Berriman Ranch Delineation of Waters of the United States and State of California

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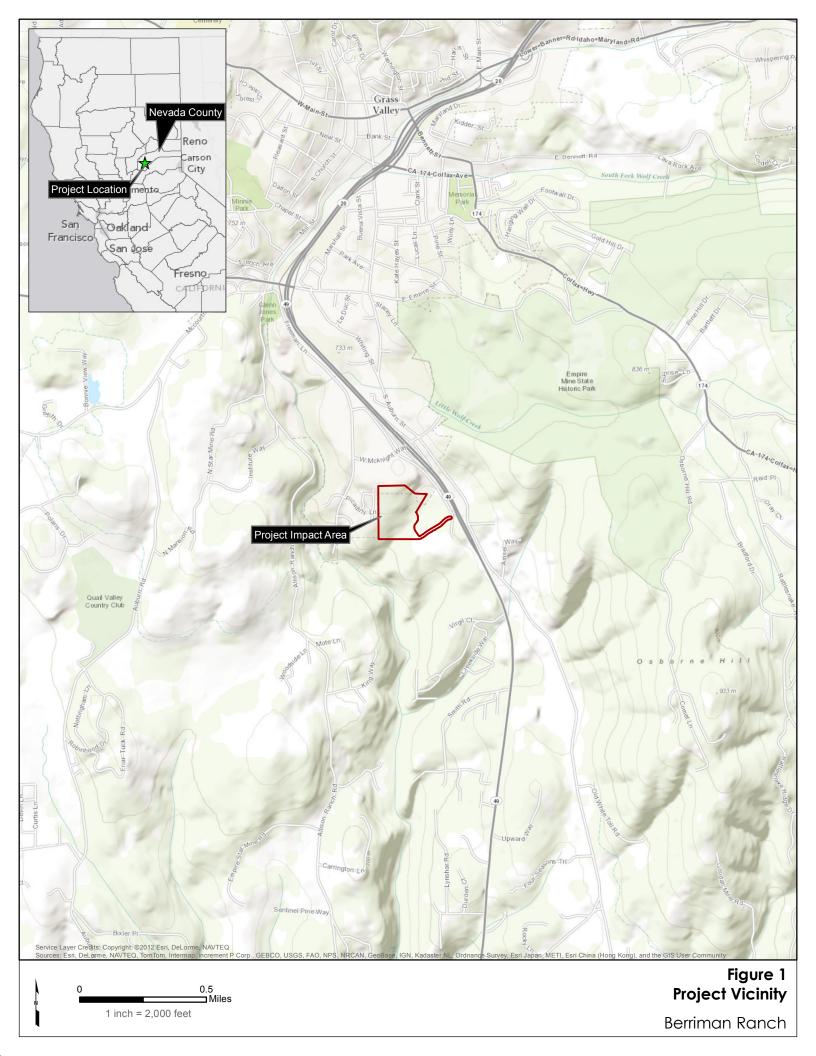
1.0 INTRODUCTION

Greg Matuzak, a Wetlands Consultant, conducted a delineation of potential waters of the United States and State of California, as well as assessed California Department of Fish and Wildlife (CDFW) jurisdiction, within the Berriman Ranch residential development and fire road project area located within the City of Grass Valley in Nevada County, California (Figure 1). The site is located within APN 22-140-03 and 22-160-03 and within Section 2, Township 15 North, Range 8 East within the USGS Grass Valley Quadrangle. The proposed project includes the development of residential units and the upgrade of an existing road to meet City of Grass Valley and local fire code standards. The proposed project includes the development of residential units connecting just east of Picadilly Lane, an existing street within the City of Grass Valley. Additionally, the proposed project plan includes the upgrade and development of an existing road that would connect Picadilly Lane with the newly developed residential units, and then with Taylorville Road.

The project is located in the City of Grass Valley, immediately south of Nevada City, in Nevada County. The project area is generally bound by two roads: Picadilly Lane to the west and Taylorville Road to the east. An existing residential development along Picadilly Lane just west of the proposed residential unit development borders the project area to the west. The project area encompasses approximately 22 total acres. The project area includes vacant private land and it is surrounded by a mix of residential and retail uses. The area surrounding the proposed project area consists of several existing commercial and residential land uses, and to a lesser degree public and quasi-public land uses.

The site is covered mostly by Ponderosa Pine, Annual Grassland, and Abandoned Orchard habitats. The site also includes small amounts of Foothill Hardwood, Foothill Riparian, and Freshwater Emergent Wetland habitats. Significant portions of the old orchards are associated with facultative mesic meadow plants and characterize the delineated wetlands associated with the project site drainages and drainage patterns. Site topography slopes gradually to the west towards Wolf Creek, where onsite drainages connect to. The site is approximately 2,200 feet above mean sea level; elevations increase in east, north, and south directions as the terrain drains to the west (Figure 2). The study area supports Annual Grassland, Orchard, Orchard/Wet Meadow/Seasonal Wetland, Montane Hardwood Woodland, Foothill Riparian habitat, and Fresh Emergent Wetland habitat types. The Foothill Riparian habitat and much of the associated wetlands within the site occur along the main tributary systems to Wolf Creek that cross the property from the east to the west. There is one main unnamed tributary to Wolf Creek that crosses the existing access and fire road, which contains a large culvert to allow water passage under the road.

The purpose of the delineation of waters of the United States on the study area was to determine the location and extent of areas that meet the Corps' criteria as waters of the United States, including wetlands, pursuant to Section 404 of the Clean Water Act (1972) to assist the SCO with development plans of the site. In addition, this delineation assessed the extent of RWQCB jurisdiction under the Clean Water Act and Porter-Cologne Water Quality Act, as well as CDFW jurisdiction, which are limited to rivers, lakes, and streams under the California Fish and Wildlife Code Section 1600 et. seq. This preliminary jurisdictional determination used methods accepted by the Corps as detailed in the Wetlands Delineation Manual (Environmental Laboratory, 1987) and more recently in the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Regions (April 2008). Additionally, existing reporting for the site was reviewed, including a Biological Inventory and Habitat Management Plan (EcoSynthesis, 2006),





Special-status Plant Survey Report (EcoSynthesis, 2008), and the Soil Survey for Nevada County, California (www.websoilsurvey.nrcs.ussda.gov) to better characterize the nature and extent of potential jurisdictional areas on the subject site. Any proposed development in areas identified as jurisdictional "waters" is subject to the permit requirements of the Corps, under Section 404 of the Clean Water Act, and would also require a Section 401 water quality certification or waiver thereof. A Streambed Alteration Agreement from the CDFW would also be required for impacts within the jurisdiction covering such an Agreement with CDFW.

2.0 REGULATORY OVERVIEW AND DEFINITIONS

The Corps, under provisions of Section 404 of the Clean Water Act and Corps' implementing regulations, has jurisdiction over the "waters of the United States." "Waters" include all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, seasonal drainage channels, etc.), all impoundments of waters otherwise defined as "waters of the U.S.", tributaries of waters otherwise defined as "waters of the U.S.", territorial seas, and wetlands adjacent to "waters of the U.S.".

Areas not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds excavated on dry land used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water filled depressions (51 Fed. Reg. 41, 217 1986). In addition, a Supreme Court ruling (SWANCC vs. Corps, January 9, 2001) determined that the Corps exceeded its statutory authority by asserting Clean Water Act jurisdiction over "an abandoned sand and gravel pit in northern Illinois, which provides habitat for migratory birds." Based solely on the use of such waters by migratory birds, the Supreme Court's holding was strictly limited to waters that are "non-navigable, isolated, and intrastate."

The Supreme Court further addressed the extent of the Corps' jurisdiction in Rapanos v. U.S. (June 19, 2006). There, a sharply divided Court issued multiple opinions, none of which garnered the support of a majority of Justices. This created substantial uncertainty as to which jurisdictional test should be used going forward. The Ninth Circuit Court of Appeal, which encompasses California, answered this in Northern California River Watch v. City of Healdsburg (August 11, 2006). There, the Court held that Justice Kennedy's opinion in Rapanos provides the controlling rule of law. Under that rule, wetlands or other waters which are not navigable in fact are subject to the Corps jurisdiction if they have a "significant nexus" to a navigable-in-fact waterway. As Justice Kennedy explained, whether a "significant nexus" exists in any given situation will have to be decided on a case-by-case basis, depending on sitespecific circumstances. Corps Headquarters in Washington, D.C. is working on substantive quidance to its District Offices as to how to apply these rulings. Pending issuance of that quidance, this report describes aquatic features on the property which meet the physical characteristics of wetlands or other waters. This represents the maximum amount of area on the property that may constitute "waters of the United States" which are subject to Corps jurisdiction. This information will be submitted to the Corps with a request that they verify this delineation. At that time, the Corps will determine whether all, a portion, or none of these aquatic features are subject to their jurisdiction in light of these court decisions. In any event, these rulings do not alter the extent of State jurisdiction over "waters of the State" (which are subject to RWQCB jurisdiction, or "rivers, lakes or streams" subject to CDFW jurisdiction.

CDFW has regulatory authority over any work within rivers, lakes and streams of the State of

California (California Fish and Wildlife Code Sections 1601-1603) on public, private and agricultural lands. Features that are regulated by CDFW include all rivers, streams, or lakes including man-made watercourses with or without wetlands, if they contain a definable bed and bank and have fish or wildlife habitat.

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurring in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USFWS has published the *National List of Plant Species That Occur In Wetlands* (1988, revised draft 1997, Corps update of wetland ratings 2014), which separates vascular plants into the following basic categories based on plant species frequency of occurrence in wetlands:

- Obligate wetland (OBL). Occur almost always (estimated probability >99%) under natural conditions in wetlands.
- Facultative Wetland (FACW). Usually occur in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
- Facultative (FAC). Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
- Facultative Upland (FACU). Usually occur in non-wetlands (estimated probability 67%-99%), but occasionally found in wetlands (estimated probability 1%-33%).
- Obligate Upland (UPL). May occur in wetlands in another region, but occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.

The Corps considers OBL, FACW, and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the updated 2014 list is assumed to be an upland species, almost never occurring in wetlands.

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. In Northern California, sufficient duration is defined as a minimum of two weeks during the growing season. Field indicators of wetland soils include observations of ponding, inundation, or saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), or gleying, which indicates reducing conditions by a blue-grey color. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of

wetland hydrology is frequently supported by indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

Ordinary High Water Mark (OHWM) is that line on the shore or banks of a water course established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area.

3.0 METHODS

The delineation of potential Section 404 "waters of the United States" and wetlands (as a subcategory of waters), RWQCB "waters of the State", and CDFW jurisdictional areas on the property was conducted on June 24th, June 29th, and July 10th, 2014 using the routine methodology as detailed in the Corps's 1987 *Wetlands Delineation Manual*. Reconnaissance-level site visits were conducted earlier in June 2014 that aided the characterization of the extent of potential jurisdictional areas. The entire project area was surveyed on foot by a wetlands ecologist and GPS/GIS specialist (Greg Matuzak and Kate Gross) for the presence of waters of the U.S. and State of California, including wetlands. The survey area included a 60 foot corridor centered on the existing access road that cuts through the project area. The existing access road is approximately 20 to 26 feet wide and an additional 17 to 20 feet was surveyed on each side of the access road for a total of a 60 foot corridor. In addition, several additional areas, including the existing unnamed tributary to Wolf Creek that crosses the project area, were included as part of the survey. The area surveyed is outlined in Figure 2.

Within the project area, normal circumstances exist because the site has been disturbed by historic farming practices and road maintenance operations, public access, and ongoing site management for many years and is now considered normal for the site. Dumping of soils, landscape materials and other miscellaneous items has also occurred for many years, and the current circumstances are now considered normal for the site. Areas not subject to this regular type of disturbance are dominated by native habitat and therefore, are also the normal circumstance. The presence of sandy and sandy loam soil mapping units on the property classifies the site as a potential problem area, and careful attention was paid while evaluating onsite soils.

The onsite unnamed tributary to Wolf Creek and adjacent topographic low areas dominated by native vegetation were the focus of the wetland delineation investigation given that the areas outside of this area were clearly upland, marked by the presence of non-native and native annual grassland species. The site visits in June and July 2014 followed no seasonal rain events and therefore, direct observation of hydrology in some areas of the project site was not possible. The potential waters of the U.S. were mapped based on the observable signs of wetland hydrology (i.e.: presence of drainage patterns and an observable ordinary high water mark within the onsite unnamed tributary to Wolf Creek). Areas containing a predominance of wetland and riparian vegetation within and adjacent to the unnamed tributary to Wolf Creek were mapped as wetland-waters of the U.S. because all three wetland parameters were met. In all of the areas surveyed, the extent of Corps and RWQCB jurisdiction were identical given that any area not showing hydric soils also did not meet the test for hydrophytic vegetation. Potential "waters" were delineated on an aerial photograph (see Figure 3 and Figure 4). Data observation points were collected in areas of the site that characterized potential "waters" which primarily consisted of areas that contained evidence of wetland hydrology (i.e. within or adjacent to the

unnamed tributary to Wolf Creek and in topographic low areas). The OHWM associated with the unnamed tributary to Wolf Creek was identified and areas containing sediment deposition, as well as the extent of hydrophytic vegetation, were used to identify the potential extent of Corps and RWQCB jurisdiction.

The unnamed tributary to Wolf Creek within the project area was determined to fall under CDFW jurisdiction based on the presence of a distinct bed and bank and its hydrologic connection to other natural drainage features in the region. The associated Foothill Riparian habitat connecting the unnamed tributary to Wolf Creek was considered a Foothill Riparian Wetland given the presence of hydric soils (from soil test pits), hydrophytic vegetation, and the connection to the tributary.

Data observation points were taken in the drainage feature and in areas dominated by hydrophytic plant species, as well as adjacent upland areas to characterize the extent of potential Federal and State jurisdiction. Soil pits were excavated to a depth of approximately 12 to 16 inches during the delineation. Given the dry nature of the site at the time of the survey, soils in general were very dry, dusty on the surface, and difficult to reach below 12 to 16 inches. Soils were not investigated in all areas of the site given most of the western section of the project area contained upland plant species and no indicators of wetland hydrology. Hydric soils were presumed absent in these locations as the areas were devoid of wetland vegetation and contained no positive indicators of wetland hydrology. Information recorded at each data point location included plant species composition (to determine the presence/absence of hydrophytic vegetation), presence/absence of indicators of wetland hydrology, and in areas containing potential wetland habitat, indicators of hydric soils.

Our final determination of potential waters of the U.S. and state of California within the subject property was based on the dominance of wetland vegetation, the presence of hydric soils, and the presence of an observable OHWM within the unnamed tributary to Wolf Creek.

4.0 RESULTS

4.1 Summary

A total of eight (8) data observation points were used to delineate potential waters of the U.S. and State of California on the property. The majority of the property is upland habitat composed of Ponderosa Pine, Annual Grassland, and abandoned orchard habitats. However, much of the abandoned orchards are located within the drainage patterns associated with the unnamed tributary to Wolf Creek. Classification of the onsite habitat types corresponds to the descriptions of natural terrestrial communities identified within the Nevada County Natural Resources Report (NCNRR; Nevada County, 2002). Appendix A includes a list of plant species observed during the surveys and Appendix B illustrates the USDA soil mapping units that occur on the property. Appendix C includes the wetland determination data forms and Appendix D includes a photo log of the site.

The majority of areas identified as potential waters of the U.S. within the project area are wetland waters as they contained a predominance of hydrophytic plant species, an observable drainage pattern or secondary indicator of wetland hydrology, and had hydric soil indicators. Wetlands were generally associated with the unnamed tributary to Wolf Creek and associated riparian habitat along both sides of the access and fire road. A small patch of seasonal wetland was identified and mapped observed onsite adjacent to the unnamed tributary to Wolf Creek in a wet meadow/seasonal wetland area. The unnamed tributary to Wolf Creek is considered a

stream with a clear OHWM and positive indicators of wetland hydrology given the drainage was dry during the surveys. In total, the delineation of waters of the U. S. identified approximately 1.72 acres of potential Foothill Riparian Wetland, 0.03 acres of Seasonal Wetland, and approximately 0.06 acres of Seasonal Streams. The mapped features are included in Figure 3 and Figure 4. As previously stated, our investigation determined that the entire reach of the unnamed tributary to Wolf Creek and associated riparian habitat within the project area is a CDFW jurisdictional area.

Potential waters of the U.S. consist of the unnamed tributary to Wolf Creek, which is seasonal stream since it contains a clear bed and bank and OHWM but was dry during the surveys. The unnamed tributary to Wolf Creek and associated riparian habitat and seasonal wetland onsite are hydrologically connected to Wolf Creek, the Bear River, the Feather River, the Sacramento River, the San Francisco Delta, and ultimately the Pacific Ocean. One are in the northern section of the project area contained marginal hydrophytic vegetation, non-hydric soils, and is hydrologically isolated from the unnamed tributary to Wolf Creek and was determined to not fall within the Corps' jurisdiction. The unnamed tributary to Wolf Creek and associated riparian and seasonal wetland areas (identified in Figure 3 and Figure 4 Wetland Delineation Maps) were also determined to fall under RWQCB jurisdiction based on the dominance of hydrophytic vegetation.

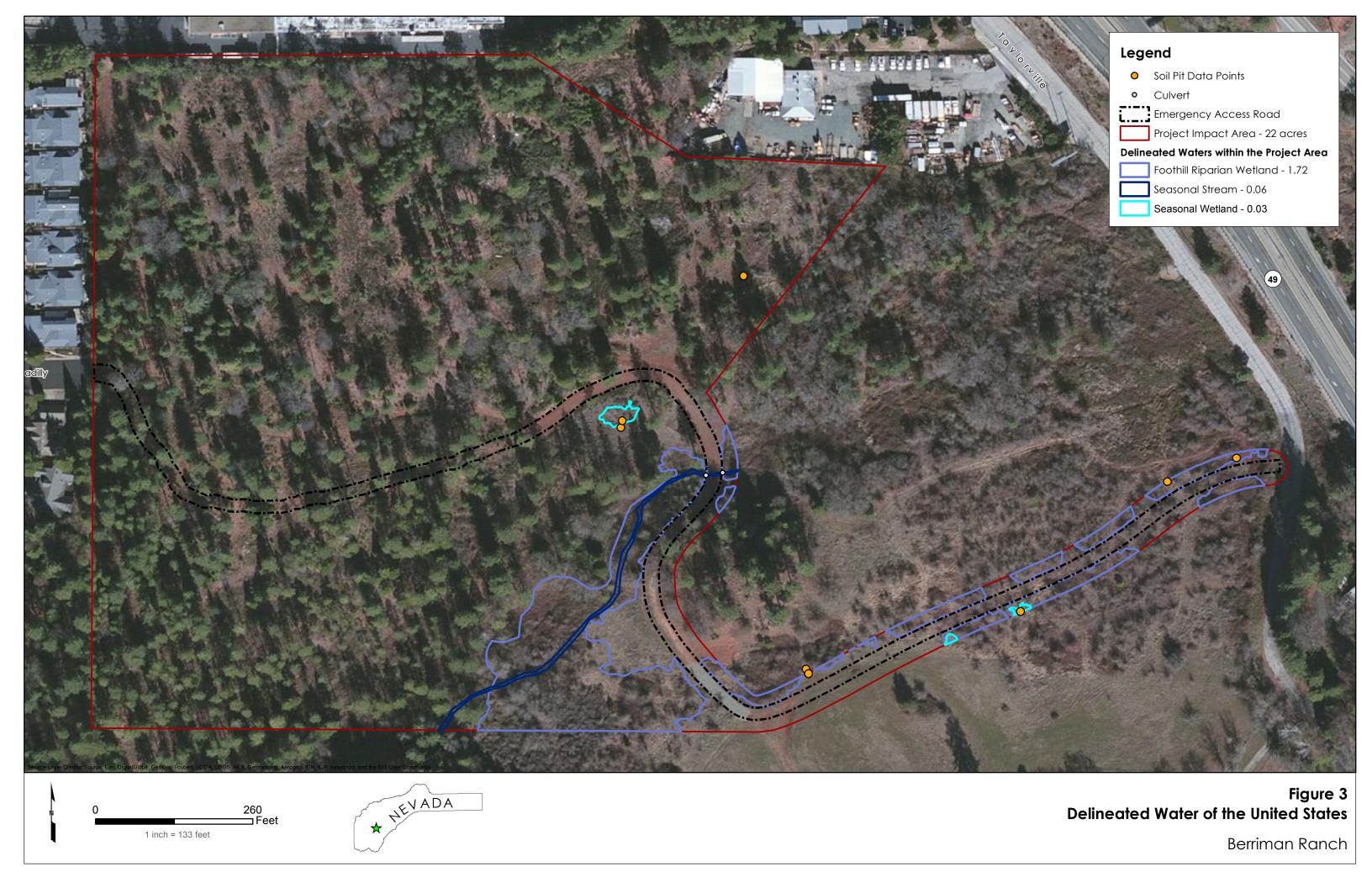
4.2 Site Drainage

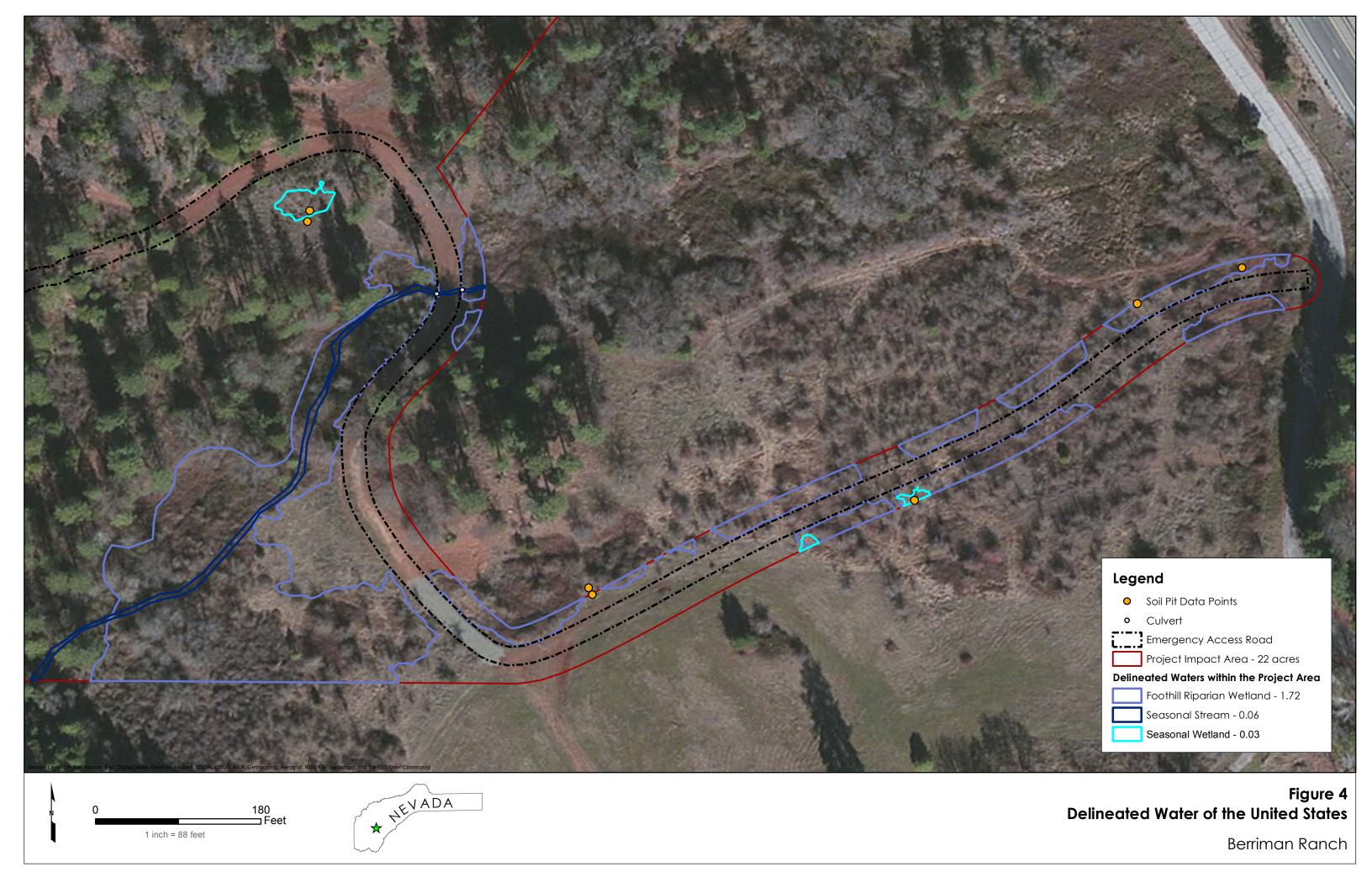
The site drainage runs from the east towards the west, with most of the site drainage crossing the project area within the unnamed tributary to Wolf Creek. The unnamed drainage crosses the existing site access and fire road through a large culvert. Associated riparian habitats in the eastern area of the project area contain hydric soils and hydrophytic vegetation; therefore, the unnamed tributary to Wolf Creek and associated riparian habitats have been identified as waters of the U.S. and waters of the State of California. The only feature within the project area that contains an OHWM and defined bed and bank is the unnamed tributary to Wolf Creek, which has been identified as a Seasonal Stream in the project area given the stream was dry during the surveys.

4.3 Vegetation

The project area is composed primarily of Ponderosa Pine, Annual Grassland, and abandoned orchard habitats. However, the abandoned orchard habitats are associated generally with the riparian habitats adjacent to the unnamed tributary to Wolf Creek and are considered Foothill Riparian Wetlands. The Ponderosa Pine habitats also include incense cedar (*Calocedrus decurrens*) and California black oak (*Quercus kelloggii*). The Annual Grassland habitats contain bromes (*Bromus diandrus and B. hordeaceus*), wild oats (*Avena sp.*), orchard grass (*Dactylis glomerata*), tall fescue (*Festuca arundinacea*), among other native and non-native grasses. The abandoned orchard areas, which are primarily associated with Foothill Riparian Wetlands, include white alders (*Alnus rhombifolia*) and willows (*Salix laevigata* and *S. lasiolepis*) in addition to Himalayan blackberry (*Rubus armeniacus*), Baltic rush (*Juncus balticus*), and irisleaved rush (*Juncus xiphioides*).

Areas identified as seasonal wetlands and wetlands associated with the unnamed tributary to Wolf Creek contain a diverse palette of native herbaceous wetland species, such as clustered field sedge (*Carex praegracilis*), umbrella sedge (*Cyperus eragrostis*), Baltic rush (*Juncus balticus*), and iris-leaved rush (*Juncus xiphioides*). In addition, an obligate wetland species,





cattail (*Typha* sp.) is also present in the topographic low areas adjacent to the unnamed tributary to Wolf Creek.

4.4 Soils

The USDA identifies three soil mapping units within the project survey area and include: (1) Musick sandy loam, 15-50% slopes; 2) Musick sandy loam, 5-15% slopes; and 3) Alluvia land, clayey (See Appendix B for Soils Map). The Alluvial land, clayey soil mapping unit is associated with the unnamed tributary to Wolf Creek and associated Foothill Riparian habitat and wetlands. The other two soil mapping units, which include the Musick sandy loam, 15-50% slopes and Musick sandy loam, 5-15% slopes occur within the upland portions of the study area that generally contain native and non-native grasslands and ponderosa pines. The following provides a brief overview of these soil mapping units:

Musick sandy loam, 15-50% slopes (MrE) is a well drained soil underlain by weathered granodiorite. Permeability is moderately slow in the subsoil. Runoff from this soil is medium to rapid on this soil. This soil is associated with areas used mostly for timber production. This soil is found in the western and northern areas of the project area adjacent to Picadilly Lane where stands of ponderosa occur within the site.

Musick sandy loam, 5-15% slopes (MrC) is a well drained soil underlain by weathered granodiorite. Permeability is moderately slow in the subsoil. Runoff from this soil is medium and the hazard of erosion is moderate. This soil is associated with areas used mostly for timber production. Some areas are used for limited grazing and irrigated pasture. This soil is found in the eastern area of the project area adjacent to Taylorville Road.

Alluvial land, clayey (Ao) is a miscellaneous land type consisting of narrow areas of alluvial material deposited along small stream channels and drainage ways. This is a moderately well drained to poorly drained material formed in fine textured alluvium derived dominantly from metabasic and granite rock. Permeability is moderately slow to very slow in this land type and it is used for winter and spring pasture and for range. This soil mapping unit is associated with the unnamed tributary to Wolf Creek and associated riparian and wetland habitat.

4.5 Hydrology

The project site has been identified as being located within the Grass Valley watershed as defined by the NCNRR. The main hydrological feature associated with the project area includes an unnamed tributary to Wolf Creek, located just west of the project area. Given the project area generally slopes from east to west, a majority of the project area drains into the unnamed tributary to Wolf Creek and eventually into Wolf Creek itself. Each data observation point was examined for positive field indicators of wetland hydrology. Indicators of wetland hydrology on the site were determined if there was an observation of a drainage pattern, water marks, cracking of the soil at the surface, and/or sediment deposits within and adjacent to the natural drainage features on site and associated riparian habitat. The preliminary Corps and RWQCB jurisdictional determination was based primarily on the presence of an observable ordinary high water mark within the unnamed tributary to Wolf Creek, but also included topographic low areas adjacent to this drainage feature that contained a predominance of wetland vegetation.

4.6 Delineation of Waters of the U.S. and State of California

This investigation within the project study area identified approximately 1.81 acres of potential wetland waters of the U.S., including 1.72 acres of Foothill Riparian Wetland, 0.03 acres of Seasonal Wetland, and 0.06 acres of Seasonal Stream. These are also considered wetlandwaters of the State of California and the site does not contain any additional waters of the State of California. CDFW jurisdictional area was identified within and along the unnamed tributary to Wolf Creek. The location, extent and determining factors are detailed below.

The majority of the wetlands delineated within the project site were associated with the unnamed tributary to Wolf Creek and adjacent riparian habitats. The unnamed tributary to Wolf Creek contains a defined bed and bank and OHWM; therefore, it was identified as a Seasonal Stream and is considered a waters of the U.S. and State of California. These wetland areas are associated with the southern and eastern areas of the project area and are mostly associated with the Alluvial land, clayey (Ao) mapped soil unit, which is associated with floodplains and small streams, and where not associated with the Ao mapped soil unit, they are associated directly within and adjacent to the unnamed tributary to Wolf Creek. The unnamed tributary to Wolf Creek and associated riparian habitat and seasonal wetland onsite are hydrologically connected to Wolf Creek, the Bear River, the Feather River, the Sacramento River, the San Francisco Delta, and ultimately the Pacific Ocean and therefore, meet the definition of a waters of the U.S. and State of California.

No wetlands were identified within the access and fire road intended to be upgraded with gravel in order to meet the City of Grass Valley and local fire codes. The wetlands identified in some areas lie adjacent to the existing roads and beyond; however, if the upgrades to the existing road are contained within the existing roadway and not within any of the mapped wetland areas detailed in Figure 3 and Figure 4 then no waters of the U.S. and State of California, including wetlands should be impacted by the proposed housing development or upgrade to the existing road. The proposed housing development is located in the northwest corner of the project area in an area that does not contain any waters of the U.S. and State of California, including wetlands given it is located in an upland area containing mostly Ponderosa Pine habitat.

Areas containing a predominance of hydrophytic vegetation and hydric soils adjacent to the unnamed tributary to Wolf Creek were identified as wetland waters as all three parameters that define a Corps jurisdictional wetland were met. The entire portion of the unnamed tributary to Wolf Creek that lies within the project area falls under Corps jurisdiction pursuant to Section 404 of the CWA. In addition to the above described Corps jurisdictional areas, there are no additional features that would fall under the RWQCB jurisdiction pursuant to the Clean Water Act and Porter-Cologne Water Quality Control Act.

5.0 CONCLUSION

The existing access road is 20 to 26 feet wide where it crosses the project area. In order to upgrade the access road to local City of Grass Valley and fire code standards, the access road must include a gravel base of 18 feet wide with a foot of shoulder on each side of the road for a total width of 20 feet. Therefore, waters of the U.S. and waters of the State of California delineated adjacent to the existing access road within the project area are located outside of the existing road area to be upgraded and the other areas to be developed within the 22 acre project area. Therefore, the upgrades to the existing access road and other areas within the project area lie outside the mapped features potentially regulated by the Corps pursuant to Section 404 of the CWA and regulated by the RWQCB pursuant to Section 401 of the CWA.

Through the survey of waters of the U.S. and waters of the State of California, it was determined that approximately 1.72 acres in the project area are designated as Foothill Riparian Wetland associated with the unnamed tributary to Wolf Creek. In addition, adjacent to the unnamed tributary to Wolf Creek, approximately 0.03 acres of Seasonal Wetland was identified in the project area and approximately 0.06 acres of Seasonal Stream (unnamed tributary to Wolf Creek) was identified in the project study area and contains a defined bed and bank and OHWM. A total of 1.81 acres of waters of the U.S. and waters of the State of California were identified within the 22 acre project area that would potentially fall under the Corps jurisdiction pursuant to Section 404 of the CWA.

The RWQCB pursuant to Section 401 of the Clean Water Act also has jurisdiction over these areas. As detailed in the CWA, any proposed construction that would place fill within areas identified as Corps jurisdictional waters would require a Department of the Army Section 404 permit and Section 401 Water Quality Certification, or waiver thereof, prior to construction. This investigation determined that the unnamed tributary to Wolf Creek and associated riparian habitat would likely fall under CDFW jurisdiction as this area contains a bed and bank with associated wildlife habitat. Any proposed alteration of this area on the subject property may require a Streambed Alteration Agreement from the CDFW pursuant to Section 1600 *et. seq.* of the California Fish and Wildlife Code prior to construction.

Appendix A

Plant List

Appendix A. Species observed within the project area during the wetland delineation

Scientific Name Common Name

CRYPTOGAMS FERNS AND SPIKE-MOSSES

Blechnaceae

Toxicodendron diversilobum

Woodwardia fimbriata chain fern

DennstaedtiaceaeBracken FamilyPteridium aquilinumbracken fern

Equisetaceae Horsetail Family

Equisetum arvense common horsetail

GYMNOSPERMS CONIFERS

CupressaceaeCypress FamilyCalocedrus decurrensincense cedar

DICOTYLEDONS FLOWERING PLANTS

poison oak

AceraceaeMaple FamilyAcer macrophyllumbig-leaf maple

Anacardiaceae Cashew Family

Apiaceae (Umbelliferae)

Daucus carota

wild carrot

Torilis arvensis

hedge-parsley

Asteraceae (Compositae) Sunflower Family

Artemisia douglasiana mugwort
Aster eatonii Eaton's aster
Calycadenia spicata white tarweed
Carduus pycnocephala Italian thistle
Centaurea solstitialis vellow star-thistle

Centaurea solstitialis yellow star-thistle
Cichorium intybus chicory

Cirsium occidentale western thistle

Cirsium vulgare
Grindelia hirsutula
Leucanthemum sp.
Madia elegans ssp. vernalis
Madia gracilis
Solidago canadensis
Sonchus sp.

Taraxacum officinale

Betulaceae

Alnus rhombifolia

Brassicaceae (Cruciferae)

Brassica nigra Lepidium nitidum Rorippa nasturtium-aquaticum

Caprifoliaceae

Lonicera hispidula

Cornaceae

Cornus nuttallii

Ericaceae

Arctostaphylos viscida

Fabaceae

Lathyrus latifolius Lotus humistratus

Hypericaceae

Hypericum perforatum

Juglandaceae

Juglans californica

common thistle gum plant ox-eye daisy common madia slender tarweed goldenrod

common dandelion

Birch Family

white alder

sow thistle

Mustard Family

black mustard pepper grass water cress

Honeysuckle Family

honeysuckle

Dogwood Family

California dogwood

Heath Family

whiteleaf manzanita

Legume Family

sweet pea lotus

St. John's Wort Family

Klamath weed

Walnut Family

California black walnut

Lamiaceae

Prunella vulgaris var. lanceolatus Stachys ajugoides

Trichostema lanceolatum

Plantaginaceae

Plantago lanceolata

Polemoniaceae

Navarretia sp.

Polygonaceae

Rumex crispus

Rosaceae

Malus spp.

Oemleria cerasiformis

Prunus virginiana

Rosa californica

Rubus armeniacus

Rubus laciniatus

Rubus leucodermis

Salicaceae

Salix laevigata Salix lasiolepis

Scrophulariaceae

Mimulus guttatus Verbascum blattaria Verbascum thapsus

Cyperaceae

Carex densa (dudleyi) Carex feta

Carex praegracilis Cyperus eragrostis

Mint Family

self-heal hedge nettle vinegar weed

Plantain Family

common plantain

Phlox Family

navarretia

Buckwheat Family

curly dock

Rose Family

pear and apple Several cultivars

oso berry

choke cherry

wild rose

Armenian blackberry

cut-leaved blackberry

blackcap raspberry

Willow Family

red willow arroyo willow

Figwort Family

seep-spring monkeyflower moth mullein woolly mullein

Sedge Family

sedge sedge

clustered field sedge

umbrella sedge

Iridaceae

Iris sp.

Juncaceae

Juncus balticus
Juncus bufonius
Juncus effusus
Juncus tenuis
Juncus xiphioides

Lemnaceae

Lemna sp.

Liliaceae

Chlorogalum pomeridianum

Poaceae

Avena sp.

Briza minor

Bromus diandrus
Bromus hordeaceus
Cynosurus echinata
Dactylis glomerata
Elymus glaucus
Festuca arundinacea
Holcus lanatus

Hordeum marinum ssp. gussoneanum

Lolium perenne perennial Muhlenbergia rigens Phalaris aquatica Poa pratensis

Taeniatherum caput-medusae

Iris Family

iris

Rush Family

Baltic rush toad rush soft rush rush

iris-leaved rush

Duckweed Family

duckweed

Lily Family

soap plant

Grass Family

wild oats

tiny rattlesnake grass

ripgut brome soft brome dog-tail grass orchard grass blue wild-rye tall fescue velvet grass

Mediterranean barley

rye grass deer grass Harding grass Kentucky bluegrass

medusa-head grass

Appendix B Soils Map



Appendix C Wetland Data Sheets

A CONTRACTOR OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRE				untains, valleys, and Coast Region
		City/Co	ounty: <u>61455</u>	Valley Navala Sampling Date: 7/10/20
Applicant/Owner:				State: CA Sampling Point: Sesonal U
Investigator(s): 6129 Matuzak Kar	e Gross	Section	n, Township, Ra	ange: Section 2, TISN, P.BE
Landform (hillslope, terrace, etc.):)	Local	relief (concave,	convex, none): <u>none</u> Slope (%): 5
	Lat:			Long: Datum:
Soil Map Unit Name: MrE Musick So	andy loo	in 15	-50% Slope	NWI classification: NONC
Are climatic / hydrologic conditions on the site typical for to	his time of ye	ear? Ye	s 🔀 No_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbe	ed? Are	"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	oblemati	ic? (If no	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	g samp	oling point l	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No X			
Hydric Soil Present? Yes			s the Sampled	
Wetland Hydrology Present? Yes	No 🗶	'	within a Wetla	nd? Yes No
Remarks:		•		
VEGETATION – Use scientific names of pla	nts		-	
The second secon		Domin	nant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1	% Cover	Specie	es? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2				
3				Total Number of Dominant Species Across All Strata: (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		_ = Total	Cover	That Are OBL, FACW, or FAC: (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3		0.		OBL species x 1 =
4				FACW species x 2 =
5				FACUL appeign
Herb Stratum (Plot size:)		= Total	Cover	FACU species x 4 = UPL species x 5 =
1.				Column Totals: (A) (B)
2. Rubus armeniacus	200%	Ve	SFACU	
3. Tachiaharum Caput-medusa	e 30%	N/P	E UPL	Prevalence Index = B/A =
4. Ch wogglum Pomeridianum		10	> JPh	Hydrophytic Vegetation Indicators:
5. Daucus carota.	10%		FACU	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6. Hypericum pertwatry	5%		FACU	3 - Prevalence Index is ≤3.0¹
7. Taxaxarum officinal	50/0		PACU	4 - Morphological Adaptations¹ (Provide supporting)
8. Aster eatoni	TO0/0		FAC	data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		= Total (Cover	be present, unless disturbed or problematic.
1				
2.				Hydrophytic Vegetation
		= Total C	over	Present? Yes No
% Bare Ground in Herb Stratum		· otal C		
Remarks:	1.	,	\	1
Upland Veget	CPOL		M Se	at

SOIL								4	OCC
		41 - 45-44						Sampling Point:	US Wed
	cription: (Describe to	o the aeptn			icator o	or confirm	the absence	of indicators.)	
Depth (inches)	Color (moist)	———— —	Redox Color (moist)	x Features	r _{upa} 1	Loc ²	Tavtura	Damada	
0-17	750241	1000/	Coloi (Illoist)		ype	_LUC	Texture	Remarks	
010	1.211	100%					Sanlycan	<u> </u>	
							<u></u>		
	· <u></u>								
			_						
¹ Type: C=Co	oncentration, D=Deple	tion, RM=Re	educed Matrix, CS:	=Covered or	Coated	Sand Gra	ains. ² Loca	ation: PL=Pore Lining, M=M	latriy
Hydric Soil I	Indicators: (Applical	ble to all LR	Rs, unless other	wise noted.))			s for Problematic Hydric S	
Histosol	, ,		Sandy Redox (S	5)				Muck (A10)	
	pipedon (A2)		Stripped Matrix (Red I	Parent Material (TF2)	
Black His	stic (A3) n Sulfide (A4)		Loamy Mucky Mi		except	MLRA 1)	•	Shallow Dark Surface (TF12	2)
_ , ,	n Sulfide (A4) d Below Dark Surface		Loamy Gleyed M	. ,			Other	(Explain in Remarks)	
	ark Surface (A12)		Depleted Matrix (Redox Dark Surf				3Indicator	f budasahi dia manadadian	
	lucky Mineral (S1)	_	Depleted Dark Sun	` '				s of hydrophytic vegetation a d hydrology must be presen	
	lleyed Matrix (S4)	_	Redox Depression	, ,				d nydrology must be presen disturbed or problematic.	t,
	ayer (if present):		•	,,,,			dilloco	disturbed of problematio.	
Туре:			_						
Depth (incl	ches):		-				Hydric Soil P	Present? Yes N	lo ×
Remarks:	1 4		_	4 /					10
	hydric	soils	; not i	ident	roto	ed o	et tri	3 Point	
IYDROLOG									
	Irology Indicators:								
	ators (minimum of one	required; ch					<u>Second</u>	ary Indicators (2 or more red	quired)
Surface V	, ,		Water-Staine	ed Leaves (F	39) (ex o	ept	Wa	ter-Stained Leaves (B9) (ML	LRA 1, 2,
	er Table (A2)			2, 4A, and 4	4B)		•	4A, and 4B)	
Saturation			Salt Crust (B					inage Patterns (B10)	
Water Ma			Aquatic Inve	•				-Season Water Table (C2)	
	t Deposits (B2)		Hydrogen St	-		00 Sarrige (S) 40	Sat	uration Visible on Aerial Ima	gery (C9)
Drift Depo	` '					ving Roots		omorphic Position (D2)	
	or Crust (B4)		Presence of					allow Aquitard (D3)	
Iron Depo:			Recent Iron I					C-Neutral Test (D5)	
	Soil Cracks (B6) n Visible on Aerial Ima	(D7)	Stunted or Si			(LRR A)		sed Ant Mounds (D6) (LRR	A)
	Vegetated Concave S		Other (Expla	ın ın Remarı	(S)		Fros	st-Heave Hummocks (D7)	
ield Observa		unace (bo)							
		No.	1 - " " "	4434					
Surface Water			Depth (inche						
Water Table Pi			Depth (inche						•
Saturation Pres	sent? Yes lary fringe)	No _	\chi Depth (inche	es):		Wetlan	d Hydrology F	Present? Yes N	<u>></u>

wetland hydrology indicators not identified at 12 is point

Remarks:

WETLAND DETERMINATION D	ATA FORM – Western Mo	untains, Valleys, and Coast Region
		SS Valley/Nevala Sampling Date: 7/10/2
Applicant/Owner:		17: 20
Investigator(s): 6reg Matrzak Kate (Section Township P	State: A Sampling Point: Susona
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave	convex penals. Non P
Subregion (LRR):		,
Soil Map Unit Name: MrE MUSICK	_ Lat:	Long: Datum: 50% Stages NWI classification: N O N C
Are climatic / hydrologic conditions on the site typical for th	is time of year? Voc.	(If an explain in Research)
Are Vegetation, Soil, or Hydrology		
Are Vegetation, Soil, or Hydrology		"Normal Circumstances" present? Yes No No
	2	eeded, explain any answers in Remarks.)
11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1		locations, transects, important features, etc.
11-12-0-15	lo lo ls the Sample	d Area
	No is the Sample within a Wetla	
		entral area of project
5ite	ala point in c	ential area of project
VEGETATION – Use scientific names of plan	its.	
Tree Stratum (Plot size:)	Absolute Dominant Indicator	Dominance Test worksheet:
1	% Cover Species? Status	Number of Dominant Species
2		That Are OBL, FACW, or FAC:(A)
3		Total Number of Dominant Species Across All Strata: (B)
4	_	
	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
<u>Sapling/Shrub Stratum</u> (Plot size:) 1)		Prevalence Index worksheet:
2		Total % Cover of: Multiply by:
3.		OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
Herb Stratum (Plot size:)	= Total Cover	FACU species x 4 = UPL species x 5 =
1 C		210
2. Carex leta	30% VAC PALIN	
3. Tuncus balticus	15% FACIN	Prevalence Index = B/A =
4. JULIUS Xiphioides	20% YES OBL	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
5. Carex praegracillis	20% YES FACW	2 - Dominance Test is >50%
6. Tubus atmeniacus	15% / FACU	X 3 - Prevalence Index is ≤3.0¹
7		4 - Morphological Adaptations ¹ (Provide supporting
8		data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹
10		Problematic Hydrophytic Vegetation¹ (Explain)
11	200 10 25 10:0	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	= Total Cover	
1		Hydrophytic
2		Vegetation
% Bare Ground in Herb Stratum	= Total Cover	Present? Yes No No No
Remarks:		

SOIL		Sampling Point: Scasona
Profile Description: (Describe to the dep	oth needed to document the indicator or confirm	m the absence of indicators.)
Depth (inches) Color (moist) % O = 141	Redox Features Color (moist) % Type¹ Loc² Z YR 4 4 25% C M	Texture Remarks Sandyloan
¹ Type: C=Concentration, D=Depletion, RM: Hydric Soil Indicators: (Applicable to all	=Reduced Matrix, CS=Covered or Coated Sand Gr	9,
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4)	Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)

___ Loamy Gleyed Matrix (F2)

Redox Dark Surface (F6)

Redox Depressions (F8)

Depleted Dark Surface (F7)

ric soils present - dorkchrona mottles present

__ Depleted Matrix (F3)

HYDROLOGY

Type: Depth (inches):

Remarks:

__ Depleted Below Dark Surface (A11)

__ Thick Dark Surface (A12)

___ Sandy Mucky Mineral (S1)

Restrictive Layer (if present):

_ Sandy Gleyed Matrix (S4)

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (exce	
High Water Table (A2) MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3) Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1) Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Oxidized Rhizospheres along Livi	
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled So	oils (C6) X FAC-Neutral Test (D5)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	. ,
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks: Dung Alland Dyd Sologia Diog Co. 1	
Remarks: wetland hydrology present	

__ Other (Explain in Remarks)

Hydric Soil Present?

³Indicators of hydrophytic vegetation and

wetland hydrology must be present,

unless disturbed or problematic.

1		ern Mountains, valleys, and Coast Region
Project/Site: Bernan Ranch	City/County:	Grass Vally Nevada Sampling Date Non We
Applicant/Owner:		State: (A Sampling Set 7/10)
Investigator(s): Gregmat VZak / Kade C	Section, Tov	wiship, Range: Section 2, TISN, ROF
Landform (hillslope, terrace, etc.):	Local relief	(concave, convex, none): None Slope (%): 15
Subregion (LRR):	Late	
Soil Map Unit Name: MrEMUSICK	Eindslaam 1	Datum: Datum: Datum:
Are climatic / hydrologic conditions on the site typical for t	his time of year? Yes	No (If no. explain in Remarks.)
Are Vegetation, Soil, or Hydrology		Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling	point locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes		, , ,
Hydric Soil Present? Yes	No Is the	Sampled Area
Wetland Hydrology Present? Yes	No within	n a Wetland? Yes No
Remarks:		
VEGETATION – Use scientific names of pla		
Tree Stratum (Plot size:	Absolute Dominant I <u>% Cover Species?</u>	Status
1		
2		
3		
4		(=/
	= Total Cove	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:)		Dravalance Index workshoot
1		Total IV Course of
2		ODI anasias
3		FACIM anasias
4 5		FAC species x 3 =
	= Total Cove	FACU species x 4 =
Herb Stratum (Plot size:)		UPL species x 5 =
1.		Column Totals: (A) (B)
2. Juneus balticus		Prevalence Index = B/A =
3. Publis armeniacus 4. Aster Partonii	_ 55% Yes [Hydrophytic Vegetation Indicators:
	15%	1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		
7 8.		
8		
10		Problematic Hydrophytic Vegetation ¹ (Explain)
11		
	= Total Cover	be present unless disturbed or problematic
Woody Vine Stratum (Plot size:)	-	
1		
2		Vegetation Present? Yes No
% Bare Ground in Herb Stratum	= Total Cover	riesellt fes No /
Remarks:		

Depth Matrix (inches) Color (moist) . %	epth needed to document the indicator or confirm	i the absence of indicators.)
(inches) Color (moist) . %	Redox Features	· · · · · · · · · · · · · · · · · · ·
A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-14" 7,54R3A 1009	<u>, , , , , , , , , , , , , , , , , , , </u>	Sunglown
		2 (6
1Tuno: C=Concentration D=Depleties DI	A.D. day and Maria and D. day and D. day	
Hydric Soil Indicators: (Applicable to a	M=Reduced Matrix, CS=Covered or Coated Sand Gra	
Histosol (A1)	-	Indicators for Problematic Hydric Soils ³ :
Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)	2 cm Muck (A10)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Red Parent Material (TF2)Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	Office (Explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No X
YDROLOGY	soils present	
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one require	od: abook all that anniv)	
Surface Water (A1)		Secondary Indicators (2 or more required)
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2
Saturation (A3)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Water Marks (B1)	Salt Crust (B11)Aquatic Invertebrates (B13)	Drainage Patterns (B10)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roots	Saturation Visible on Aerial Imagery (C
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	S (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (
regelated contact cultate (
ield Observations:	No Depth (inches):	
ield Observations:		
Field Observations: Surface Water Present? Yes		
Gurface Water Present? Yes Vater Table Present? Yes Caturation Present? Yes	No Depth (inches):	nd Hydrology Present? Yes No
Field Observations: Surface Water Present? Yes Vater Table Present? Yes Saturation Present? Yes includes capillary fringe)	No Depth (inches): Wetlar	nd Hydrology Present? Yes No
Field Observations: Surface Water Present? Yes Vater Table Present? Yes Saturation Present? Yes includes capillary fringe)	No Depth (inches):	

WETLAND DETERMINATION DATA FORM – Western Mo	untains, Valleys, and Coast Region
Project/Site: Revinas Rand City/County: 600	
Applicant/Owner:	State: Sampling Point: Li Varian
Investigator(s): Greg Matrzet Keck Gross Section, Township, F	lange: Section 271 ISN, 28E
Landform (hillslope, terrace, etc.): Local relief (concave	e, convex, none): None Slope (%):
	Long: Datum:
Soil Map Unit Name: All Uvial Confelagey	NWI classification: NOn C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	(If no, explain in Remarks.)
	e "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If naturally problematic)	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No Is the Sample within a Wetland Hydrology Present?	
Testand Trydrology Tresent:	and? Yes No No
Remarks:	
VECETATION Line orientific names of plants	
VEGETATION – Use scientific names of plants.	
Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size:)	Dominance Test worksheet:
1	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2	
3	Total Number of Dominant Species Across All Strata: (B)
4	• (-)
= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
2	OBL species x 1 =
3	FACW species 25 x 2 = 50
4	FAC species $20 \times 3 = 60$
= Total Cover	FACU species 25 x 4 = 100
Herb Stratum (Plot size:)	UPL species x 5 =
1 ASTOPATONYS 20% YES THE	Column Totals: 70 (A) 20 (B)
2. Turus balticus 15% yes FEW	Prevalence Index = B/A = 3,0
3. Rubus armeniacus 25% ves THU	Hydrophytic Vegetation Indicators:
4. Carex feta 60% TACW	1 - Rapid Test for Hydrophytic Vegetation
5	2 - Dominance Test is >50%
6	3 - Prevalence Index is ≤3.01
7	4 - Morphological Adaptations¹ (Provide supporting
8	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹
9	Problematic Hydrophytic Vegetation¹ (Explain)
10	Indicators of hydric soil and wetland hydrology must
= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	·
1	Hydrophytic
2	Vegetation
% Bare Ground in Herb Stratum= Total Cover	Present? Yes No No No
Remarks:	
hydroplyte regetation prese-	+

ampling Point: Ripinita

	h needed to document the indicator or confirm	n the absence of indicators.)
Depth Matrix	Redox Features	uno uno or maioutoro.)
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	<u>Texture</u> Remarks
HZ11 104R4 2 85%	25/24/4 15% C M	tineloan
7	(1)	
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS=Covered or Coated Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all L	.RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
	Sandy Redox (S5)	2 cm Muck (A10)
	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Depleted Matrix (F3) Redox Dark Surface (F6)	3 Indicators of hadron but a second of
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:	<u> </u>	\ .
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
low Choma	hydric soils pr	resert
HYDROLOGY	·	
HYDROLOGY Wetland Hydrology Indicators:		
Wetland Hydrology Indicators:	chock all that apply)	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2,4A, and 4B)Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present?	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches):	— Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ➢ Drainage Patterns (B10) — Dry-Season Water Table (C2) — Saturation Visible on Aerial Imagery (C9) s (C3) — Geomorphic Position (D2) — Shallow Aquitard (D3) ✓ FAC-Neutral Test (D5) — Raised Ant Mounds (D6) (LRR A) — Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8 Field Observations: Surface Water Present? Yes No Saturation Present? Yes No (includes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Wetlan	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8 Field Observations: Surface Water Present? Yes No Saturation Present? Yes No (includes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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WEILAND DETERMINATION DATA FORM – Western N	
Project/Site: Derman Rand City/County: 6V	405 Valley Newforsampling Date: 6 29/2
Applicant/Owner:	State! A Sampling Point: Ripark W
Investigator(s): 6006 Mattract Lock Gross Section, Township	Range: Section 7 ITISN, REF
Landform (hillslope, terrace, etc.): Local relief (conca	ive, convex, none): Slope (%):
Subregion (LRR):	Long: Datum:
	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic?	If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point	nt locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No Is the Samp Within a Western Hydrology Present?	oled Area etland? Yes No
Wetland Hydrology Present? Yes No within a We	100
Tremaine.	
VEGETATION – Use scientific names of plants.	
Absolute Dominant Indicat	
Tree Stratum (Plot size:)	Number of Dominant Species
1	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
4	Species Across All Strata: (B)
= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)	Prevalence Index worksheet:
1	
2	OBL species x 1 =
4	FACW species x 2 =
5	FAC species x 3 =
= Total Cover	FACU species x 4 =
Herb Stratum (Plot size:) 1. Taenia Jann Caput-medus ESG VE (X)	UPL species x 5 =
	Column Totals: (A) (B)
2	Prevalence Index = B/A =
4	Hydrophytic Vegetation Indicators:
5	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6	
7	4 - Morphological Adaptations ¹ (Provide supporting
8	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must
11 = Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	
1	_ Hydrophytic
2	Vegetation Present? Yes No
% Bare Ground in Herb Stratum= Total Cover	1 162 NO NO
Remarks:	

_	_	
•	()	
u	v	_

SOIL		Sampling Point:
	epth needed to document the indicator or confirm	n the absence of indicators.)
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type ¹ Loc ²	Testure
1-1211 75402/2 1000	Color (moist) % Type Loc	Texture Remarks
12 13 (4)/2 (00%	<i></i>	Delan
Type: C=Concentration, D=Depletion, RN	M=Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to al	II LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Depleted Matrix (F3) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		Problematic
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
	driz soils	nyunc don Plesent? Tes No
Remarks: non-hy	driz soils	NO NO
YDROLOGY	relais soils	No No
YDROLOGY Wetland Hydrology Indicators:		
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require	d; check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one require _ Surface Water (A1)	d; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Crimary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
YDROLOGY Vetland Hydrology Indicators: Crimary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
YDROLOGY Vetland Hydrology Indicators: Vimary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	d; check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roots	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9, 5) (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Vetland Hydrology Indicators: Vimary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Por Port Port Port Port Port Port Port P	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roote Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Por Port Port (Page 1) Provided the Concave Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B3) Sparsely Vegetated Concave Surface (I	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roote Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Por	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Project/Site: Part Cover Chyclory Cress Val Chyclory Chycl	WEILAND DETERMINATION	DATA FORM – Western Mo	ountains, Valleys, and Coast Region
Applicant/Overset Investigator(s): Check Park Face, etc.: Investigator (etc.) Investig	Project/Site: Per Nay Rage	City/County: 600	ss Valles. Sampling Date Riparia
Investigator(s) CAPE MACK TALL Landform (initistope, lefrace, etc.): Lendform (initistope, lefrace, etc.): Soli Map Unit Name: Mr C MU 57 Lat. Lat: Long: Doublam: No (If no. explain in Remarks). Are Vegetalistic Significantly disturbed? Are Vegetalistic Significantly disturbed? Are Vegetalistic Significantly disturbed? Yes No Is the Sampled Area within a Wetland? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No Is the Sampled Area within a Wetland? Yes No I	Applicant/Owner:		De (124)
Local relief (concave, convex, none): None Siope (%): Siope (%	Investigator(s): Only Meet Zak / K	at Goss Section, Township, F	Range: Section 2, TIN, RSE
Subregion (LFR): Soil Map Unit Name: M**	Landform (hillslope, terrace, etc.):	Local relief (concave	
Soil Map Unit Name: MT C MU Sc Land Cath Side Map C Note climatic Phydrologic conditions on the site typical for this time of year? Yes No (If no explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No Is the Sampled Area within a Wetland yet of Dominant Species That Are OBL, FACW, or FAC. And The Sampled Area within a Wetland Yes of Country of The Sampled Area within a Wetland yet of Country of The Sampled Area within a Wetland yet of Country of The Sampled Area within a Wetland yet of Country of The Sampled Area within a Wetland yet of Prevalence Index is s.3.0 (A) 2.2.0 (B)	2 2	l at·	Long:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no. explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are Vegetation Soil or Hydrology naturally problematic? SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc Hydrolytic Vegetation Present? Yes No Is the Sampled Area within a Wolfand? Yes No Wolfard Hydrology Present? Yes No Is the Sampled Area within a Wolfand? Yes No No Wolfard Hydrology Present? Yes No No Wolfard Hydrology No	Soil Map Unit Name: MrC MUSick	Janly (cam 5-15%	Agrec NWI classification: NOSP
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No	Are climatic / hydrologic conditions on the site typical fo		
Are Vegetation Soll or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Yes No No Is the Sampled Area within a Wotland? Welland Hydrology Present? Yes No No Deminant Indicator Species? Absolute Scover. Absolute Species? Status Uniber of Dominant Species That Are OBL, FACW, or FAC. 2. John Number of Dominant Species That Are OBL, FACW, or FAC. Total Number of Dominant Species That Are OBL, FACW, or FAC. Tota	Are Vegetation, Soil, or Hydrology		
Hydrophylic Vegetation Present? Yes No within a Wetland? Yes No No Wetland Hydrology Present? Yes No within a Wetland? Yes No No Wetland Hydrology Present? Yes No within a Wetland? Yes No No Wetland Hydrology Present? Yes No within a Wetland? Yes No No Wetland Hydrology Present? Yes No Yes No Yes No Yes Yes No Yes Yes No Yes Yes No Yes Yes Yes Yes No Yes	Are Vegetation, Soil, or Hydrology		
Hydrophytic Soil Present? Yes No No Weltland Hydrology Present? Yes No Weltland Hydrophytic Vegetation Present? Yes No Yes Ye	SUMMARY OF FINDINGS - Attach site m	ap showing sampling point	locations, transects, important features, etc
Wetland Hydrology Present? Yes No within a Wetland? Yes No No Remarks: VEGETATION - Use scientific names of plants. Dominant Indicator Species Status Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL, FACW, or FAC: (B) Total Number of Dominant Species That Are OBL		_ No	
Remarks:		within a West	
Absolute % Cover Species? Slatus Dominant Indicator Species? Slatus Number of Dominant Species Nu		. No	NO
Absolute % Cover Species? Slatus Dominant Indicator Species? Slatus Number of Dominant Species Nu			
Absolute % Cover Species? Slatus Dominant Indicator Species? Slatus Number of Dominant Species Nu			
Tree Stratum (Plot size:	VEGETATION – Use scientific names of p	lants.	
1	T 01 -1 (71 - 1		Dominance Test worksheet:
2.	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
Species Across All Stratus			That Are OBL, FACW, or FAC:(A)
### Sapling/Shrub Stratum (Plot size:	3.		
Sapling/Shrub Stratum (Plot size:			Species Across All Strata: (B)
Prevalence Index worksheet: Total % Cover of:			Percent of Dominant Species That Are ORL FACW or FAC:
Total % Cover of:			. ,
OBL species			
FACW species			
FAC species			
Herb Stratum (Plot size:	5		FAC species $20 \times 3 = 60$
Herb Stratum (Plot size:) 1. 2. VEC V		= Total Cover	
2. Hydrophytic Vegetation Indicators: 1. Rapid Test for Hydrophytic Vegetation 2. Dominance Test is >50% 3. Prevalence Index is \$\leq 3.0\tau 4. Mydrophytic Vegetation Indicators: 1. Rapid Test for Hydrophytic Vegetation 2. Dominance Test is >50% 3. Prevalence Index is \$\leq 3.0\tau 4. Morphological Adaptations\tau for data in Remarks or on a separate sheet) 5. Wetland Non-Vascular Plants\tau for Problematic Hydrophytic Vegetation (Explain) 11			
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 10	1. DEL 1115 CONTROL	- 100 NOC 5100	
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No	3 Azzla Potobla	- 2000 (es Frey	Prevalence Index = B/A = 2>75
5	4 Robert achericas	- 2000 Vec FAVI	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
6		- WO FES TAU	
7	6		
8			
9	8		data in Remarks or on a separate sheet)
10 Problematic Hydrophytic Vegetation¹ (Explain) 11 = Total Cover Woody Vine Stratum (Plot size:) 1 = Total Cover Wegetation Present? Yes No	9		2 400 March 1997 1997 1997 1997 1997 1997 1997 199
Moody Vine Stratum (Plot size:) be present, unless disturbed or problematic.	10		
Woody Vine Stratum (Plot size:) 1	11		¹Indicators of hydric soil and wetland hydrology must
1	Woody Vine Stratum (Plot size:	= Total Cover	be present, unless disturbed or problematic.
2			
% Bare Ground in Herb Stratum = Total Cover Present? Yes No			
% Bare Ground in Herb Stratum		= Total Cover	
TCHIDINS.	% Bare Ground in Herb Stratum		
	remarks:		

^	

Sampling Point: Right Post

. Tomo Decemption: (Describe to the depth	needed to document the indicator or confirm	1 the absence of indicators.)
Depth Matrix	Redox Features	,
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
10-14" +SM4/2 90% S	25914/4 10% C M	Suddan
		U
¹ Type: C=Concentration, D=Depletion, RM=Re	educed Matrix, CS=Covered or Coated Sand Gra	oine 2 costion DI - Dere Lining M. Matrix
Hydric Soil Indicators: (Applicable to all LR	Rs, unless otherwise noted.)	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Restrictive Layer (if present):	Redox Depressions (F8)	unless disturbed or problematic.
Type:		
Depth (inches):	-	
Remarks:		Hydric Soil Present? Yes No
darkdrong	= hydric soil	S
HYDROLOGY		4
HYDROLOGY		
Wetland Hydrology Indicators:		· ·
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2,4A, and 4B)✓ Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ✓ Drainage Patterns (B10) ✓ Dry-Season Water Table (C2) ✓ Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ✓ Drainage Patterns (B10) — Dry-Season Water Table (C2) — Saturation Visible on Aerial Imagery (C9) S (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) ✓ FAC-Neutral Test (D5) — Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ✓ Drainage Patterns (B10) — Dry-Season Water Table (C2) — Saturation Visible on Aerial Imagery (C9) S (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) ✓ FAC-Neutral Test (D5) — Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ✓ Drainage Patterns (B10) — Dry-Season Water Table (C2) — Saturation Visible on Aerial Imagery (C9) S (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) ✓ FAC-Neutral Test (D5) — Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ✓ Drainage Patterns (B10) — Dry-Season Water Table (C2) — Saturation Visible on Aerial Imagery (C9) S (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) ✓ FAC-Neutral Test (D5) — Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Saturation Present? Yes No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ✓ Drainage Patterns (B10) — Dry-Season Water Table (C2) — Saturation Visible on Aerial Imagery (C9) S (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) ✓ FAC-Neutral Test (D5) — Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check of the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Second Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No Gincludes capillary fringe) Describe Recorded Data (stream gauge, monitor)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Second Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Sincludes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WETLAND DETERMINATION DATA FO	DRM – Western Mo	ountains, Valleys, and Coast Region
Project/Site: Kemhan Rand	_ City/County: <u>6 nu</u>	Sampling Date: 6/24/
Applicant/Owner:		State: CA Sampling Point: Pipara
Applicant/Owner: Investigator(s): 6 reg matrix (Carl Gave	Section Township I	Range State 7 TISU ROLE
Landform (hillslope, terrace, etc.):	Local relief (concav	e, convex, none): None Slope (%): 10
Subregion (LRR):		lean.
Soil Map Unit Name: MVC, MV Sick Sandy	lour 5-15	96-lgas NWI classification: Ne - P
Are climatic / hydrologic conditions on the site typical for this time of	vear? Yes V	(If no explain in Remarks)
Are Vegetation, Soil, or Hydrology significan		e "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally		needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	• 0.10.100.000.000.000.000	
Hydrophytic Vegetation Present? Yes No	7	etc
Hydric Soil Present? Yes No	Is the Sample	ed Area
Wetland Hydrology Present? Yes No	within a Wetl	land? YesNo
Remarks:		
VEGETATION – Use scientific names of plants.		
Absolut	te Dominant Indicator	Dominance Test worksheet:
	er Species? Status	Number of Dominant Species
1		_ That Are OBL, FACW, or FAC:(A)
2		Total Number of Dominant
4		Species Across All Strata: (B)
	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:)		That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
1		
2		
3		FACW species x 2 =
4		FAC species x 3 =
5		FACU species x 4 =
Herb Stratum (Plot size:)	= Total Cover	UPL species x 5 =
1.		Column Totals: (A) (B)
2. Kusus armoniatus 6590	yes FALU	Prevalence Index = B/A =
3		Hydrophytic Vegetation Indicators:
4		1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0¹
7		4 - Morphological Adaptations ¹ (Provide supporting
8		data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹
10		 Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must
11		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	_= Total Cover	
1		Hydrophytic
2		Vegetation
% Bare Ground in Herb Stratum	_= Total Cover	Present? Yes No
Remarks:	^	
Upland Vesptotian on	reco-L	
	a u	

\sim	1-		
•	()	ı	
J	\smile		_

Depth

(inches

Type:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Color (moist) % Type¹ Loc² Color (moist) ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: _ Histosol (A1) ___ Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) ___ Stripped Matrix (S6) Red Parent Material (TF2) ___ Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) _ Hydrogen Sulfide (A4) ___ Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) ___ Depleted Matrix (F3) ___ Thick Dark Surface (A12) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present. Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Depth (inches): **Hydric Soil Present?** Remarks: non-hydric soils **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) __ Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) ___ Dry-Season Water Table (C2) Sediment Deposits (B2) _ Hydrogen Sulfide Odor (C1) __ Saturation Visible on Aerial Imagery (C9) _ Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3)
 Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) ___ Shallow Aquitard (D3) _ Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) ___ FAC-Neutral Test (D5) Surface Soil Cracks (B6) __ Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) ___ Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): _ Saturation Present? Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

			untains, Valleys, and Coast Region
Project/Site: Beriman Runch	City/C	county: 6vas	SValley Werydo Sampling Date: 6/29/20
Applicant/Owner:			State: CA Sampling Point: Sauce W
Investigator(s): Greg Matrat	Section	on, Township, Ra	ange: Season 2, TISN, PEE
Landform (hillslope, terrace, etc.):	b Local	relief (concave,	convex, none): Slope (%): 29
· · · · · · · · · · · · · · · · · · ·			
Soil Map Unit Name: Alluvial (cond	Clases		NWI classification:
Are climatic / hydrologic conditions on the site typical for t	this time of year? Y	es 🗸 No	(If no explain in Remarks)
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing sam	pling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes			
Hydric Soil Present? Yes		Is the Sample	
Wetland Hydrology Present? Yes	No	within a Wetla	nd? Yes No No
Remarks:			
VEGETATION – Use scientific names of pla	nto.		
VEGETATION – Ose scientific flames of pla		:	
Tree Stratum (Plot size:)	Absolute Domi	inant Indicator ies? Status	Dominance Test worksheet:
1			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	= Tota	al Cover	That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x 1 =
4			FACW species x 2 =
5			FACUspecies x 3 =
Herb Stratum (Plot size:)	= Tota	al Cover	FACU species x 4 = UPL species x 5 =
1. Astar Patonii	25% Y4	x FAC	Column Totals: (A) (B)
2. They but trus	45% 40	FACU	
3. Rusys arnewalus	1590	FACU	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
6			3 - Prevalence Index is ≤3.0¹
7			4 - Morphological Adaptations ¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must
	= Total	Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	= Total	Cover	
1			Hydrophytic
2			Vegetation Present? Yes No
% Bare Ground in Herb Stratum	= Total	Cover	169 / NO
Remarks:	1 1-		٨
Hydrophytic vege	tarbon	dreser	+

Sampling Point:

Sasul # 2

Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture	Damada
(inches) Color (moist) % Color (moist) % Type¹ Loc² Texture	Demonstra
	Remarks
0-14" 1078412 85% 7592414 15% C M Clay	
	PL=Pore Lining, M=Matrix.
	Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5) 2 cm Muck	(A10)
	t Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallo	ow Dark Surface (TF12)
	lain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) 3Indicators of by	
Constant of the constant of th	ydrophytic vegetation and
Control of the Charles of the Charle	rology must be present,
Restrictive Layer (if present):	rbed or problematic.
Type:	
•	nt? Yes No
.,	ntr resNo
Remarks: dark chroma soils = hydric soi	5
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply) Secondary Ir	ndicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (except Water-St	tained Leaves (B9) (MLRA 1, 2,
Life Martin Teles (AO)	nd 4B)
■ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Patterns (B10)
	son Water Table (C2)
0 "	on Visible on Aerial Imagery (C9)
	phic Position (D2)
N 1N 4 0 4 0 0	Aquitard (D3)
	utral Test (D5)
X 0f 0 !! 0 . ! . (D0)	ant Mounds (D6) (LRR A)
lavadation Vicinia and Autolia (DE)	ave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes No Zepth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches): Wetland Hydrology Prese	nt? Yes No
(includes capillary fringe)	NO
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
	,
Remarks: Wether hydrology indicators	present
	1

Appendix D

Photo Log



Photo 1: Seasonal wetland adjacent to the unnamed tributary to Wolf Creek.



Photo 2: Seasonal wetland adjacent to the unnamed tributary to Wolf Creek.



Photo 3: Seasonal wetland in the eastern portion of the project area on the south side of access road.



Photo 4: Freshwater emergent wetland adjacent to unnamed tributary to Wolf Creek.



Photo 5: Freshwater emergent wetland and riparian habitat adjacent to unnamed tributary to Wolf Creek.



Photo 6: Western forested and non-wetland area of project area.



Photo 7: Entrance to western portion of project area from Picadilly Lane.



Photo 8: Western forested and non-wetland area of project area.



Photo 9: Unnamed tributary to Wolf Creek with associated riparian habitat vegetation.



Photo 10: Eastern portion of the project area with abandoned orchards and associated riparian habitat vegetation.