		485	FAC	Prevalence Index Worksheef
2				Total % Cover of: Multiply by
3				OBL Species
4				FACW Species x2=
50%=			7. E. 2. (1. (1. (1. (1. (1. (1. (1. (1. (1. (1	FAC Species x3 =
Herb Stratum (use scientific names)	% Cover	Species?	. A.	FACU Species x4 =
1. Bronus d'andrus 2. B. hirdercous	20	. - 1/-	FACU	UPL Species x5=
3. E. madritensis	15	N	UPL	Column Totals (A)(B)
A Herdrum Leporinom	15	N	FAC	Prevalance Index = B/A =
5. Brassica Negra	15	N	UPL	Hydrophytic Vegetation Indicators
5. Croton Setia erus	5-	N	UPL	Dominance Text is >50%
Erodium botrys	10	2	UPL	Prevalence Index is ≤ 3.01 Morphological Adaptations1 (provide supporting
50%= Total Cover:				data in Remarks or on a separate sheet)
Voody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
·	v 			**Indicators of hydric soil and wetland hydrology must be present.
				\$1 \text{240}
50%= Total Cover:	- <u></u>			Hydrophytic Vegetation? NO

% Bare Ground in Herb Stratum ____ % Cover of Blotic Crust ____

Soils										
Profile Description: (Des	cribe to the d			indicator o	or confirm	the absence	of indi	cators.		
Depth <u>Matrix</u> (inches) <u>Color (moist)</u>		Redox Feature Color (moist)	<u>%</u>	Type ¹	Loc2	Texture		R	emarks	
0-10 101R4/4		57R 5/6	10	Type	Pi	GRAVE	2114	_	-	
7-10 10 110 119	7.0	- 4	-10 -	<u> </u>	PL	SANTO		200		
		71	<u> </u>	·	10					
Types: C = Concentration D = I	Depletion RM	= Reduced Matrix	2 _{L00}	cation: PL	= Pore Lir	ning RC=R	oot Cha	nnel	M = Matrix	(,
lydric Soil Indicators: (Applicable to	all LRRs, unless o				Indicators fo	r Prob	ematic	Hydric Sc	oils ³
Histosol (A1)	·.	Sandy	Gleyed Mat	trix (S4)		1	em Mu	k (A9)	(LRR C)	
Histic Epipedon (A2)			Redox (S5)			20	cm Mu	k (A10	(LRR B))
Black Histic (A3)			ed Matrix (S6					Vetric		
Hydrogen Sulfide (A4)			Mucky Mine						erials (TF	2)
Stratified Layers (AG)	(LRR C).	Loamy	-	` '					Gravel B	-
1 cm Muck (A9) (LRR i			ed Matrix (F	• •			_		Remark	
Depleted Below Dark S	•	•	Dark Surfac	•				4		
Thick Dark Surface (A1	` '		ed Dark Surf	` '		³ Indicator	rs of hy	drophy	tic vegeta	ation and
Sandy Mucky Mineral (•		Depressions	٠,,		wetland h				
candy madky minorar (01)		Pools (F9)	3 (1 0)						
	Туре:		Depth (Inch	nes)	Hydi	ric Soil? Y	55			
Remarks Hydrology	Type:			nes)	Hydi					
Remarks Hydrology Wetland Indicators				nes)	Hydi	ric Soil? 47		tors (2	or more I	required)
Remarks Hydrology Wetland Indicators		cient)		nes)	Hydi	Secondary	Indica		or more I	
Remarks Hydrology Wetland Indicators Primary Indicators (Any one in		cient) Salt Cru	Depth (Inch	nes)	Hydi	SecondaryWa	Indica	ırks (B1) (Riverir	
Remarks Hydrology Wetland Indicators Primary Indicators (Any one in		cient) Salt Cru Biotic C	Depth (Inch		Hydi	Secondary Wa	Indica	irks (B1 Depos) (Riverir	ne) Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3)	dicator is suff	cient) Salt Cru Biotic C	Depth (Inch	es (B13)	Hydi	Secondary Wa Se	Indica ater Ma dimen	irks (B1 Depos osits (B) (Riverir its (B2) (ne) Riverine)
Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None	dicator is suffi	cient) Salt Cru Biotic C Aquatic Hydroge	Depth (Inch ust (B11) crust (B12) Invertebrate en Sulfide O	es (B13)	Hydi	Secondary Wasses	Indica	rks (B1 Depos osits (B Patterr) (Riverir its (B2) (3) (Riveri	ne) Riverine) ine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3)	dicator is suffi verine) (Nonriverine)	cient)Salt CruBiotic CoAquaticHydrogeOxidize	Depth (Inch	es (B13) odor (C1) eres (C3)		Secondary Wa Se Dri Dra Dra	r Indica ater Ma diment ft Depo ainage y-Seas	orks (B1 Depos osits (B Patterr on Wat) (Riverir its (B2) (3) (Riveri is (B10)	ne) Riverine) ine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2)	dicator is suffi verine) (Nonriverine)	cient) Salt Cru Biotic C Aquatic Hydroge Oxidize Presence	Depth (Inch ust (B11) crust (B12) Invertebrate en Sulfide O d Rhizosphe ce of Reduce	es (B13) odor (C1) eres (C3) ed Iron (C		Secondary Wasse Dri Dra Dry	Indica ater Ma diment ft Depo ainage y-Seas in Muc	nrks (B1 Depos osits (B Patterr on Wat k Surfa) (Riverir its (B2) (3) (Riveri as (B10) er Table ce (C7)	ne) Riverine) ine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6)	dicator is suffi verine) (Nonriverine)	cient) Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent	Depth (Inch ust (B11) crust (B12) Invertebrate en Sulfide O d Rhizosphe	es (B13) odor (C1) eres (C3) ed Iron (C		Secondary Wa Se Dri Dra Dry Thi	r Indica ater Ma diment ft Depo ainage y-Seas in Muc	orks (B1 Depososits (B Pattern on Wat k Surfa) (Riverir its (B2) (3) (Riveri is (B10) er Table ce (C7) s (C8)	ne) Riverine) ine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on	dicator is suffi verine) (Nonriverine)	cient) Salt Cru Biotic C Aquatic Hydrog Oxidize Presenc Recent Plowed	Depth (Inch ust (B11) crust (B12) Invertebrate en Sulfide O d Rhizosphe ce of Reduce Iron Reducti	es (B13) dor (C1) eres (C3) ed Iron (C		Secondary Wa Se Dri Dra Dry Cra	Indicater Madiment of Deposition of Muchaylish Induction	nrks (B1 Depos osits (B Patterr on Wat k Surfa) (Riverir its (B2) (3) (Riveri is (B10) er Table ce (C7) s (C8)	ne) Riverine) ine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	dicator is suffi verine) (Nonriverine)	cient) Salt Cru Biotic C Aquatic Hydrog Oxidize Presenc Recent Plowed	Depth (Inch ust (B11) crust (B12) invertebrate en Sulfide O d Rhizosphe ce of Reduce fron Reducti I Soils (C6)	es (B13) dor (C1) eres (C3) ed Iron (C		Secondary Wasse Dri Dra Dry Thi Cra Saa	Indica ater Ma diment ft Depo ainage y-Seas in Muc ayfish i turation	orks (B1 Depose Desits (B Pattern On Wat k Surfa Burrows	(Riverir its (B2) (3) (Riverins (B10) er Table ce (C7) s (C8) e-on C9)	ne) Riverine) ine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	dicator is suffi verine) (Nonriverine)	cient) Salt Cru Biotic C Aquatic Hydrog Oxidize Presenc Recent Plowed	Depth (Inch ust (B11) crust (B12) invertebrate en Sulfide O d Rhizosphe ce of Reduce fron Reducti I Soils (C6)	es (B13) dor (C1) eres (C3) ed Iron (C		Secondary Wa Se Dri Dra Dry Thi Cra Ae	Indicater Madiment of Deposition Muchayfish Inturation allow American Impallow Impal	nrks (B1 Depos posits (B Pattern on Wat k Surfa Burrows n Visible agery () (Riverir its (B2) (3) (Riveri is (B10) er Table ce (C7) s (C8) e-on C9)	ne) Riverine) ine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6 Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (dicator is suffi verine) (Nonriverine)	cient) Salt Cru Biotic C Aquatic Hydrog Oxidize Presenc Recent Plowed	Depth (Inch ust (B11) crust (B12) invertebrate en Sulfide O d Rhizosphe ce of Reduce fron Reducti I Soils (C6)	es (B13) dor (C1) eres (C3) ed Iron (C		Secondary Wa Se Dri Dra Dry Thi Cra Ae	Indicater Madiment of Deposition Muchayfish Inturation allow American Impallow Impal	orks (B1 Depose poits (B1 Patternon Watek Surfa Burrows TVisible agery (Aquitaro	(Riverir its (B2) (3) (Riverin its (B10) er Table ce (C7) s (C8) e-on C9) i (D3) et (D5)	ne) Riverine) ine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (dicator is suffi verine) (Nonriverine)	cient) Salt Cru Biotic C Aquatic Hydrog Oxidize Presenc Recent Plowed	Depth (Inch ust (B11) crust (B12) Invertebrate en Sulfide O d Rhizosphe ce of Reduct Iron Reducti Soils (C6)	es (B13) dor (C1) eres (C3) ed Iron (C	24)	Secondary Wa Se Dri Dra Dry Thi Cra Ae	Indicater Madiment off Dependence of Muchayfish Interaction and Immallow A C-Nett	nrks (B1 Depos posits (B Patterr on Wat k Surfa Burrows r Visibl agery ((Riverir its (B2) (3) (Riverin its (B10) er Table ce (C7) s (C8) e-on C9) i (D3) et (D5)	ne) Riverine) ine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (dicator is suffi verine) (Nonriverine))	cient) Salt Cru Biotic C Aquatic Hydrog Oxidize Presenc Recent Plowed Other (E	Depth (Inch ust (B11) crust (B12) Invertebrate en Sulfide O d Rhizosphe ce of Reduce Iron Reducti I Soils (C6) Explain in Re	es (B13) dor (C1) eres (C3) ed Iron (C	24)	Secondary Wase Se Dri Dra Dry Thi Cra Ae Sha	Indicater Madiment off Dependence of Muchayfish Interaction and Immallow A C-Nett	orks (B1 Depose poits (B1 Patternon Watek Surfa Burrows TVisible agery (Aquitaro	(Riverir its (B2) (3) (Riverin its (B10) er Table ce (C7) s (C8) e-on C9) i (D3) et (D5)	ne) Riverine) ine)

			*0	
North State Resources				Habitat Type (3RASSLAND)
Wetland Determination Data Form - Arid V	Vest Rec	ion		Wetland Type SEASONAL WILD
	_			. ,
Project/Site: Sisk Dam Corrective Action Project		City/Count	ty: Merce	d County Sampling Date: 7/7/69
Applicant/Owner:U.S. Bureau of Reclamation				State: <u>CA</u> Sampling Point: <u>37</u>
Investigator(s):J. Colescott				
Landform (hillslope, terrace, etc.) SWAVE		Landra	lief /eeneeur	Slone % 2-4
Subregion (LRR)LRR-C				
Are climatic/hydrologic conditions on the site typical for this				
Are vegetation N, soil N, or hydrology N signif	icantly distu	rbed? Are r	ormal circui	mstances present?
Are vegetation N, soil N, or hydrology N natura				
- The regulation, con, or injurcing) indicate				,
Summary of Findings (Attach site map showing				
Hydrophytic vegetation? 455 Hydric soil? 455 Wel	land hydrolo	av? 4ES	ls sample	ed area a wetland? 45 Other waters? NO
USACE Jurisdiction				
Adjacent to Waters Tributary to Waters Isolat	ed (with inte	erstate comn	nerce)	_ Isolated (non jurisdictional)
Explain: CONNECTED VIA UPLAN	SWA	LES, A	DI DI	TCHES
Evaluation of features designated "Ot	her Wat	ters of t	he Unit	ed States"
Indicators: Defined bed and bank Scour	Ordin	ary High W	ater Mark M	lapped
Feature Designation: Perennial Intermittent E	phemeral_	Blue-lir	ne on USGS	G Quad'
Natural Drainage Artificial Drai				
APPEAR TO CONTINUE DOWN	TH I	DATE	GUA	PARAMATERS. DOES NOT
100,00 /00102	CA > Due	2	1	F-1200F
APPEAR TO CONTINUE DOWN	7 LOPUZ	10	my i	DIHER FRANCE.
			CO2 1 22 67	Dominance Test Worksheet
Vegetation	Absolute		Indicator	Number of dominant species
Tree Stratum (use scientific names)	% Cover	Species?	Status	that are OBL, FACW, or FAC: (A)
1				
2				Total number of dominant species
3				across all strata:
50%=				Percent of dominant species that
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
1. Atroplex lentatornis	5	YES.	FAC	ale obc, mon, or mo
				Prevalence Index Worksheet
2. Baccharis filularis		465	UPC	Total % Cover of: Multiply by
3				OBL Species
4				FACW Species x2=
50%=5	10			7
Herb Stratum (use scientific names)	% Cover	Species?	Status	/ /
1. Vulpia bromo des	25	165	FACW	FACU Species x4 =
		465		UPL Species x5=
Hordeom Jeporinon			FAC	Column Totals (A)(B)
3. Bromus d'andris	25	465	UPL	Prevalance Index = B/A =
1. B. hord pacay	15	N	FACU	Prevalance index – b/A –
brassica negra	P	<u>N</u> _	UPL	Hydrophytic Vegetation Indicators
, , , ,				Dominance Text is >50%
·				7 Prevalence Index is ≤ 3.01
F00/- 200/- T-110	IDA			Morphological Adaptations (provide supporting
50%= Total Cover:		0 <u>2</u> 2012-24		data in Remarks or on a separate sheet)
Voody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must
				be present.
				YE!
50%= 70%= Total Cover				Hydrophytic Vegetation?

Total Cover:

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust _

Profile Description: (Des		Redox Features			1.21		
(inches) Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
1-10 107R44	85	7.54R5/6	10	· 75	PL	GRAVE WY	Loke
		7.5 YR 41	_5_	D	R	<u> </u>	
Types: C = Concentration D = I	Depletion	RM = Reduced Matrix	2	Location: PL	= Pore Lini	ng RC = Root Cha	nnel M = Matrix
ydric Soil Indicators:_(Applicable	to all LRRs, unless of	<u>herwise r</u>	noted)	!	ndicators for Proble	ematic Hydric Soils3
Histosol (A1)		Sandy	Gleyed M	fatrix (S4)			ck (A9) (LRR C)
Histic Epipedon (A2)		Sandy	Redox (S	55)		2 cm Mud	k (A10) (LRR B)
Black Histic (A3)		Strippe	d Matrix ((S6)		Reduced	Vetric (F18)
Hydrogen Sulfide (A4)		Loamy	Mucky M	ineral (F1)			nt Materials (TF2)
Stratified Layers (AG) ((LRR C).	Loamy	Gleyed M	fatrix (F2)			d Sand/Gravel Bars
1 cm Muck (A9) (LRR I	D)	Deplete	ed Matrix	(F3)		Other (Ex	φlain in Remarks)
Depleted Below Dark S	Surface (A	11) Redox	Dark Surf	face (F6)			
Thick Dark Surface (A1	12)	Deplete	d Dark S	urface (F7)			drophytic vegetation and
Sandy Mucky Mineral ((S1)	Redox	Depression	ons (F8)		wetland hydrolog	gy must be present.
		Vernal	Pools (F9	9)			
	Type:		Depth (In	nches)	Hydri	c Soil? YES	
Remarks HYDEIC			Depth (In	nches)	Hydri	c Soil? ₹₹S	
Remarks HYDEIC Hydrology Wetland Indicators	501	15	Depth (In	nches)	Hydri		fors (2 or more required
Hydrology Netland Indicators Primary Indicators (Any one in	501	usufficient)		nches)	Hydri	Secondary Indica	
Hydrology Netland Indicators Primary Indicators (Any one in Surface Water (A1)	501	sufficient).	st (B11)		Hydri	Secondary Indica	rks (B1) (Riverine)
Hydrology Netland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2)	501	sufficient) Salt Cru Biotic Cr	st (B11))	Hydri	Secondary Indica Water Ma Sediment	rks (B1) (Riverine) Deposits (B2) (Riverine
Hydrology Netland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3)	SO!	sufficient) Salt Cru Biotic Cru Aquatic	st (B11) rust (B12) Invertebra) ates (B13)	Hydri	Secondary Indica Water Ma Sediment Drift Depo	arks (B1) (Riverine) Deposits (B2) (Riverine osits (B3) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None	dicator is:	sufficient) Salt Cru Biotic Cru Aquatic Hydroge	st (B11) rust (B12) Invertebra) ates (B13)		Secondary Indica Water Ma Sediment Drift Depo	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10)
Hydrology Netland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2)	dicator is siverine)	sufficient) Salt Cru Biotic Cru Aquatic Hydroge Doxidized	st (B11) rust (B12) Invertebra en Sulfide) ates (B13) Odor (C1) oheres (C3)		Secondary Indica Water Ma Sediment Drift Depo	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) Surface Soil Cracks (B6)	dicator is siverine)	sufficient) Salt Cru Biotic Co Aquatic Hydroge Dy Oxidized Presence	st (B11) rust (B12) Invertebra in Sulfide if Rhizosp e of Redu) ates (B13) Odor (C1) oheres (C3) uced Iron (C		Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) K Surface (C7)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2)	dicator is siverine)	sufficient) Salt Cru Biotic Co Aquatic Hydroge Presence Recent I	st (B11) rust (B12) Invertebra en Sulfide) ates (B13) Odor (C1) oheres (C3) uced Iron (C		Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) & Surface (C7) Burrows (C8)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on	dicator is siverine) (Nonriverine)	sufficient) Salt Cru Biotic Co Aquatic Hydroge Description Recent I	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6) ates (B13) Odor (C1) oheres (C3) uced Iron (C		Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) K Surface (C7)
Hydrology Netland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	dicator is siverine) (Nonriverine)	sufficient) Salt Cru Biotic Co Aquatic Hydroge Description Recent I	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6) ates (B13) Odor (C1) oheres (C3) uced Iron (Cuction in		Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E Saturation Aerial Im-	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) & Surface (C7) Burrows (C8)
Hydrology Netland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	dicator is siverine) (Nonriverine)	sufficient) Salt Cru Biotic Co Aquatic Hydroge Presence Recent I Plowed Other (E	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6) ates (B13) Odor (C1) oheres (C3) uced Iron (Cuction in		Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E Saturation Aerial Ima	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) K Surface (C7) Burrows (C8) TVisible-on agery (C9)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) Surface Soil Cracks (B6 Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (dicator is siverine) (Nonriverine)	sufficient) Salt Cru Biotic Co Aquatic Hydroge Presence Recent I Plowed Other (E	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6) ates (B13) Odor (C1) oheres (C3) uced Iron (Cuction in	(4)	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Much Crayfish E Saturation Aerial Image Shallow A FAC-Netu	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) & Surface (C7) Burrows (C8) On Visible on Agery (C9) Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) Surface Soil Cracks (B6 Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (Incident Company (B7) Water-Stained Leaves (Incident Company (B7)	dicator is siverine) (Nonriverine)	sufficient) Salt Cru Biotic Co Aquatic Hydroge Presence Recent I Plowed Other (E	st (B11) rust (B12) Invertebra en Sulfide I Rhizosp e of Redu ron Redu Soils (C6) ates (B13) Odor (C1) oheres (C3) uced Iron (Cuction in	(4)	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E Saturation Aerial Ima	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) & Surface (C7) Burrows (C8) On Visible on Agery (C9) Aquitard (D3)
Hydrology Wetland Indicators Primary Indicators (Any one in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (None Sediment Deposits (B2) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (Incident Company (B7) Water-Stained Leaves (Incident Company (B7))	dicator is siverine) (Nonriverine)	sufficient) Salt Cru Biotic C Aquatic Hydroge Presence Recent I Plowed Other (E	st (B11) rust (B12) Invertebra in Sulfide if Rhizosp ie of Redu ron Redu Soils (C6 ixplain in) ates (B13) Odor (C1) oheres (C3) uced Iron (Cuction in	24)	Secondary Indica Water Ma Sediment Drift Depo Drainage Dry-Sease Thin Much Crayfish E Saturation Aerial Image Shallow A FAC-Netu	arks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) & Surface (C7) Burrows (C8) On Visible on Agery (C9) Aquitard (D3)

North State Resources		•		Habitat Type (S. PSASS LAND)
Wetland Determination Data Form - Arid V	_			Wetland Type VPLAND
Project/Site: Sisk Dam Corrective Action Project		City/Count	y: Merced	County Sampling Date: 7/1/01
Applicant/Owner:U.S. Bureau of Reclamation				State: <u>CA</u> Sampling Point: <u>38</u>
Investigator(s):J. Colescott				
Landform (hillslope, terrace, etc.) Sware		_ Local rel	ief (concave	convex, none) CONCAUE Slope % 6-5
Subregion (LRR)LRR-C	So	il Map Unit I	Vame: Xe	rofluvents, Ext. Gravelly
Are climatic/hydrologic conditions on the site typical for this t	time of year	7465	If no, explai	n in remarks.)
Are vegetation N, soil N, or hydrology N signifi	cantly distur	rbed? Are n	ormal circur	nstances present? 165
Are vegetation N, soil N, or hydrology N natura	ally problem	atic? (If nee	eded, explai	n any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation? NO Hydric soil? 455 Wet				
USACE Jurisdiction Adjacent to Waters Isolate Explain:	ed (with inte	erstate comm	nerce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour Feature Designation: Perennial Intermittent Element Perennial Artificial Drain	Ordin	nary High Wa Blue-lin	ater Mark Mare on USGS	apped
Remarks DOWNSLOPE FOOD & DOCUMENTS NON-WER				CLONUTE AREX DP
DEWNSLOPE FROD &	or r	DE	YRES	SIONAL AIGHT. DI
DOCUMENTS NOW-WER	bush	(and)	mon	5.
Vegetation Tree Stratum (use scientific names)	Absolute % Cover	Dominant Species?		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
2.				Total number of dominant species
3				across all strata:
50%=				Percent of dominant species that 40 (AB)
Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	are OBL, FACW, or FAC: 70 (AB)
1. Atrophex leutifornia	5	YES_	HC	Prevalence Index Worksheet
2			-	Total % Cover of: Multiply by
3	*			OBL Species x1=
l				FACW Speciesx2=
50%= 2,5 20%= 1 Total Cover:	5_			FAC Species x3 =
Herb Stratum (use scientific names)	% Cover	Species?		FACU Species ×4 =
1. Vulpia promoides		<u>- Y-</u>	FACW	17.00 openies /
Bronus hordercous	20	<u> </u>	FACU	the same was a factor of the same and the sa
3. B. madritensis	20	. 4	UPL	
1. Eradium botrus	20	<u>M.</u>	UPL	Prevalance Index = B/A =
Brassica megra	15	N_	UPZ	Hydrophytic Vegetation Indicators
i				Dominance Text is >50%
				Prevalence Index is ≤ 3.01 Morphological Adaptations¹ (provide supporting
50%= Total Cover:				data in Remarks or on a separate sheet)
	% Cover	Species?	Status	Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must
· ——————				be present.
·				110
50%= Total Gover:				Hydrophytic Vegetation? NO
Bare Ground in Herb Stratum % Cover of Biot	ic Crust_			

Soils		<u> </u>
Profile Description: (Describe to the dependent Matrix	oth needed to document the indicator or Redox Features	confirm the absence of indicators.
(inches) Color (moist) %	Color (moist) % Type ¹	<u>Loc²</u> <u>Texture</u> <u>Remarks</u>
0-12 10484/4 95 10	1/2 5 RM	M GANBY LOAM
¹ Types: C = Concentration D = Depletion RM :	= Reduced Matrix ² Location: PL =	Pore Lining RC = Root Channel M = Matrix
Hydric Soil Indicators: (Applicable to a	I LRRs, unless otherwise noted)	Indicators for Problematic Hydric Soils3
Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy Redox (S5)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Stripped Matrix (S6)	Reduced Vetric (F18)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Red Parent Materials (TF2)
Stratified Layers (AG) (LRR C).	Loamy Gleyed Matrix (F2)	Vegetated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	_X Redox Depressions (F8)	wetland hydrology must be present.
	Vernal Pools (F9)	
Destrictive Lover (if process). Tomas	Double (Instead)	Hydric Soil? NO
Restrictive Layer (if present): Type:	Depth (Inches)	_ Hydric Soil? 100
Remarks HYDRIC 5	501L5	
Hydrology		·
Wetland Indicators		
Primary Indicators (Any one indicator is suffice	ient)	Secondary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres (C3)	Dry-Season Water Table (C2)
Surface Soil Cracks (B6)	Presence of Reduced Iron (C4)	
Inundation Visible on	Recent Iron Reduction in	Crayfish Burrows (C8)
Aerial Imagery (B7)	Plowed Soils (C6)	Saturation Visible on
Water-Stained Leaves (B9)	Other (Explain in Remarks)	Aerial Imagery (C9)
1.44		Shallow Aquitard (D3)
		FAC-Netural Test (D5)
Field Observations		
Surface Water Present? Yes No 🗡	_ Depth (inches) V	Netland Hydrofogy? Yes No X/
Water Table Present? Yes No	Depth (inches)	,
Saturation Present? Yes No	Depth (inches) (includes	capillary fringe)
Describe Recorded Data (stream gauge,	monitoring well, aerial photos, and previous	inspections), if available:

Remarks

North State Resources	Vast Daw	·	147	Habitat Type GRASSIMD
Wetland Determination Data Form - Arid V Project/Site:Sisk Dam Corrective Action Project Applicant/Owner:U.S. Bureau of Reclamation		City/Count	y: Merced	Wetland Type Sampling Date: 9/14/0 State: CA Sampling Point: 39
Investigator(s):	So time of year cantly distur	il Map Unit N ? <u>\ \ E</u> (tbed? Are no	Name: XX If no, explai ormal circur	n in remarks.) nstances present? 4E5
Summary of Findings (Attach site map showing Hydrophytic vegetation? 155 Hydric soil? 155 Wet				
USACE Jurisdiction Adjacent to Waters Tributary to Waters Isolate Explain: CONNECTED UPUND Evaluation of features designated "Ot	her Wat	ters of the	he Unite	ed States"
Indicators: Defined bed and bank Scour_ Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drain	Ordin phemeral	ary High Wa	ater Mark M e on USGS	apped Quad
Remarks SMALL DEPRESSIONAL	WETC	AND.		
Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover	Dominant Species?		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
2. 3 Total Cover:				Total number of dominant species 2 (B) Percent of dominant species that 100 (AB)
Sapling/Shrub Stratum (use scientific names) 1 2	% Cover	Species?	Status	are OBL, FACW, or FAC: (AB) Prevalence Index Worksheet Total % Cover of: Multiply by
3				OBL Species x1 = FACW Species x2 =
Herb Stratum (use scientific names) 1. Vuldia Dramoides 2. Heliotropium wrassavicum		Species?	FACW	FAC Species
3. Bronus Mardencoses 4. Crodiaum botrys 5. Lepidium latifolium	15 5 5	2222	FACU FACU	Prevalance Index = B/A = Hydrophytic Vegetation Indicators
6. Drazica regra 7	95		Status	Dominance Text is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
1		Species?	Status	Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation?
50%= Total Cover: % Bare Ground in Herb Stratum				пудгорнунс чеденион+

Soils							<u>.</u>
Profile Description: (Describ	Redox	Features	he indicator		the absence o		
(inches) Color (moist)	% Color (m		Type ¹	<u>Loc2</u>	<u>Texture</u>	Remarks	
0-12 1V4R4/6 8	35 104R	1/2 10	_ 4_	_M_	SNOY	LOAM	
	75 YR	1/6 5		RC		<u> </u>	
		<u></u>					
¹ Types: C = Concentration D = Depl	etion RM = Reduced	d Matrix	² Location: PL	= Pore Lini	ng RC = Roo	ot Channel M = Mati	ńx
Hydric Soil Indicators: (App	licable to all LRRs, u	ınless otherwise	noted)		ndicators for I	Problematic Hydric S	Soils ³
Histosol (A1)		Sandy Gleyed I	Matrix (S4)		1 cm	Muck (A9) (LRR C) .
Histic Epipedon (A2)		_ Sandy Redox (2 cm	Muck (A10) (LRR	B)
Black Histic (A3)		Stripped Matrix	-			uced Vetric (F18)	
Hydrogen Sulfide (A4)		Loamy Mucky M				Parent Materials (T	F2)
Stratified Layers (AG) (LRI	R C).	Loamy Gleyed				etated Sand/Gravel	
1 cm Muck (A9) (LRR D)		Depleted Matrix				er (Explain in Rema	
Depleted Below Dark Surfa	ace (A11)	Redox Dark Sur				. (— •	•
Thick Dark Surface (A12)		Depleted Dark			3Indicators	of hydrophytic vege	tation and
Sandy Mucky Mineral (S1)	\overline{x}	Redox Depress				drology must be pre	
cardy mosty minoral (C1)	. —	Vernal Pools (F					
		veniai roois (i	ارد				
Restrictive Layer (if present): Ty		Depth (I	Inches)	Hydri	c Soil? YE	<u> </u>	
Remarks HYDeic	501L4.	Depth (I	Inches)	Hydri	c Soil? YE		
Remarks HYDEIC Hydrology		Depth (I	Inches)	Hydri	c Soil? YE	· · · · · · · · · · · · · · · · · · ·	
Remarks HYDeic	50114.	Depth (I	Inches)	Hydri		ndicators (2 or more	e required)
Hydrology Wetland Indicators	50114.	Depth (I		Hydri	Secondary II		
Hydrology Wetland Indicators Primary Indicators (Any one indicator	SOILS.	Salt Crust (B11)		Hydri	Secondary I	ndicators (2 or more	rine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator	SOILS.	Salt Crust (B11) Biotic Crust (B12)	2)	Hydri	Secondary IIWate	ndicators (2 or more	rine) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator	SOILS.	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb	2) prates (B13)		Secondary II Wate Sedi Drift	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2)	rine) (Riverine) erine)
Hydrology Wetland Indicators Primary Indicators (Any one indicato	stor is sufficient) X	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfid	2) rates (B13) e Odor (C1)		Secondary II Wate Sedi Drift Drain	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10	rine) (Riverine) erine)
Hydrology Wetland Indicators Primary Indicators (Any one indicato	stor is sufficient) X	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos	2) prates (B13) e Odor (C1) pheres (C3)		Secondary II Wate Sedi Drift Drain Dry-	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl	rine) (Riverine) erine)) e (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicato	stor is sufficient) The province of the provi	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec	2) orates (B13) e Odor (C1) opheres (C3) duced Iron (C		Secondary II Wate Sedi Drift Drain Dry-	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl Muck Surface (C7)	rine) (Riverine) erine)) e (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicato	stor is sufficient) The province of the provi	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red	2) erates (B13) e Odor (C1) pheres (C3) duced Iron (C		Secondary II Wate Sedi Drift Drain Dry- Thin Cray	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl Muck Surface (C7) fish Burrows (C8)	rine) (Riverine) erine)) e (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicato	ntor is sufficient) X ne) nnriverine) N	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Plowed Soils (C	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cluction in		Secondary II Wate Sedi Drift Drain Dry- Thin Cray Satu	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl Muck Surface (C7) fish Burrows (C8) ration Visible on	rine) (Riverine) erine)) e (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicators (Any one indicators (Any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonsurface Soil Cracks (B6)) Inundation Visible on Aerial Imagery (B7)	ntor is sufficient) X ne) nnriverine) N	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cluction in	24)	Secondary II Wate Sedi Drift Drain Dry- Thin Cray Satu Aeri	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl Muck Surface (C7) fish Burrows (C8)	rine) (Riverine) erine)) e (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicators (Any one indicators (Any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonsurface Soil Cracks (B6)) Inundation Visible on Aerial Imagery (B7)	ntor is sufficient) X ne) nnriverine) N	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Plowed Soils (C	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cluction in		Secondary II Wate Sedi Drift Drain Thin Cray Satu Aeri	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl Muck Surface (C7) fish Burrows (C8) ration Visible on al Imagery (C9)	rine) (Riverine) erine)) e (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicators (Any one indicators (Any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonsurface Soil Cracks (B6)) Inundation Visible on Aerial Imagery (B7)	ntor is sufficient) X ne) nnriverine) N	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Plowed Soils (C	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cluction in	24)	Secondary II Wate Sedi Drift Drain Thin Cray Satu Aeri	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl Muck Surface (C7) fish Burrows (C8) ration Visible on al Imagery (C9) low Aquitard (D3)	rine) (Riverine) erine)) e (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicators (Any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonsidering Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	ntor is sufficient) X ne) Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Plowed Soils (C	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cluction in	(4)	Secondary II Wate Sedi Drift Dry- Thin Cray Satu Aeri Shal	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl Muck Surface (C7) fish Burrows (C8) ration Visible on al Imagery (C9) low Aquitard (D3) -Netural Test (D5)	rine) (Riverine) erine)) e (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicators (Any one indicators (Any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Notes Soil Cracks (B6)) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations	ne) No M Dep	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Plowed Soils (C Other (Explain in	2) rates (B13) e Odor (C1) pheres (C3) duced Iron (Cluction in	(4)	Secondary II Wate Sedi Drift Dry- Thin Cray Satu Aeri Shal	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl Muck Surface (C7) fish Burrows (C8) ration Visible on al Imagery (C9) low Aquitard (D3)	rine) (Riverine) erine)) e (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicators (Any one indicators (Any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverian (B2)) Sediment Deposits (B2) (Nonriverian (B2)) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations Surface Water Present? Yes	No M Dep	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Plowed Soils (C Other (Explain in	2) prates (B13) e Odor (C1) pheres (C3) duced Iron (Cluction in 6) n Remarks)	(4)	Secondary II Wate Sedi Drift Dry- Thin Cray Satu Aeri Shall FAC	ndicators (2 or more er Marks (B1) (Rive ment Deposits (B2) Deposits (B3) (Rive nage Patterns (B10 Season Water Tabl Muck Surface (C7) fish Burrows (C8) ration Visible on al Imagery (C9) low Aquitard (D3) -Netural Test (D5)	rine) (Riverine) erine)) e (C2)

Remarks WETTAND AY DROLDGY

North State Resources Wetland Determination Data Form - Arid West Region	Habitat Type GRASUAD Wetland Type UPLAND
Project/Site: Sisk Dam Corrective Action Project City/County:	Merced County Sampling Date: 9/14/69 State: CA Sampling Point: 40
Landform (hillslope, terrace, etc.) Swarze Local relief (consumption (LRR) LRR-C Soil Map Unit Name Are climatic/hydrologic conditions on the site typical for this time of year? (If no Are vegetation), soil D, or hydrology significantly disturbed? Are normal	o, explain in remarks.)
Are vegetation, soil, or hydrology naturally problematic? (If needed Summary of Findings (Attach site map showing sampling point locations, tra	d, explain any answers in Remarks.) ansects, important features, etc.)
Hydrophytic vegetation? AUO Hydric soil? NO Wetland hydrology? NO Is USACE Jurisdiction Adjacent to Waters Isolated (with interstate commerce Explain:	e) Isolated (non jurisdictional)
Evaluation of features designated "Other Waters of the Indicators: Defined bed and bank Scour Ordinary High Water Feature Designation Perennial Intermittent Ephemeral Blue-line or Natural Drainage Artificial Drainage Navigable Water	Mark Mapped n USGS Quad er
PAIR TO DP 41.	LL WETUND. (UPLIND
Vegetation Absolute % Cover Dominant Ind Species? Stratum (use scientific names) 1. 2.	I bloom have af deminant appealace
3 Total Cover: Sapling/Shrub Stratum (use scientific names) <u>% Cover Species? Sta</u>	across all strata: (B) Percent of dominant species that 22
1	Prevalence Index Worksheet Total % Cover of: OBL Species FACW Species Multiply by X 2 =
2 Bromus diandrifensis 40 4 Ul	FAC Species
6	Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting)
50%= Z0%= Total Cover: Woody/Vine Stratum (use scientific names)	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation?

% Bare Ground in Herb Stratum ___ % Cover of Blotic Crust _

Soils					<u> </u>
Profile Description: (Describe to the depth Matrix	needed to documen Redox Features	t the indicator of	or confirm the	e absence of indic	cators.
	olor (moist) %	Type ¹	<u>Loc²</u>	Texture LOAM	Remarks
¹ Types: C = Concentration D = Depletion RM = F	Parlurad Matrix	² Location: PL	- Pore Lining	RC = Root Cha	nnel M = Matrix
Hydric Soil Indicators: (Applicable to all L					ematic Hydric Soils ³
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (AG) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Sandy Gleyer Sandy Redox Stripped Mate Loamy Mucky Loamy Gleyer Depleted Mate Redox Dark S Depleted Dar Redox Depre Vernal Pools	d Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Surface (F6) k Surface (F7) ssions (F8)		1 cm Muc 2 cm Muc Reduced Red Pare Vegetated Other (Ex	k (A9) (LRR C) k (A10) (LRR B) Vetric (F18) It Materials (TF2) If Sand/Gravel Bars plain in Remarks) drophytic vegetation and gy must be present.
Remarks NON-144De1C 2 Hydrology Wetland Indicators					fore (2) or more required
Primary Indicators (Any one indicator is sufficient Surface Water (A1) High Water Table (A2)	Salt Crust (B1 Biotic Crust (E			Water Ma	tors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Aquatic Inverte	ebrates (B13) ide Odor (C1) ospheres (C3) educed Iron (Ceduction in (C6)	4)	Drift Depo Drainage Dry-Sease Thin Mucl Crayfish E Saturation	osits (B3) (Riverine) Patterns (B10) on Water Table (C2) c Surface (C7) Burrows (C8)
Field Observations Surface Water Present? Yes No _X	Depth (inches)		Wetland Hy		ral Test (D5)
Water Table Present? Yes No X Saturation Present? Yes No X	Depth (inches)		es capillary fi	inge)	, ,
Describe Recorded Data (stream gauge, m	onitoring well, aerial ph	otos, and previou	s inspection	s), if available:	

North State Resources Wetland Determination Data Form - Arid V	Vest Rea	ion		Habitat Type CRASSIAND Wetland Type SEASONAL NILD
Project/Site: Sisk Dam Corrective Action Project		City/Count	y: Merced	County Sampling Date: 7/14/8 State: CA Sampling Point: 4
Investigator(s): J. Colescott Landform (hillslope, terrace, etc.) DEPLESS (ON) Subregion (LRR) LRR-C Are climatic/hydrologic conditions on the site typical for this to the second significant of the second significant significant of the second significant si	So time of year	il Map Unit I ? <u>YES</u> rbed? Are n	Name: BA (If no, explair ormal circum	ustra Lota 2-67. in remarks.) istances present? YES
Summary of Findings (Attach site map showing Hydrophytic vegetation? 45 Hydric soil? 45 Wet				
USACE Jurisdiction Adjacent to Waters Tributary to Waters Isolate Explain:	ed (with inte	erstate comm	nerce)	Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour Feature Designation: Perennal Intermittent Endured Drainage Artificial Drain	Ordin	nary High Wa	ater Mark Ma ne on USGS	pped
Remarks SMALL WETUND AREA 15 CONSTRICTED B	POLYC	DAD	FORU	THELI PAD HILL.
Vegetation Tree Stratum (use scientific names) 1 2	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species
3 20%= Total Cover: Sapling/Shrub Stratum (use scientific names) 1. Darcharis Salicifolia 2.	% Cover		FACW)	Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: (B) (AB)
3. 4. 50%= 7 20%= 2 Total Cover: Herb Stratum (use scientific names) 1. Lefidium latifolium 2. Marcunium Volaare	10 % Cover 60	Species?	Status FtCW	OBL Species x1= FACW Species x2 = FAC Species x3 = FACU Species x4 = UPL Species x5 =
Bronus madriteus: 5 1. Conium maculatum		N	OBL	Column Totals (A) (B) Prevalance Index = B/A = Hydrophytic Vegetation Indicators Dominance Text is >50%
50%= <u>45</u> 20%= <u>18</u> Total Cover:	90 % Cover	Species?	Status	Prevalence Index is ≤ 3.01 Morphological Adaptations¹ (provide supportine data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explaine Indicators of hydric soil and wetland hydrology must be present.
50%= 20%= Total Cover-				Hydrophytic Vegetation? <u>YES</u>

Soils						<u> </u>
Profile Description: (Describe to the Depth Matrix	e depth needed to do Redox Feature		e indicator o	or confirm	the absence o	f indicators.
(inches) Color (moist) % 5-12 10 48 72 95	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture Long	<u>Remarks</u>
0-12 1012 75	7,54R5/B	<u> </u>	A	01	LORP	
	71011-0/8			10		
¹ Types: C = Concentration D = Depletion	RM = Reduced Matrix	2	Location: PL	= Pore Lini	ing RC = Roo	of Channel M = Matrix
Hydric Soil Indicators: (Applicable	to all LRRs, unless o	therwise r	noted)		Indicators for I	Problematic Hydric Soils3
Histosol (A1)	Sandy				1 cm	Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy	-			2 cm	Muck (A10) (LRR B)
Black Histic (A3)	Strippe	ed Matrix (S6)		Red	uced Vetric (F18)
Hydrogen Sulfide (A4)	Loamy	Mucky M	ineral (F1)		Red	Parent Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy	Gleyed M	latrix (F2)		Vege	etated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Deplet	ed Matrix	(F3)		Othe	er (Explain in Remarks)
Depleted Below Dark Surface (A1	1) Redox	Dark Surf	ace (F6)			
Thick Dark Surface (A12)	Deplete	ed Dark S	urface (F7)			of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox	Depression	ons (F8)		wetland hyd	drology must be present.
	Vernal	Pools (F9)-			
Destrictive Lover (if presently Type: A	lans	Danth (In	ahaa\ =		c Soil? [ES	
Restrictive Layer (if present): Type:		Depth (III	ches)	Hyan	C SOII! [10/2	
Remarks HYDRIC Sol	45					
						
Hydrology						
Wetland Indicators	ufficient)				Cocondoni	ndicators (2 or more required)
Primary Indicators (Any one indicator is s	umdenti				Secondary II	idicators (2 of more required)
Surface Water (A1)	Salt Cru	ust (B11)			Wate	er Marks (B1) (Riverine)
High Water Table (A2)	Biotic C	rust (B12))		Sedi	ment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic	Invertebra	ates (B13)		Drift	Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydroge	en Sulfide	Odor (C1)		Drain	nage Patterns (B10)
Sediment Deposits (B2) (Nonnvenn	e) Oxidize	d Rhizosp	heres (C3)		Dry-	Season Water Table (C2)
Surface Soil Cracks (B6)	Present	ce of Redu	iced Iron (C	4)	Thin	Muck Surface (C7)
Inundation Visible on		Iron Redu			Cray	fish Burrows (C8)
Aerial Imagery (B7)		Soils (C6	•			ration Visible on
Water-Stained Leaves (B9)	Other (E	Explain in	Remarks)			al Imagery (C9)
	4 A.S.					ow Aquitard (D3)
					FAC-	Netural Test (D5)
Field Observations						$\sqrt{}$
Surface Water Present? Yes No				Wetland F	lydrology? Yes	s No
Water Table Present? Yes No_	S		_			**,
Saturation Present? Yes No.	P Depth (inche			es capillary		· · · · · · · · · · · · · · · · · · ·
Describe Recorded Data (stream ga	uge, monitoring well, a	enai photos	s, and previou	is inspectio	ms), if available	5.

Hydeology

Remarks WENND

North State Resources Wetland Determination Data Form - Arid W	lest Reg	ion		Habitat Type (VASSIAND) Wetland Type UPLAND
Project/Site:Sisk Dam Corrective Action Project Applicant/Owner:U.S. Bureau of Reclamation Investigator(s):J. Colescott Landform (hillslope, terrace, etc.)	So ime of year's	Local reliil Map Unit i	ief (concave Name: SA (If no, explain ormal circum	state: <u>CA</u> Sampling Point. <u>75</u> convex, none) <u>Concave</u> Slope % <u>S</u> LI VAR LOAM 2-9 % in in remarks.) instances present? <u>YES</u>
Summary of Findings (Attach site map showing Hydrophytic vegetation? NO Hydric soil? NO Wetl USACE Jurisdiction Adjacent to Waters Isolate	and hydrolo	gy? NO	Is sample	d area a wetland? NO Other waters? NO
Explain: Evaluation of features designated "Otl Indicators: Defined bed and bank Scour Feature Designation: Pereninal Intermittent Explainable Artificial Drainage Artificial Drain Remarks SMALL SWALE IN WETAND PERAMETERS OR SECOUR + DEPOSITION, - NON W.	her Wat Ordin phemeral nage	ers of t ary High W Blue-lir Navigable	he Unite ater Mark Ma ne on USGS Water	ed States" apped Quad
Vegetation Tree Stratum (use scientific names) 1	Absolute % Cover	Dominant Species?		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: Total number of dominant species across all strata: (A)
50%= Total Cover: Sapling/Shrub Stratum (use scientific names) 1 2 3	% Cover	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: Prevalence Index Worksheet Total % Cover of: OBL Species X 1 =
4 Total Cover: Herb Stratum (use scientific names) 1. Browns hordeacous 2. Browns diamaris 3. Browns madritensis 4. Coton setiaerus 5. Fradium batrus	% Cover 20 20 10	Species?	Status FACU 19PL UPL UPL	FACW Species FAC Species FACU Species VA = VA
6	165 % Cover	Species?		Dominance Text is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) **Indicators of hydric soil and wetland hydrology must be present.** Hydrophytic Vegetation?
50%= Total Cover: % Bare Ground in Herb Stratum 35 % Cover of Blot		-		nydropnyuc vegetauon+ 1

Soils						<u>-</u>
	Redox Features					-
	color (moist)	<u>%</u>	Type ¹	Loc2	Texture Constitution	Remarks Lofm
0-8 7.54R1/6 100		<u> </u>			GRAVEWY	Lonie
						
1Tumon Car Concentration D. Donlation DM -		21 0	ntian. Di		DC Poot Chon	nel M = Matrix
Types: C = Concentration D = Depletion RM =					ng RC = Root Chan	
Hydric Soil Indicators: (Applicable to all				<u>1</u>	ndicators for Proble	· ·
Histosol (A1)	Sandy Gl	•	nx (S4)		1 cm Mucl	
Histic Epipedon (A2)	Sandy Re				2 cm Mucl	, , ,
Black Histic (A3)	Stripped i		•		Reduced \	
Hydrogen Sulfide (A4)	Loamy M	-			Red Paren	•
Stratified Layers (AG) (LRR C)	Loamy Gl	-				Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Depleted	Matrix (F:	3)		Other (Exp	lain in Remarks)
Depleted Below Dark Surface (A11)	Redox Da	rk Surfac	e (F6)			
Thick Dark Surface (A12)	Depleted	Dark Surf	ace (F7)			rophytic vegetation and
Sandy Mucky Mineral (S1)	Redox De	pressions	(F8)		wetland hydrology	must be present.
	Vernal Po	ols (F9)				
Restrictive Layer (if present): Type:	De	enth (Inch	- lea	Hvdri	c Soil? ND	
				_ 119411	00011: 102	
Remarks NON-HYDRIC S	りしり					
·						
Hydrology					·	
Wetland Indicators Primary Indicators (Any one indicator is sufficie	nt).				Secondary Indicate	ors (2 or more required)
Surface Water (A1)	Salt Crust	(D11)			Mafer Mar	ks (B1) (Riverine)
High Water Table (A2)	Biotic Crus					Deposits (B2) (Riverine)
			~ (D42)			sits (B3) (Riverine)
Saturation (A3)	Aquatic Inv					
Water Marks (B1) (Nonriverine)	Hydrogen		` '			atterns (B10)
Sediment Deposits (B2) (Nonnverine)	Oxidized R	•	` '	45.		n Water Table (C2)
Surface Soil Cracks (B6)	Presence of			4)		Surface (C7)
Inundation Visible on	Recent from		on in			urrows (C8)
Aerial Imagery (B7)	Plowed Sc				Saturation	
Water-Stained Leaves (B9)	Other (Exp	iain in Re	marks)		Aerial Ima	
w.						uitard (D3)
					FAC-Netur	al Test (D5)
Field Observations						💉
Surface Water Present? Yes No	Depth (inches) _		_	Wetland H	ydrology? Yes	_ No _X
Water Table Present? Yes No	Depth (inches) _		_			***
Saturation Present? Yes No	Depth (inches) _	<u></u>		s capillary		
Describe Recorded Data (stream gauge, m	onitoring well, aeria	l photos, a	nd previou	s inspectio	ns), if available:	
5	46' 1.55'	24.0	11	# A # 3	1264	

Wetland Dete	rth State Resources
Project/Site:Sist	Dam Corrective Ac
Applicant/Owner: _	U.S. Bureau of Rec

% Bare Ground in Herb Stratum ____ % Cover of Blotic Crust _

Habitat Type	GRASSLAND
Wetland Type	EPHEMERAL

Wetland Determination Data Form - Arid V	Vest Reg	ion		Wetland Type FHEMERAL
				VKKINAGE
Project/Site: Sisk Dam Corrective Action Project		City/Coun	ty:mercec	State: CA Sampling Point: 43
Applicant/Owner: U.S. Bureau of Reclamation				State. CA Samping Four.
Investigator(s): J. Colescott				- MANGAUE CLARA OF 5-8
Landform (hillslope, terrace, etc.) DRANTAE		Local re	lief (concave	, convex, none) (1) Convex, none) (1) Convex, none) (1) Convex, none)
Subregion (LRR) <u>LRR-C</u>	So	il Map Unit	Name: 4	LUNE LOAM 2-8%, SLOPE
Are climatic/hydrologic conditions on the site typical for this t				
Are vegetation N, soil N, or hydrology N signifi	cantly distur	bed? Are n	normal circun	nstances present? 1122
Are vegetation \nearrow , soil \nearrow , or hydrology \nearrow natural	ally problem	atic? (If ne	eded, explai	n any answers in Remarks.)
Summary of Findings (Attach site map showing Hydrophytic vegetation? NO Hydric soil? NO Wet	sampling p	oint location	s, transects,	important features, etc.) d area a wetland? NO Other waters?
USACE Jurisdiction Adjacent to Waters Isolate Explain:	ed (with inte	rstate comn	nerce)	_ Isolated (non jurisdictional)
	Ordin	ary High W Blue-lir	ater Mark Mare on USGS	apped X — ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
Remarks	20192 C.			/ MANUAL CRACES
MAKING OHUM DIFFICULT	AGE.	VEGE!	小龙口	W/ ANNOYC GEASSES
MAKING OHWM DIFFICULT	10 DI	5 CERN	, BUT	A WELL DEFINED BED
+ BANK BISECTS THIS SECTION	on of	THE	STUDY	AREA SEE PHOID.
Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
2.				Total - unbest of deminant species
3				Total number of dominant species across all strata:
50%=				FOR DOUBLE POSSESSES AND TO SERVE AND THE SE
Sapling/Shrub Stratum (use scientific names)	Orac Care Care	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
2.				Prevalence Index Worksheet Total % Cover of: Multiply by
3.				
4				
50%= 20%= Total Cover:				FACW Species x 2 = FAC Species x 3 =
Herb Stratum (use scientific names)	% Cover	Species?	Status	
1. Bromus diaudrus	40	Y	UPL	FACU Species x 4 =
2 Bromus inermos	40	4	UPL	UPL Speciesx5=
3. Brassica neara	20	Y	UPL	Column Totals (A)(B)
4				Prevalance Index = B/A =
5				Hydrophytic Vegetation Indicators
6				Dominance Text is >50%
7.				Prevalence Index is ≤ 3.01
50%= Total Cover:	100			Morphological Adaptations (provide supporting data in Remarks or on a separate sheet)
	% Cover	Species?	Status	Problematic Hydrophytic Vegetation¹ (Explain) 1Indicators of hydric soil and wetland hydrology must be present.
2		· · · · · · · · · · · · · · · · · · ·		Hidrophysic Vegetation? NO

Soils			_			·
Profile Description: (Describe to the dep	th needed to docur Redox Features	nent the	indicator o	r confirm t	the absence o	of indicators.
	Color (moist)	%	Type ¹	<u>Loc2</u>	<u>Texture</u>	Remarks
0-64 10484/3 100					SANDY	LOXM
	 _					
				<u> </u>		
1Types: C = Concentration D = Depletion RM =	Reduced Matrix	2 _{L0}	cation: PL	= Pore Lini	ng RC = Ro	ot Channel M = Matrix
Hydric Soil Indicators: (Applicable to all	LRRs, unless other					Problematic Hydric Soils3
Histosol (A1)	Sandy Gl	eyed Ma	trix (S4)		1 cr	n Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy Re	dox (S5)		2 cr	n Muck (A10) (LRR B)
Black Histic (A3)	Stripped	Matrix (S	6)		Red	uced Vetric (F18)
Hydrogen Sulfide (A4)	Loamy M	ucky Min	eral (F1)		Red	Parent Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy G	eyed Ma	trix (F2)		Veg	etated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Depleted	Matrix (F	3)		Oth	er (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Da	rk Surfa	ce (F6)			
Thick Dark Surface (A12)	Depleted	Dark Su	rface (F7)			of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox De	pression	ıs (F8)		wetland hy	drology must be present.
•	Vernal Po	ols (F9)				
Restrictive Layer (if present): Type:		onth /Ino	hool	Llude	0 Soil 2 1 12)
Remarks SANDY LOAM, WITH WELL DRAINED + PERIODIC				EDUY.	The state of the	LINGEL
						
Hydrology						
Wetland Indicators Primary Indicators (Any one indicator is sufficient	ent).				Secondary I	ndicators (2 or more required)
Surface Water (A1)	Salt Crust	(B11)			Wat	er Marks (B1) (Rivenne)
High Water Table (A2)	Biotic Crus	st (B12)			X Sedi	ment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic In	vertebrat	es (B13)		_X_ Drift	Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen	Sulfide (Odor (C1)		Drai	nage Pattems (B10)
X_ Sediment Deposits (B2) (Nonriverine)	Oxidized F	Rhizosph	eres (C3)		Dry-	Season Water Table (C2)
X Surface Soil Cracks (B6)	Presence	of Reduc	ed Iron (C	4)	Thin	Muck Surface (C7)
Inundation Visible on	Recent Iro		tion in		Cray	fish Burrows (C8)
Aerial Imagery (B7)	Plowed So					ration Visible on
:Water-Stained Leaves (B9)	Other (Exp	lain in R	emarks)			al Imagery (C9)
· et						low Aquitard (D3)
					FAC	-Netural Test (D5)
Field Observations						V
Surface Water Present? Yes No	Depth (inches)			Wetland H	iydrology? Ye	s_X No
Water Table Present? Yes No X			–		e'e*	
Saturation Present? Yes No X	Depth (inches)	l phetes		s capillary		<u> </u>
Describe Recorded Data (stream gauge, r	noniloning well, aena EP(+5:WKR	-	and previou DRA, N		rıs), ir avallabl	ъ.
Remarks	- 1 (1 Co 1 (1 Co	-	- 4-1,1/-			

North State Resources				Habitat Type GRASSUM &
Wetland Determination Data Form - Arid V				Wetland Type DYLAND
Project/Site:Sisk Dam Corrective Action Project		_ City/Count	y: _Mercec	County Sampling Date: 9/18/09
Applicant/Owner: U.S. Bureau of Reclamation				State: <u>CA</u> Sampling Point: <u>44</u>
Investigator(s):J. Colescott	1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -			······································
Landform (hillslope, terrace, etc.) TERRALE		Local rel	lief (concave	convex, none) CANCAVE Slope % O
Subregion (LRR)LRR-C	Sc	il Map Unit I	Name: X	profluvents. Ext. gravelly
Are climatic/hydrologic conditions on the site typical for this			****	0
Are vegetation N , soil N , or hydrology N signif	icantly distu	rhed? Are n	omal circur	nstances present? 45S
Are vegetation N soil N, or hydrology N natur				
Summary of Findings (Attach site map showing	g sampling p	oint location	s, transects	important features, etc.)
Hydrophytic vegetation? 455 Hydric soil? 100 We	lland hydrolo	ogy? NO	Is sample	d area a wetland? NO Other waters? NO
USACE Jurisdiction Adjacent to Waters Isolate Explain:	led (with inte	erstate comm	nerce)	Isolated (non jurisdictional)
Evaluation of features designated "Of	her Wat	ters of t	he Unite	ed States"
Indicators: Defined bed and bank Scour				
Feature Designation: Perennial Intermittent E	phemeral _	Blue-lin	ne on USGS	Quad
Natural Drainage Artificial Drai				<u> </u>
Remarks MINOR DEPRESSIONS ALONG	NAG	enu)	HAUL	ROAD PORDON OF
STUDY AREA. SOLLS ARE JE	ERY H	HED P	ACH ED	GRAVELLY LOAM BUT
AXUE NO INDICATORS OF LONG				
	200111	. 24	1 c fort > So	
Vegetation		Dominant		Dominance Test Worksheet Number of dominant species
Tree Stratum (use scientific names)	% Cover	Species?	Status	that are OBL, FACW, or FAC: (A)
2.	-			T. () of dominant angulas
3.				Total number of dominant species across all strata: (B)
50%= Z0%= Total Cover:				a section of descriptions and the section of the se
Sapling/Shrub Stratum (use scientific names)		Species?	Status	Percent of dominant species that
1.	70 00101	Оросност	Otatuo	
2.				Prevalence Index Worksheet Total % Cover of: Multiply by
3.				/
4.				7
50%= 20%= Total Cover:		-		7
Herb Stratum (use scientific names)	% Cover	Species?	Status	(710 0)00100
1. Lepidium latifolium	25	4.55	FACW	FACU Species x 4 =
2 Vuleia branoides		y	FNW	UPL Species x5=
3. Komus d'andros		4	UPC	Column Totals (A) (B)
4. Hardeun leparinom	10	N	FAC	Prevalance Index = B/A =
5. Bromos Lordeacous			FACU	II I I I I I I I I I I I I I I I I I I
6.			440-	Hydrophytic Vegetation Indicators
7.				Prevalence Index is < 3.01
50%= <u>45</u> 20%= <u>18</u> Total Cover:	90			Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet)
Mondy//fine Stratum (use exientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
1	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- Powoo!	Juliu	*Indicators of hydric soil and wetland hydrology must
2		-		be present.
50%=				Hydrophytic Vegetation?
% Bare Ground in Herb Stratum / 6 % Cover of Bio	fic Cruef			
A Part Aleana III Horn On attuin 7 - 10 Oostel Of Dio	no orust			

Depth <u>Matrix</u>	pth needed to doc Redox Features					
nches) Color (moist) %	Color (moist)	%_	Type ¹	Loc2	<u>Texture</u>	<u>Remarks</u>
-4 104R 3/3 100					GRIVE	LY LOTAL
·						
pes: C = Concentration D = Depletion RM	= Reduced Matrix	2	Location: PL	= Pore Lir	ning RC = R	oot Channel M = Matrix
dric Soil Indicators: (Applicable to a	II LRRs, unless ot	herwise n	oted)		Indicators for	r Problematic Hydric Soils ³
Histosol (A1)	Sandy	Gleyed M	latrix (S4)		1 0	m Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy I	Redox (S	5)		20	m Muck (A10) (LRR B)
Black Histic (A3)	Strippe	d Matrix (S6)		Re	duced Vetric (F18)
Hydrogen Sulfide (A4)	Loamy	Mucky Mi	ineral (F1)		Re	d Parent Materials (TF2)
Stratified Layers (AG) (LRR C).	Loamy	Gleyed M	latrix (F2)		Ve	getated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Deplete	d Matrix ((F3)		Ott	ner (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox I	Dark Surfa	ace (F6)			
Thick Dark Surface (A12)	Deplete	d Dark St	urface (F7)			s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox [Depressio	ons (F8)		wetland h	ydrology must be present.
	Vernal i	Pools (F9))			
emarks VEET HARD SOIL NO INDICATION OF		Depth (In	27 DI			
emarks VEEN HARD SOIL NO INDICATION OF ydrology etland Indicators	LONG DO	ONZ	27 DI	4 10	TON.	IN THAT 4", TH
emarks VEET HARD SOIL S NO INDICATION OF ydrology etland Indicators imary Indicators (Any one indicator is suffice	LOWE DO	PATION	27 DI	4 10	Secondary	IN THAT 4", THE
emarks VERN HARD SOLL NO INDICATION OF ydrology etland Indicators mary Indicators (Any one indicator is suffice Surface Water (A1)	LODIC >0	6 N. 2 PARTION St (B11)	LY DI	4 10	Secondary Wa	IN THAT 4", THE Indicators (2 or more required) ter Marks (B1) (Riverine)
emarks VERT HARD SOLL MO INDICATION OF ydrology etland Indicators mary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2)	LOW DO	6 N 2 PM 17 OF	LY DI	4 10	Secondary Wa Wa	In THAT 4", 1H Indicators (2 or more required) Inter Marks (B1) (Riverine) Indicators (2 or more required)
emarks VEPA HARD SOLL ydrology etland Indicators mary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3)	ient) Salt Cru Biotic Cr Aquatic	st (B11) rust (B12) Invertebra	LY 51	4 10	Secondary Wa Sec	Indicators (2 or more required) Indicators (2 or more required) Iter Marks (B1) (Riverine) Item Marks (B2) (Riverine) Item Marks (B3) (Riverine)
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emarks VEPT HARD SOLL ydrology etland Indicators imary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6)	ient) Salt Cru Biotic Cr Aquatic Hydroge Oxidized	st (B11) rust (B12) Invertebra n Sulfide I Rhizospi e of Redu	ates (B13) Odor (C1) heres (C3) iced Iron (C	a TO	Secondary Wa Sec Drit Dra Dry	Indicators (2 or more required) Indicators (2 or more required) Indicators (2 or more required) Indicators (B1) (Riverine) Indicators (B1) (Riverine) Indicators (B2) (Riverine) Indicators (B3) (Riverine) Indicators (B4)
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lydrology /etland Indicators imary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	ient) Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presence Recent I	st (B11) rust (B12) Invertebra n Sulfide Rhizospl e of Redu ron Redu Soils (C6)	ates (B13) Odor (C1) heres (C3) uced Iron (C	a TO	Secondary Wa Sec Drit Dra Dry Thi Cra Sat Ae	Indicators (2 or more required) Indicators (B1) (Riverine) Indicators (B3) (Riverine) Indicators (B1) (Riverine) Indicators (B3) (Riverine) Indicators (B4) Indicators (B3) (Riverine) Indicators (B4)
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emarks VEPA HARD SOLUTION OF ydrology vetland Indicators imary Indicators (Any one indicator is suffice Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	ient) Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presence Recent I Plowed Other (E	st (B11) ust (B12) invertebra n Sulfide l Rhizospl e of Redu ron Redu Soils (C6) xplain in I	ates (B13) Odor (C1) heres (C3) uced Iron (C	(4)	Secondary Wa Secondary Drit Dra Dry Thi Cra Sat Ae Sha	Indicators (2 or more required) Indicators (2 or more required) Inter Marks (B1) (Riverine) Inter Marks (B1) (Riverine) Inter Marks (B3) (Riverine) Inter Marks (B3) (Riverine) Inter Marks (B3) (Riverine) Inter Marks (B3) (Riverine) Inter Marks (B10) Inter Marks (B10) Inter Marks (B10) Inter Marks (B10) Inter Marks (B1) Inter Marks (B2) Inter Marks (B1) Inter Marks (B2) In
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North State Resources Wetland Determination Data Form - Arid V			:#	Habitat Type DAM SERVICE AREA Wetland Type UPLAND
Project/Site: Sisk Dam Corrective Action Project Applicant/Owner: U.S. Bureau of Reclamation Investigator(s): J. Colescott		_ City/Count	y: Merced	County Sampling Date: 7/18/09 State: CA Sampling Point: 45
Landform (hillslope, terrace, etc.) DERESCION Subregion (LRR) LRR-C Are climatic/hydrologic conditions on the site typical for this Are vegetation , soil , or hydrology , significant s	So time of year	il Map Unit M ? <u>Y.E.S.</u> (rbed? Are n	varne: XE (If no, explair ormal circum	n in remarks.) Stances present? 455
Summary of Findings (Attach site map showing Hydrophytic vegetation? NO Hydric soil? NO Well Well Hydrophytic vegetation?				
USACE Jurisdiction Adjacent to Waters Isolat Explain:				
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour_ Feature Designation: Perennial Intermittent E Natural Drainage Artificial Drainage	Ordin phemeral nage	nary High Wa Blue-lin Navigable \	ater Mark Ma e on USGS Water	apped Quad
Remarks SMAU SHACLOW DE TO MEET SOILS OR HYDE	PRESS 2010a'	1 PAR	SOME H	HDROPHYTIC VEG. FAILS
Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover	Dominant Species?		Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC:
3 Total Cover: Sapling/Shrub Stratum (use scientific names)		Species?	Status	Total number of dominant species (B) Percent of dominant species that are OBL, FACW, or FAC:
1. Baccharis Pilularis 2. 3.		YFS		Prevalence Index Worksheef Total % Cover of: OBL Species x1 =
4	48 % Cover 40		Status FACW	FACW Species x2 = BD FAC Species x3 = FACU Species x4 =
3				Column Totals <u>80</u> (A) <u>280</u> (B) <u>3.5</u> Prevalance Index = B/A = <u>7.5</u> 89 588
5	40			Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet)
Woody/Vine Stratum (use scientific names) 1 2 50%=				Problematic Hydrophytic Vegetation¹ (Explain) **Indicators of hydric soil and wetland hydrology must be present.** Hydrophytic Vegetation?
% Bare Ground in Herb Stratum 60 % Cover of Blo				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators. Depth	
1 Types: C = Concentration D = Depletion RM = Reduced Matrix 2 Location: PL = Pore Lining RC = Root Channel M = Matrix	
1 Types: C = Concentration D = Depletion RM = Reduced Matrix 2 Location: PL = Pore Lining RC = Root Channel M = Matrix	
The state of the s	
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Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted) Indicators for Problematic Hydric Soils ³	
Histosol (A1) Sandy Gleyed Matrix (S4) 1 cm Muck (A9) (LRR C)	
Histic Epipedon (A2) Sandy Redox (S5) 2 cm Muck (A10) (LRR B)	
Black Histic (A3) Stripped Matrix (S6) Reduced Vetric (F18)	
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Red Parent Materials (TF2)	
Stratified Layers (AG) (LRR C) Loamy Gleyed Matrix (F2) Vegetated Sand/Gravel Bars	
1 cm Muck (A9) (LRR D) Depleted Matrix (F3) Other (Explain in Remarks)	
Depleted Below Dark Surface (A11) Redox Dark Surface (F6)	
Thick Dark Surface (A12) Depleted Dark Surface (F7) 3Indicators of hydrophytic vegetation	and
Sandy Mucky Mineral (S1) Redox Depressions (F8) wetland hydrology must be present.	
Vernal Pools (F9)	
Restrictive Layer (if present): Type: Depth (Inches) Hydric Soil? \(\frac{\mathcal{U}}{\text{\infty}} \)	
Remarks HARD SOIL, BUT NO INDICATORS OF HYDRIC CONDITIONS.	
Hydrology	
Wetland Indicators	
Primary Indicators (Any one indicator is sufficient) Secondary Indicators (2 or more requ	ed)
Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Rivenine)	
Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Rivenne) Water Marks (B1) (Rivenne) Soldiment Deposits (B2) (Rive	ine)
High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (River	ine)
High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine)	ine)
High Water Table (A2) Sediment Deposits (B2) (River Saturation (A3) Water Marks (B1) (Nonriverine) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)	ine)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Riverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Dry-Season Water Table (C2)	ine)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Riverine) Prainage Patterns (B10) Dry-Season Water Table (C2) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Thin Muck Surface (C7)	ine)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in Crayfish Burrows (C8)	ine)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Biotic Crust (B12) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Dry-Season Water Table (C2) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Recent Iron Reduction in Aerial Imagery (B7) Plowed Soils (C6) Saturation Visible on	ine)
High Water Table (A2) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Mater Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Plowed Soils (C6) Water-Stained Leaves (B9) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)	ine)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)	ine)
High Water Table (A2) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Dry-Season Water Table (C2) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Plowed Soils (C6) Water-Stained Leaves (B9) Other (Explain in Remarks) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)	ine)
High Water Table (A2) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Dry-Season Water Table (C2) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Other (Explain in Remarks) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)	ine)
High Water Table (A2) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Dry-Season Water Table (C2) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Plowed Soils (C6) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations Surface Water Present? Yes No X Depth (inches) Wetland Hydrology? Yes No XO	ine)
High Water Table (A2) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres (C3) Dry-Season Water Table (C2) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Other (Explain in Remarks) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Netural Test (D5)	ine)

Remarks /

- 1	
	North State Resources
	• • • • • • • • • • • • • • • • • • • •

Vetland Determination Data Form - Arid West Region

51	N 2013
Habitat Type	RESEVOUIR
Wetland Type	DEED WHIER

wetland Determination Data Form - Arid W		Wetland Type TEEF OUT TER
Project/Site: Sisk Dam Corrective Action Project	City/County: Merced	County Sampling Date: 9/18/89
Applicant/Owner:U.S. Bureau of Reclamation		State: CA Sampling Point: 46
investigator(s): J. Colescott		_
Landform (hillslope, terrace, etc.) RESERIOUIR	Local relief (concave,	convex, none) CON CAUE Slope % 2-5
Subregion (LRR) LRR-C		
Are climatic/hydrologic conditions on the site typical for this ti	me of year? 165 (If no, explain	in remarks.)
Are vegetation N, soil N, or hydrology N signific	cantly disturbed? Are normal circum	stances present? YES
Are vegetation, soil, or hydrology natura		
Summary of Findings (Attach site map showing	sampling point locations, transects, i	important features, etc.)
Hydrophytic vegetation? YES Hydric soil? YES Wetl	and hydrology? 465 Is sampled	area a wetland? 100 Other waters? 155
USACE Jurisdiction Adjacent to Waters Tributary to Waters Isolate Explain: シャン という (スをら)	ed (with interstate commerce)	Isolated (non jurisdictional)
Evaluation of features designated "Otl	ner Waters of the Unite	d States"
Indicators: Defined bed and bank X Scour	Ordinary High Water Mark Maj	pped X
Feature Designation: Perennial Intermittent X Ep Natural Drainage Artificial Drain	hemeral Blue-line on USGS (Quad <u>X</u>
Remarks DP DOCUMENTS THAT		SHOW IS ACCOUNTED
DR LOCATED AT UPPER LIN	uts of Hiah u	WATER IN A BRACH
(WAVE ZEEKING) AREA.		<u> </u>
Vegetation	Absolute Dominant Indicator	Dominance Test Worksheet
Tree Stratum (use scientific names)	% Cover Species? Status	Number of dominant species that are OBL, FACW, or FAC: (A)
1. Salix la evigata		
2. Populus fremontin	5 9 FACW	Total number of dominant species 5 (B)
3		40.000
		Percent of dominant species that are OBL, FACW, or FAC: (AB)
Sapling/Shrub Stratum (use scientific names) 1. Baccharis Vininar	% Cover Species? Status	are OBL, FACW, or FAC:
2.	10 4 17/00	Prevalence Index Worksheet Total % Cover of: Multiply by
3.		10.00
4.		7
50%=	10	7
	% Cover Species? Status	FAC Species ×3 = FACU Species ×4 =
1. Brassica peara	25 4 VPL	
2 Helitropium Oparassavicum	10 4 OBL	
3		Column Totals (A)(B) Prevalance Index = B/A =
4		Prevalance index = BIA =
5		Hydrophytic Vegetation Indicators
6		Dominance Text is >50% Prevalence Index is ≤ 3.01
7. 50%=17.5 20%= 7 Total Cover:		Morphological Adaptations (provide supporting
		data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
Woody/Vine Stratum (use scientific names) 1	% Cover Species? Status	1Indicators of hydric soil and wetland hydrology must
2		be present.
50%= Total Cover:		Hydrophytic Vegetation? 455
% Bare Ground in Herb Stratum 75% Cover of Blots		27 (2001) W. C.
	The Control of the Co	

Soils						
Profile Description: (Describe to the de	pth needed to doc	ument the	e indicator o	or confirm	the absence of in	dicators.
Depth Matrix	Redox Features					
(inches) Color (moist) %	Color (moist)	<u>%</u>	Type ¹	Loc2	<u>Texture</u>	Remarks
0-6 2.54.4/2 100					completed	GENELY SAND
				Simpulances	#12	
¹ Types: C = Concentration D = Depletion RM	= Reduced Matrix	2	Location: PL	= Pore Lin	ing RC = Root C	hannel M = Matrix
Hydric Soil Indicators: (Applicable to a						blematic Hydric Soils3
Histosol (A1)			latrix (S4)	-		uck (A9) (LRR C)
Histic Epipedon (A2)		Redox (S				uck (A10) (LRR B)
		37.5			Reduce	
Black Histic (A3)		Matrix (
Hydrogen Sulfide (A4)			ineral (F1)			rent Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy (ed Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Deplete				_X_ Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox D	Dark Surf	ace (F6)		_ 10	U+
Thick Dark Surface (A12)	Depleted	d Dark S	urface (F7)			nydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox D	Depressio	ons (F8)		wetland hydrol	ogy must be present.
	Vernal F	Pools (F9)			
				State to	11.00	
Restrictive Layer (if present): Type:		Depth (In	iches)	Hydr	ic Soil? 4ES	
Remarks CLEAR LAYERS OF	FLUVIAL "	SEDIX	<i>rentai</i>	·Cros		
						3.5
						
Hydrology						
Wetland Indicators	.:0				Casandam: Indi	estare (2 or more required)
Primary Indicators (Any one indicator is suffic	aenų.				Secondary mult	cators (2 or more required)
Surface Water (A1)	Salt Crus	st (B11)			Water N	farks (B1) (Riverine)
High Water Table (A2)	Biotic Cr	ust (B12))		Sedime	nt Deposits (B2) (Riverine)
Saturation (A3)	Aquatic I	Invertebr	ates (B13)		Drift De	posits (B3) (Riverine)
Water Marks (B1) (Nonriverine)			Odor (C1)			e Patterns (B10)
Sediment Deposits (B2) (Nonriverine)			heres (C3)			ason Water Table (C2)
Surface Soil Cracks (B6)		120	iced Iron (C	241		ick Surface (C7)
	The second second			4)		Burrows (C8)
Inundation Visible on Aerial Imagery (B7)	Recent Ir					AND AND AND DESCRIPTION OF THE PROPERTY.
Water-Stained Leaves (B9)	Plowed:		57 - 10 J. J. D. J. D.			on Visible on
		xpiain in	Remarks)			magery (C9)
6 asis						Aquitard (D3)
					FAC-Ne	tural Test (D5)
Field Observations	·.		1770	0.7524 50 800		V
Surface Water Present? Yes No _<	_ Depth (inches))		Wetland	Hydrology? Yes	<u> </u>
Water Table Present? Yes No	_ Depth (inches)				
Saturation Present? Yes No 1	Depth (inches)			les capillar		
Describe Recorded Data (stream gauge	, monitoring well, ae	rial photos	s, and previous	us inspecti	ons), if available:	
BATH TUB RI	NG CLEA	PLY	VISIT	3LE		
Remarks	•					

Wetland Determination Data Form - Ar	id Wood Don	ula n		Habitat Type CBASSLAND Wetland Type Ph. Stream
Project/Site: Sisk Dam Corrective Action Project Applicant/Owner: U.S. Bureau of Reclamation		_ City/County	y: <u>Merce</u>	d County Sampling Date: 7/18/09
Investigator(s):J. Colescott				e, convex, none) ONCIVE Slope % ~10 //
Subregion (LRR) <u>LRR-C</u> Are climatic/hydrologic conditions on the site typical for	So	oil Map Unit N	lame: ON	VEIL SILT LOAM, 30-50%
Are vegetation N , soil N , or hydrology N s Are vegetation N , soil N , or hydrology N	significantly distu	rbed? Are no	ormal circu	mstances present? 4 5
Summary of Findings (Attach site map sho Hydrophytic vegetation? NO Hydric soil? 489	owing sampling p	oint location	s, transects	, important features, etc.)
USACE Jurisdiction Adjacent to Waters Tributary to Waters I Explain: TUB SAN I	solated (with inte	erstate comm	erce)	Isolated (non jurisdictional)
Evaluation of features designated '	"Other Wat cour Ordin Ephemeral	ters of the nary High Wa Blue-lin	he Unit ater Mark M e on USGS	apped x - 1 WDE
Remarks SMALL (1-FOOT LO EPHEMERAL FLOW PATE				DRAINAGE. LIKELY UD PAIR TAKEN
Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover			Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
2		_		Total number of dominant species (B)
50%= Total Co	over:	Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
		_		Prevalence Index Worksheet Total % Cover of: Multiply by
	over:			OBL Species x1 = x2 = x2 = x3 = x3 = x3 = x3 = x4 = x4 = x4 = x4
lerb Stratum (use scientific names) . A J e Na Fatva	% Cover	Species?	Status VPL	FACU Species ×4=
Brows madritusis	20	7	UPL	UPL Species x5 = Column Tetals (A) (B)
Eradium botigs Brassica negra	10		UPZ	Prevalance Index = B/A = Hydrophytic Vegetation Indicators Dominance Text is >50%
50%= Total Co	ver:	_		Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet)
/oody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present.
50%=	ver			Hydrophytic Vegetation? NO

Soils		
Depth Matrix	epth needed to document the indicator or confi Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	하는 사람들은 사람들이 가입을 보면 보다는 것이 되었다. 그런 사람들은 사람들이 되었다면 하는 사람들이 되었다.
0-8 104R 3/8 600	104R3/2 40	Strody LOAM
¹ Types: C = Concentration D = Depletion RM		
Hydric Soil Indicators: (Applicable to a	all LRRs, unless otherwise noted)	Indicators for Problematic Hydric Soils3
Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Sandy Redox (S5)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Stripped Matrix (S6)	Reduced Vetric (F18)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Red Parent Materials (TF2)
Stratified Layers (AG) (LRR C)	Loamy Gleyed Matrix (F2)	Vegetated Sand/Gravel Bars
1 cm Muck (A9) (LRR D)	Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	3Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present.
,,	Vernal Pools (F9)	
Restrictive Layer (if present): Type:		ydric Soil? YES The DEPOSITION
Hydrology Wetland Indicators Primary Indicators (Any one indicator is suffi	cient)	Secondary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	X Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	X Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres (C3)	Dry-Season Water Table (C2)
Surface Soil Cracks (B6)	Presence of Reduced Iron (C4)	Thin Muck Surface (C7)
Inundation Visible on	Recent Iron Reduction in	Crayfish Burrows (C8)
Aerial Imagery (B7)	Plowed Soils (C6)	Saturation Visible on
Water-Stained Leaves (B9)	Other (Explain in Remarks)	Aerial Imagery (C9)
		Shallow Aquitard (D3)
	N.	FAC-Netural Test (D5)
Field Observations		
Surface Water Present? Yes No X		nd Hydrology? Yes X No
Water Table Present? Yes No	Depth (inches)	
Saturation Present? Yes No Z		
77 72 430 A	e, monitoring well, aerial photos, and previous insper	ections), if available:
	The second secon	

	North State Resources				SCRUB Habitat Type SHROB ISLAND
	Wetland Determination Data Form - Arid V	Vest Reg	jion		Welland Type UPLAND
	Project/Site: <u>Sisk Dam Corrective Action Project</u> Applicant/Owner: <u>U.S. Bureau of Reclamation</u>		_ City/Count	y: Merced	State: CA Sampling Point: 48
21	Investigator(s):J. Colescott				State. <u>CA</u> Sampling Forth. <u>70</u>
	Landform (hillstone terrace etc.) HIUSIDE		Local rel	ief (concave	convex none) NOWE Slope % 40
	Subregion (LRR) <u>LRR-C</u>	So	il Man Unit I	Name: A 5	olt very stony clay 30-50%
*0	Are climatic/hydrologic conditions on the site typical for this t	time of year	7 465	(If no. explain	n in remarks.)
	Are vegetation, soil, or hydrology signifi	icantly distu	rbed? Are n	ormal circun	nstances present? <u>MES</u>
	Are vegetation N, soil N, or hydrology N natura	ally problem	atic? (If ne	eded, explai	n any answers in Remarks.)
	Summary of Findings (Attach site map showing	sampling p	oint location	s. transects.	important features, etc.)
	Hydrophytic vegetation? NO Hydric soil? NO Wetl	land hydrolo	06√ ¿ÁBC	ls sample	d area a wetland? NO Other waters? NO
	USACE Jurisdiction Adjacent to Waters Isolate Explain:	ed (with inte	erstate comm	nerce)	Isolated (non jurisdictional)
	Evaluation of features designated "Ot Indicators: Defined sed and bank Scour Feature Designation: Perennial Intermittent Endured Drainage Artificial Drain	Ordin	nary High Wa	ater Mark Mare on USGS	apped
	Remarks		4		
	SMALL SHROB ISLAND W/1 WEILAND INDICATORS WEI		AGE 1	NAS A	- SUSPECT SEEP NO
	Vegetation Tree Stratum (use scientific names) 1.	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
	2. 3.				Total number of dominant species Z across all strata: (B)
	50%= Total Cover:				Percent of dominant species that
SILVER	Sapling/Shrub Stratum (use scientific names)	% Cover	Species?	Status	are OBL, FACW, or FAC: 50 (AB)
Buffalo Berry	1. Shepherdia argentare 2. Sambreus mexicans	80	4	FAC	Prevalence Index Worksheet Total % Cover of: Multiply by
	3				OBL Species x1 =
	4				FACW Species x 2 =
	50%= Total Cover:				FAC Species x3 =
			Species?		FACU Species x 4 =
	1				UPL Species x5=
	3.				Column Totals(A)(B)
	4.				Prevalance Index = B/A =
	5.				Hydrophytic Vegetation Indicators
	6.				Dominance Text is >50%
	7.				Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (provide supporting
	50%= Total Cover:				data in Remarks or on a separate sheet)
st i	Woody/Vine Stratum (use scientific names)	% Cover	Species?	Status	Problematic Hydrophytic Vegetation ¹ (Explain)
9	1				¹ Indicators of hydric soil and wetland hydrology must be present.
	2 /			. 1	
	50%=				Hydrophytic Vegetation? NO
	% Bare Ground in Herb Stratum / 00 % Cover of Biot	ic Crust			res er indere d A

Soils							
Profile Description: (Describe to the of Depth	lepth needed to doc Redox Features			or confirm	the absence	of indicato	
(inches) Color (moist) %	Color (moist)	<u>%</u>	Type ¹	Loc2	<u>Texture</u>	n makee	Remarks
0-6 107R 3/2 100					5/004	cury	
						9 a	
¹ Types: C = Concentration D = Depletion RI	M = Reduced Matrix	2 _L	ocation: PL	= Pore Lin	ing RC = R	Root Channel	M = Matrix
Hydric Soil Indicators: (Applicable to	all LRRs, unless oth	nerwise no	oted)		Indicators fo	r Problema	tic Hydric Soils3
Histosol (A1)	Sandy (1	cm Muck (A	(9) (LRR C)
Histic Epipedon (A2)	Sandy F	r - 3	77. TEL TO		2	cm Muck (A	10) (LRR B)
Black Histic (A3)	Stripped	enane alli	Škace		Re	educed Vet	ric (F18)
Hydrogen Sulfide (A4)	Loamy I						laterials (TF2)
Stratified Layers (AG) (LRR C)	Loamy						ind/Gravel Bars
1 cm Muck (A9) (LRR D)		d Matrix (I					n in Remarks)
Depleted Below Dark Surface (A11)							
Thick Dark Surface (A12)			rface (F7)		3Indicato	rs of hydro	hytic vegetation and
Sandy Mucky Mineral (S1)	Redox D						nust be present.
ound) madily minoral (01)	Vernal F						
		0010 (1 0)			· · · · · · · · · · · · · · · · · · ·		
						1/1	
Restrictive Layer (if present): Type:		Depth (Inc	ches)	Hydr	ic Soil? _/	<u> </u>	
		Depth (Inc	ches)	Hydr	ic Soil? _/		2//
	0165	Depth (Inc	ches)	Hydr	ic Soil?/	<u></u>	
Remarks NON HYDRIC 50		Depth (Inc	ches)	Hydr	ic Soil? _/		
Remarks NON HYDRIC SO		Depth (Ind	ches)	Hydr	ic Soil?		
Remarks NON HYDRIC 50	0115	Depth (Inc	ches)	Hydr		35	(2 or more required)
Hydrology Wetland Indicators	0115		ches)	Hydr	Secondary	/ Indicators	(2 or more required) (B1) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is suf	ficient).		ches)	Hydr	Secondar,	/ Indicators	
Hydrology Wetland Indicators Primary Indicators (Any one indicator is suf	ficient). Salt Crus Biotic Cr	st (B11) ust (B12)	ches)	Hydr	Secondary W:	/ Indicators ater Marks diment De	(B1) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is suff Surface Water (A1) High Water Table (A2) Saturation (A3)	ficient) Salt Crus Biotic Cr	st (B11) ust (B12) nvertebra		Hydr	Secondary Wasses	/ Indicators ater Marks adiment De	(B1) (Riverine) posits (B2) (Riverine)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is suf Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	ficient). Salt Crus Biotic Cru Aquatic I Hydroge	st (B11) ust (B12) nvertebra n Sulfide (ites (B13) Odor (C1)	Hydr	Secondary Was	v Indicators ater Marks diment De ift Deposits ainage Pat	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is suff Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	ficient) Salt Crus Biotic Crus Aquatic I Hydroge Oxidized	st (B11) ust (B12) nvertebra n Sulfide (Rhizosph	ites (B13) Odor (C1) neres (C3)		Secondary We Secondary Dr.	r Indicators ater Marks diment De ift Deposits ainage Pat y-Season V	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2)
Hydrology Wetland Indicators Primary Indicators (Any one indicator is suf Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6)	ficient) Salt Crus Biotic Cru Aquatic I Hydroge Oxidized Presence	st (B11) ust (B12) nvertebra n Sulfide (Rhizosph	otes (B13) Odor (C1) neres (C3) ced Iron (C		Secondary Wasses	ater Marks diment De ift Deposits ainage Pat y-Season V in Muck Su	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2)
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North State Resources				Habitat Type QUARRY
Wetland Determination Data Form - Arid V				Wetland Type
Project/Site: Sisk Dam Corrective Action Project Applicant/Owner: U.S. Bureau of Reclamation		_ City/Count	y:Merced	State: CA Sampling Point: 49
Investigator(s): J. Colescott Landform (hillslope, terrace, etc.) Qurey		Local rel	ief (concave	s, convex, none)P_1 Slope % _O ~ 100
Subregion (LRR) <u>LRR-C</u> Are climatic/hydrologic conditions on the site typical for this a conditions on the site typical for this a conditions on the site typical for this a condition on the site typical for this a condition on the site typical for this a condition on the site typical for this accordance in the condition of th	ime of year cantly distu	rbed? Are n	(If no, explai ormal circur	in in remarks.) Instances present? YE 5
Summary of Findings (Attach site map showing Hydrophytic vegetation? NO Hydric soil? NO Wet	sampling p	oint location	s, transects Is sample	important features, etc.) d area a wetland? NO Other waters? NO
USACE Jurisdiction Adjacent to Waters Isolate Explain:	ed (with inte	erstate comn	nerce)	_ Isolated (non jurisdictional)
Evaluation of features designated "Ot Indicators: Defined bed and bank Scour Feature Designation: Perennial Intermittent Endural Drainage Artificial Drain	Ordir phemeral	nary High Wa	ater Mark M	apped
Remarks CONSIDERED A "PI IN SEVERAL MINOR DEPRESO TO A LACK OF DOMINANT HYD SOILS.	510NS	· NO	T con	ISIDERED A WEILAND DUE
Vegetation Tree Stratum (use scientific names)	Absolute % Cover		Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: (A)
2. 3.				Total number of dominant species (B)
50%= Total Cover: Sapling/Shrub Stratum (use scientific names) 1		Species?	Status	Percent of dominant species that are OBL, FACW, or FAC: (AB)
2.				Prevalence Index Worksheef Total % Cover of: OBL Species x 1 =
4				FACW Species $\frac{5}{5}$ $x2 = \frac{10}{15}$ FAC Species $\frac{5}{5}$ $x3 = \frac{15}{15}$
1. Trichostema (anceolata 2. Brows hardencons	% Cover	Species?	Status VPL FACU	FACU Species 5 x4= 26 UPL Species 5 x5= 25
3. Hemizonia pungens 4. Vulpia promoides	5 <u>-</u> 5	4	FACW	Column Totals 20 (A) 70 (B) Prevalance Index = B/A = 3.5 20 70
5				Hydrophytic Vegetation Indicators Dominance Text is >50% Prevalence Index is ≤ 3.01
50%= 1 0 20%= 1 Total Cover: Woody/Vine Stratum (use scientific names)	0/ Cayor	Species?	Status	Morphological Adaptations¹ (provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
1	 			**Indicators of hydric soil and wetland hydrology must be present.** Hydrophytic Vegetation?
50%= Z0%= Total Cover: % Bare Ground in Herb Stratum 🐒 % Cover of Blod				пушторпуше чедецации — 1

	n needed to document Redox Features	t the indicator or	confirm the absence of indicators.
(inches) Color (moist) % C		76 Type1	Loc ² Texture Remarks — GRAVEICY LOAM
Types: C = Concentration D = Depletion RM =			= Pore Lining RC = Root Channel M = Matrix
Hydric Soil Indicators: (Applicable to alf I Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (AG) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark S Depleted Dar Redox Depre	d Matrix (S4) x (S5) rix (S6) y Mineral (F1) d Matrix (F2) trix (F3) Surface (F6) rk Surface (F7) essions (F8) (F9)	Indicators for Problematic Hydric Soils3 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vetric (F18) Red Parent Materials (TF2) Vegetated Sand/Gravel Bars Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present.
Restrictive Layer (if present): Type: ROCK Remarks ROCKY GRAVEL TO NO HYDRIC SOIL IN	SURFACE W/		TIN LAYER OF SOIL ON TOP
Hydrology			
Hydrology Wetland Indicators Primary Indicators (Any one indicator is sufficient			Secondary Indicators (2 or more required)
Wetland Indicators	nt) Salt Crust (B1 Biotic Crust (I Aquatic Invert Hydrogen Sul	at 1) Bat 2) Bebrates (B13) Bedrates (C1) Bedrates (C3) Bedrates (C4) Bedrates (C4) Bedrates (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Rivenne) Sediment Deposits (B2) (Rivenne) Drift Deposits (B3) (Rivenne) Drainage Patterns (B10) Dry-Season Water Table (C2)
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APPENDIX B

Representative Photographs August 31 to September 18, 2009



Photograph 1. Cover photograph. Looking southwest from the eastern edge of the study area, south of State Route 152 and Gonzaga Road. Visible in the photograph is the dam, the seep wetlands at the base of the dam, and Basalt Hill Road.



Photograph 2. To provide a sense of scale, this view is from the top of the dam looking northeast. The seep wetlands described in the photographs that follow can be seen as the narrow string of trees and darker vegetation just beyond the straight gravel road in the sunny portion of the photograph.

B. F. Sisk Dam Corrective Action Project Delineation of Waters of the United States



Photograph 3. Seepage wetlands occur in the lands east of the foot of the dam. Starting at the south end of the dam, data point 14 (shovel) documents the first of a series of wetland features (FEW10) created from dam seepage. These wetland features are connected via a series of ditches that help to convey the waters to O'Neill Forebay. The next several photographs depict several of the wetland features and ditches that convey these waters.



Photograph 4. Looking southeast at the north end of FEW9, another seep wetland in the complex mentioned in Photograph 3. The photograph is taken from a low bench near the eastern foot of the dam.



Photograph 5. Data point 5 located on the western edge of FEW9. The data point is located at the base of a small rise at the abrupt upland boundary to the wetland feature. Note the dense cattail understory and red willow overstory.



Photograph 6. Looking west at FEW9, data points 6 (shovel in background) and 7 (backpack) document the eastern edge of the FEW9 feature. The data points are located south of the point Photograph 4 was taken from (see Figure 4c).



Photograph 7. Looking northeast from approximately 0.1 mile north of the point Photograph 4 was taken from. The darker vegetation between the toe of the slope and the pickup truck is the wetland feature (SW4) associated with the conveyance of dam seepage. Data points 1 and 2 are located just out of the photograph to the right.



Photograph 8. Data points 1 (shovel) and 2 (backpack) document the seasonal wetland (SW4) and adjacent upland, respectively.



Photograph 9. Data points 21 and 22 document the seasonal wetland (SW6) and adjacent upland, respectively, that occurs at the northern boundary of the central portion of the study area (see Figure 4c). The feature extends beyond the boundaries of the study area and functions as a collection area for runoff of precipitation and dam seepage that occurs east of the dam. SW4, SW6, and SW20 are part of the same large seasonal wetland.



Photograph 10. Looking northwest at D8. This ditch is the main outflow conveyance feature of the seepage collected in the wetlands and ditch features pictured above. This ditch flows north to O'Neill Forebay. The channel width at this point is estimated at 8 feet, based on weak indicators of an ordinary high water mark.



Photograph 11. Data point 15 (shovel) documents a small fresh emergent wetland (FEW4) located on the north side of the dam in the north western portion of the study area. This feature is also a seep wetland and a number of ditches (e.g., D12) help to convey these waters to the O'Neal Forebay.



Photograph 12. Data point 16 documents a ditch (D10) that conveys seepage waters toward O'Neill Forebay on the north side of the dam.



Photograph 13. A number of seasonal wetlands occur east of the dam. This photograph of SW32 shows the feature's close proximity to FEW9. Data point 11 (backpack) documents the feature, and data point 10 (shovel) documents the adjacent uplands.



Photograph 14. Data points 19 (shovel) and 20 (GPS unit) document the boundaries of SW22. As is evident in the photograph, the boundary is very subtle. In this case, hydric soil indicators were observed at both points, but the vegetation and hydrology indicators were missing from the upland point.



Photograph 15. Data point 23 documents another small seasonal wetland (SW24). Each of the seasonal wetland features that occur east of the dam are depressional, and the three wetland parameters are evident, but it is not certain whether dam seepage plays a role in their hydration. As depressional features, they may only be hydrated during winter precipitation events.



Photograph 16. The soils at data point 23 show the prominent redox features.



Photograph 17. Data point 28 (shovel) documents upland conditions in a suspect wetland located north of State Route 152. The aerial photograph of the study area shows a drainage-like feature here. This data point was installed at the low point of the feature, but no wetland parameters were met.



Photograph 18. Data point 31 documents the seasonal wetland (SW19) that occurs in a very shallow depression in the portion of the study area north of State Route 152. The indicators are weak, but sufficient for the feature to be considered a wetland.



Photograph 19. Several ephemeral drainages exit the hills surrounding the study area. Here, DP 43 documents this 2-foot wide ephemeral drainage (ED5). Although annual upland vegetation has colonized the feature, and the soils are not hydric, the bed and bank feature with evidence of scour and deposition qualifies as an "other waters" of the United States.



Photograph 20. The incised channel of ED5 is more pronounced on the west side of Basalt Hill Road.



Photograph 21. Data point 47 documents another small ephemeral drainage (ED3). Similar to ED5, upland vegetation has colonized this drainage, but strong evidence of scour and deposition, and a pronounced bed and bank qualify this feature as an "other waters".



Photograph 22. Data point 46 documents the San Luis Reservoir below the full pool elevation. The dam can be seen in the background, and a temporary road in the foreground. Scattered debris has been trapped within the stems of the shrub (seep willow) growing along the upper water mark and other indicators help to define the "bathtub ring" at full pool elevation.



Photograph 23. Another view of the lake bottom documented by data point 46 (shovel in background).



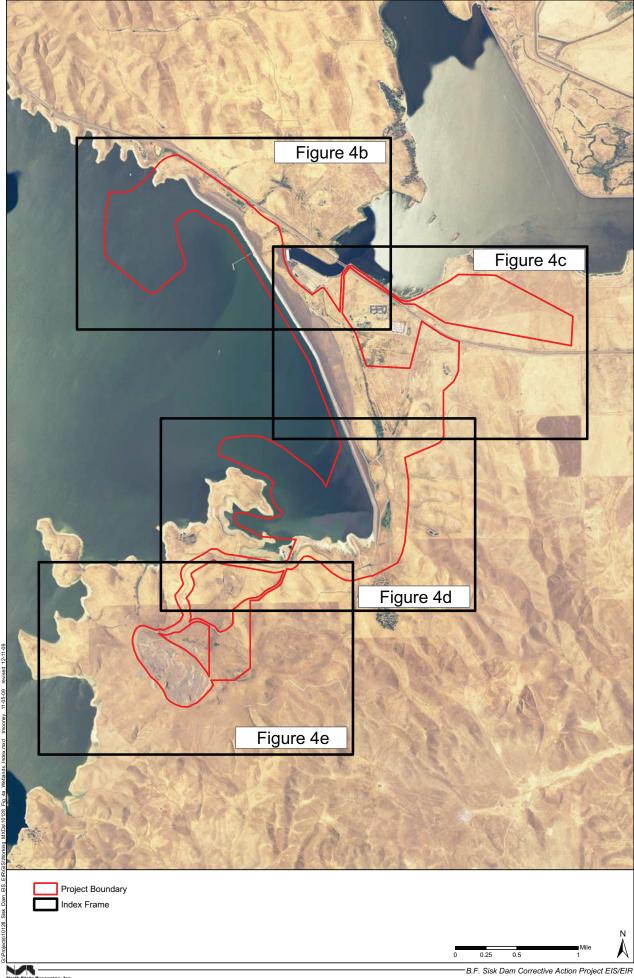
Photograph 24. This photograph shows the single "mixed chaparral" stand of silver buffaloberry. The species is not a wetland indicator, but there is a small ephemeral drainage leading from it. Data point 48 documents that the three wetland parameters were met within the stand. Also visible in the photograph is the "mud slide area" depicted on Figure 4e. Although small rivulets are visible within the mud slide, they are a remnant of the slide and are not considered waters.



Photograph 25. Data point 49 documents that the small "puddles" that have formed within the quarry on top of Basalt Hill are not wetlands. The features are almost devoid of vegetation, the soil layer is very thin on top of rock, with no hydric soil indicators. Only the wetland hydrology parameter is met (see data sheet 49).



Figures 4a – 4e
Preliminary Boundaries of Waters of the United States, Including Wetlands



North State Resources, Inc.

Figure 4d Preliminary Boundaries of Waters of the United States, including Wetlands

Figure 4e Preliminary Boundaries of Waters of the United States, including Wetlands