Mattley Meadow Aquatic Resource Delineation

Prepared By: Plumas Corporation PO Box 3880 Quincy, CA 95971 530-283-3739

Prepared For: Stanislaus National Forest, Calaveras Ranger District 5519 Highway 4 PO Box 500 Hathaway Pines, CA 95233 (209) 795-1381

February 24, 2020



Mattley Meadow near the east gully, July 7, 2016.

Contents

Contents	. 2
Introduction	. 2
Location	. 3
Methods	. 3
Existing Conditions	. 3
Aquatic Resources	. 4
Proposed Project Impacts	. 5
References	.6
Attachments List (Maps, Forms, Photos)	.7

Introduction

The purpose of this report is to identify and describe aquatic resources within the Mattley Meadow Restoration Project area. This report facilitates efforts to:

- 1. Avoid or minimize impacts to aquatic resources during the design process;
- 2. Document aquatic resource boundary determinations for review by regulatory authorities; and
- 3. Provide background information.

The area surveyed for this report was the 51.89-acre Area of Potential Effect (APE) for the Mattley Meadow Restoration Project. The project area is in a montane meadow system at an elevation of 7,200 feet, in the upper Mattley Creek watershed, which is in the headwaters of the Middle Fork Mokelumne River. The project area includes the upper treatment area, Mattley Creek Meadow, and lower treatment area, Mattley Meadow (Attachment 1). Both meadows are in a xeric trend to due channel incisions that prevent streamflows from accessing the floodplain.

Contact information

Property Owner:	Stanislaus National Forest, Calaveras Ranger District Interdisciplinary Team Leader: Zachary Croyle 5519 Highway 4, PO Box 500 Hathaway Pines, CA 95233 209-813-6034
	Stan Dell'Orto, private landowner 209-768-6381
Applicant:	Plumas Corporation Project Contact: Leslie Mink PO Box 3880 Quincy, CA 95971

Location

The Mattley Meadow Restoration Project is located in Calaveras County, California, within the Stanislaus National Forest, Township 7 North, Range 17 East, Sections 8 and 17 (Attachment 1). The project area is located approximately 40 miles east of Jackson, three miles southeast of the east end of Salt Springs Reservoir and four miles west of Bear Valley.

The meadows can be accessed via existing 4 wheel-drive only roads. At this time, there is a washout on State Highway 26, which is normally used to reach the project area from Jackson, CA. Alternate driving directions are provided for the purposes of this jurisdictional determination. From Angels Camp, CA, take State Highway 4 east toward Arnold, CA. Continue east past Arnold for approximately 18 miles. Turn left (north) on USFS road FS7N09 (Cabbage Patch Log Road). Proceed approximately 1.4 miles, then turn right on USFS road FS7N12. After approximately 0.9 miles, turn left at the "Y". Continue north for approximately 1.6 miles, and turn right at the "Y". Proceed 0.5 miles, and turn right at the "Y" (FS7N62Y). Proceed another 0.3 miles and turn right at the "Y". After 0.2 miles, veer left onto FS7N37Y. Proceed 1.2 miles, then make a hard right onto USFS road FS7N16. Proceed 0.8 miles, then make a slight right onto FS7N16c. This road will take you south for approximately 0.75 miles to the southwest end of the meadow.

The bulk of the meadow is located on publicly accessible lands administered by the USDA-Forest Service, and an access letter is not required for the US Army Corps of Engineers to collect samples to verify the jurisdictional determination on those lands. The western half of the Mattley Meadow portion of the project area is under private ownership. A letter of permission to access these private lands is provided in Attachment 2.

Methods

This wetland delineation was conducted in accordance with the 1987 US Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and Arid West Regional Supplement (Environmental Laboratory 2008). Prior to the field survey, a soils report was generated from the US Department of Agriculture Natural Resource Conservation Service's online Web Soil Survey (USDA-NRCS 2016). The wetland delineation field survey was conducted on July 7, 2016 by Leslie Mink of Plumas Corporation.

Cross-section survey data, collected by Jim Wilcox of Plumas Corporation, were reviewed to quantify channel widths and depths. Channel widths are from bank to bank (as measured by field measurements of the ordinary high water mark), and are shown on the map as linear features. Sample points were recorded with a Trimble Geo7x GPS unit. Photos were taken with a Samsung Galaxy IV smartphone (Attachment 5).

Existing Conditions

Landscape Setting

The Mattley Meadow Restoration Project area consists of two distinct meadow areas, Mattley Meadow and Mattley Creek Meadow, within the Mattley Meadows complex in the headwaters of Mattley Creek. Mattley Creek is tributary to the North Fork Mokelumne River. The mainstem Mokelumne River is a

Traditionally Navigable Water from its mouth to Frandy Gage, 3.5 miles upstream of New Hope Road in Galt, CA (ACOE 2017). Mattley Meadow occupies the confluence area of multiple small drainages and hillslope flows supporting high and middle gradient riparian hydrogeomorphic meadow types as well as discharge slope meadows (Weixelman et al. 2011). Two unnamed tributaries to Mattley Creek flow through Mattley Meadow, referred to as "east gully" and "west gully" (the west gully is not included in the project area). A constructed channel exists at the center of the meadow, which is no longer functional but has contributed to the xeric trend in the meadow. Mattley Creek Meadow is principally a discharge slope hydrogeomorphic meadow type occupying a very small drainage area (see Vicinity Map, Attachment 1, for the relative location of Mattley Creek Meadow and Mattley Meadow).

At some point in the past, the channels flowing through Mattley Meadow began to incise, likely in response to disturbance (road construction, past intensive livestock use, and/or channel modification). The channels are now deeply incised and high flows are no longer able to overflow onto the floodplain. The groundwater elevation has lowered in response to the channel incision and snow melt runoff quickly flows out of the meadow instead of flooding it and recharging the local groundwater system. Dry season stream flows have diminished as a result of reduced groundwater recharge. The altered meadow hydrology has led to a drying of the meadow, significant conifer encroachment, and degradation of meadow wildlife habitat. A large aspen stand in the meadow has been weakened and is experiencing widespread mortality.

The field survey was carried out in July 2016. At the time of the survey, precipitation during water year 2016 was above average for the northern Sierra Nevada, although the northern portion of Calaveras County was still considered to be in a state of severe drought (US Drought Monitor 2016). Sample points were collected at dispersed locations throughout the entire survey area and used in the delineation of aquatic resources.

Soil Survey Results

The USDA Web Soil Survey custom soil report for the survey area is provided in Attachment 7. The soils in the Mattley Meadow portion of the survey area are described as Entic Cryumbrepts, deep, on 1 to 10 percent slopes. These loamy sand soils are derived from igneous rock alluvium, and are well drained, with a depth of more than 80 inches to a restrictive layer. They occur in alluvial fan features. In the Mattley Creek Meadow portion of the survey area, the soils are Gerle family, bouldery-Rock outcrop complex, 5 to 35 percent slopes. Gerle family soils are found in moraine landforms and are derived from granitic glacial till. These soils are stony to bouldery sandy loams and are well drained.

Aquatic Resources

The 51.89-acre Area of Potential Effects (APE) is comprised of 3,191 linear feet (0.32 acres) of intermittent riverine channel and 0.78 acres of wet meadow riparian floodplain (palustrine). Table 1 provides a summary of the aquatic resources identified within the survey area. The remainder of the project area is 50.79 acres of upland habitats. All aquatic resources are shown on the wetland delineation maps provided in Attachment 3, and are described in the sections that follow. The plant species observed in the field survey are provided in Attachment 4; Field Forms are provided in Attachment 6.

Intermittent Channel (Riverine, Intermittent, Streambed)

Three sections of intermittent channel were identified in the survey area (MC1, MC2, and MC3). The channels are tributary to Mattley Creek. The channels are deeply incised and support sparse hydrophytic vegetation only in the channel bottom. The flows in these intermittent stream channels occur during the late-spring and early summer snowmelt period. Acreage of these channels is based on the ordinary high water mark as follows: MC1=14'; MC2=2'; MC3=1'.

Wetland Floodplain

Two vegetated wetland areas were identified in the survey area. MWF1 (Riparian) is a small area of floodplain located at the downstream end of intermittent channel MC1. MWF2 (Persistent, Emergent, Palustrine) is a discharge slope meadow (Weixelman et. al 2011) located in the western portion of the survey area that is hydrologically independent of the abandoned constructed channel MC3.

Aquatic Resources Name	Map Label	Cowardin Type	Location (Latitude, Longitude)	Acres	Linear Feet (Stream Channels)
Mattley Channel 1	MC1	R4SB3 ¹	38.46952, -120.12458	0.22	700
Mattley Channel 2	MC2	R4SB3	38.46289, -120.12419	0.08	1,652
Mattley Channel 3	MC3	R4SB5 ²	38.46283, -120.12616	0.02	839
Mattley Wetland Floodplain 1	MWF1	PEM1 ³	38.46979, -120.12508	0.02	
Mattley Wetland Floodplain 2	MWF2	PEM1	38.46262, -120.12713	0.77	
			Subtotal Riverine	0.32	3,191
			Subtotal Palustrine	0.78	
			Total Aquatic Resources	1.10	3,191

Table 1. Aquatic Resources within the Survey Area

¹Riverine, Intermittent, Streambed, Cobble-Gravel

²Riverine, Intermittent, Streambed, Mud

³Persistent, Emergent, Palustrine

The conclusions of this wetland delineation are considered draft until verified by the US Army Corps of Engineers, Sacramento District.

Proposed Project Impacts

This wetland delineation was conducted in preparation for a meadow and channel restoration project. An impact map and table of impacts is provided in Attachment 8.

References

[ACOE] US Army Corps of Engineers. 2017. Navigable Waterways in the Sacramento District. Web application available at *http://www.spk.usace.army.mil/Missions/Regulatory/Jurisdiction/Navigable-Waters-of-the-US/* Accessed March 15, 2017.

Environmental Laboratory. 1987. US Army Corps of Engineers Wetlands Delineation Manual. Wetlands Research Program Technical Report Y-87-1 (online edition). US Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS. January 1987.

Environmental Laboratory. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). US Army Engineer Research and Development Center, Vicksburg, MS. September 2008.

National Drought Mitigation Center. 2016. US Drought Monitor, California Status for July 19, 2016.

USDA-NRCS. 2016. Custom Soil Resource Report for Stanislaus National Forest, California, Parts, Mattley Meadow Preliminary Wetland Delineation. Web Soil Survey Application, generated July 5, 2016.

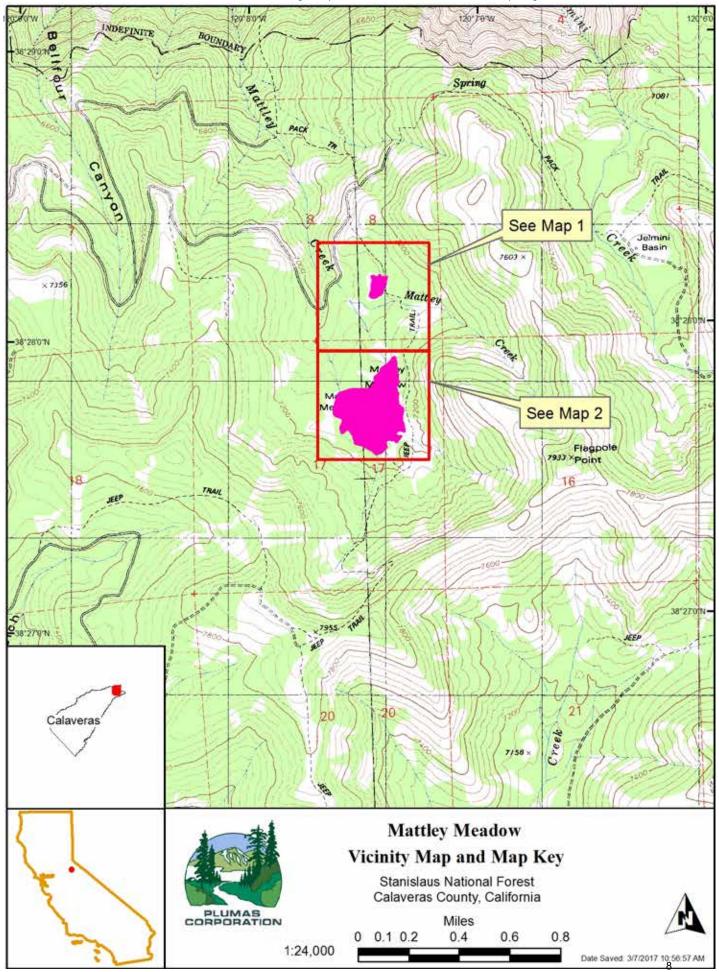
Weixleman, DA, B Hill, DJ Cooper, EL Berlow, JH Viers, SE Purdy, AG Merrill, and SE Gross. 2011. A Field Key to Meadow Hydrogeomorphic Types for the Sierra Nevada and Southern Cascade Ranges in California. Gen Tech. Report R5-TP-034. Vallejo, CA. USDA-Forest Service, Pacific Southwest Region, 34 pp.

Wilcox, J. 2015. Mattley Meadow Restoration Design Report. Prepared for the Calaveras Ranger District, Stanislaus National Forest, February 27, 2015.

Attachments List (Maps, Forms, Photos)

- Attachment 1: Vicinity Map and Delineation Map Key
- Attachment 2: Private Property Access Letter
- Attachment 3: Wetland Delineation Maps
- Attachment 4: List of Plant Species and Wetland Indicator Status
- Attachment 5: Sample Point Photos
- Attachment 6: Sample Field Forms
- Attachment 7: Custom Soil Resource Report for the Mattley Meadow Restoration Project
- Attachment 8: Impact Map with Table of Impacts

Attachment 1 Vicinity Map and Wetland Delineation Map Key



Attachment 2

Stan Dell'Orto 6512 Hwy 26 Mokelumne Hill, CA 95245

Jesse Stoval US Army Corps of Engineers California South Branch Sacramento District HQ Office 1325 J Street, Room 1350 Sacramento, California 95814

March 16, 2017

Re: Mattley Meadow Restoration Project

Dear Mr. Stoval:

This letter serves as authorization for the US Army Corps of Engineers (ACOE) to enter my 160 acres of private land located within the Stanislaus National Forest at Mattley Meadow, for the purpose of collecting samples to verify the jurisdictional determination for the Mattley Meadow Restoration Project.

Authorization is given subject to the following conditions:

- The ACOE will indemnify and hold Stan Dell'Orto harmless from any actions, demands, costs, claims, liability, attorney's fees, and expenses for injury to or death of any and all persons and destruction of or damage to any and all property caused by or arising out of your use of the premises and/or use by your agents, employees, or independent contractors.
- Stan Dell'Orto is to receive a copy of any reports and/or data generated as a result of this project.
- No smoking or open fires of any kind will be allowed.
- Any litter resulting from your use of the premises will be removed upon completion of use.
- You will notify Stan Dell'Orto at 209-768-6381 at least **48-hours** prior to conducting any work on my property.

This authorization will terminate December 31, 2017, and can only be renewed by written consent of both parties. Please sign both originals of this letter as your acceptance of these conditions and return one copy to me. Should you have any questions please feel free to contact me at the phone number listed above.

Sincerely,

- DealOnto STAN DELL'ORTC

9

Mr. Jesse Stoval, ACOE Mattley Meadow Wetland Delineation March 16, 2017 Page 2 of 2 – Acceptance and Approval

Acceptance & Approval

US ARMY CORPS OF ENGINEERS

By:

Sianature

Printed name of authorized signatory

Date

STAN DELL'ORTO

<u>ton Dell'Orti</u> signature 3/16/2017

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Attachment 3 – Wetland Delineation Maps

Mattley Meadow Restoration Project Aquatic Resource Delineation 51.89 acres in Calaveras County, CA on Stanislaus National Forest and private land Calaveras Dome and Tamarack USGS Quads. Mattley Creek Map Area (1 of 2)

Delineation by Leslie Mink of Plumas Corporation. Field Survey conducted July 7, 2016; map prepared February 20, 2020. Area of Potential Effects is two separate Treatment Areas: northern treatment area is Mattley Creek; southern treatment area is Mattley Meadow; collectively referred to as the Mattley Meadow Restoration Project. Only one of the three channels through the project area MC2 corresponds with a USGS map blue line. Direction of streamflow is to the north and northwest. Project area is mesic meadow in a xeric trend due to incised channels.

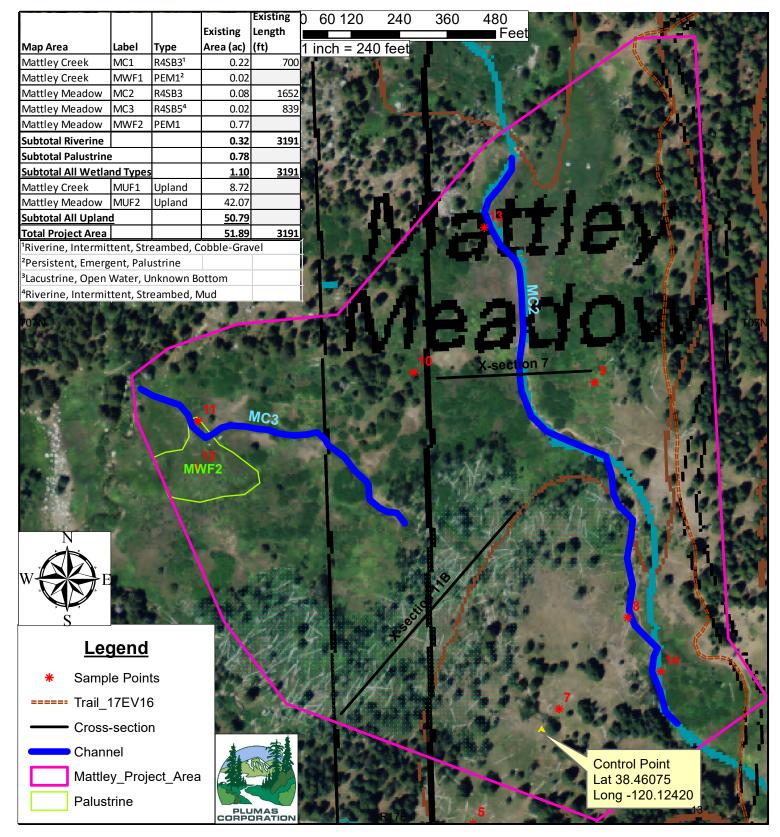
Base imagery source: USDA-FSA Aerial Photography Field Office. 2012. National Agricultural Imagery Program. Published August 28, 2012, overlain over USGS quad maps.

Map Area	Label	Туре	Existing Area (ac)	Existing Length (ft)
Mattley Creek	MC1	R4SB3 ¹	0.22	700
Mattley Creek	MWF1	PEM1 ²	0.22	,0(
Mattley Meadow	MC2	R4SB3	0.08	1652
Mattley Meadow	MC3	R4SB5 ⁴	0.02	839
Mattley Meadow	MWF2	PEM1	0.77	
, Subtotal Riverine			0.32	319
Subtotal Palustrine	2		0.78	
Subtotal All Wetla	nd Types	6	<u>1.10</u>	<u>319</u>
Mattley Creek	MUF1	Upland	8.72	
Mattley Meadow	MUF2	Upland	42.07	
Subtotal All Upland	d		<u>50.79</u>	
Total Project Area			51.89	<u>319</u>
¹ Riverine, Intermit			Cobble-Grav	el
² Persistent, Emerg				
³ Lacustrine, Open				
⁴ Riverine, Intermit	tent, Str	eambed, I	Mud	
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Mattley Meadow Restoration Project Aquatic Resource Delineation 51.89 acres in Calaveras County, CA on Stanislaus National Forest and private land Calaveras Dome and Tamarack USGS Quads Mattley Meadow Map Area (2 of 2)

Delineation by Leslie Mink of Plumas Corporation. Field Survey conducted July 7, 2016; map prepared February 20, 2020. Area of Potential Effects is two separate Treatment Areas: northern treatment area is Mattley Creek; southern treatment area is Mattley Meadow; collectively referred to as the Mattley Meadow Restoration Project. Only one of the three channels through the project area MC2 corresponds with a USGS map blue line. Direction of streamflow is to the north and northwest. Project area is mesic meadow in a xeric trend due to incised channels.

Base imagery source: USDA-FSA Aerial Photography Field Office. 2012. National Agricultural Imagery Program. Published August 28, 2012, overlain over USGS quad maps.



Scientific Name	Scientific Name Common Name	
Achnatherum sp.	Rice grass	
Aconogonon phytolaccifolium	Alpine fleeceflower	FAC
Alopecurus sp.	Meadow foxtail	
Boechera stricta	Canadian rockcress	FACU
Bromus diandrus	Ripgut brome	NL
Bromus inermis	Smooth brome	FACU
Carex nebrascensis	Nebraska sedge	OBL
Collinsia sparsiflora	Few flowered collinsia	NL
Darmera peltata	Indian rhubarb	OBL
Delphinium polycladon	Mountain-marsh larkspur	FACW
Eleocharis acicularis	Needle spike-rush	OBL
Eleocharis decumbens	Decumbent spikerush	FACW ²
Eleocharis quinqueflora	Few-flower spike-rush	OBL
Gilia latiflora	Broad-flowered gilia	NL
Hackelia velutina	Velvet stickseed	NL
Heterocodon rariflorum	Western Pearlflower	FACW
Hydrophyllum occidentale	Squaw-Lettuce	FACW
Hypericum anagalloides	Tinker's-Penny	OBL
Lupinus polyphyllus	Blue-Pod Lupine	FAC
Mertensia oblongifolia	Oblongleaf bluebells	FAC
Mimulus guttatus	Seep monkey-flower	OBL
Perideridia parishii	Parish's yampah	FAC
Polygonum minimum	Zigzag Knotweed	FACU
Rorippa curvipes	Blunt-Leaf Yellowcress	FACW
Sidalcea asprella	Dwarf checkerbloom	FACW ³
Solidago canadensis	Canada goldenrod	NL
Solidago elongata	Cascade Canada Goldenrod	FACU
Stellaria longipes	Long-Stalk Starwort	FACW
Taraxacum oficinale	Common Dandelion	FACU
Trifolium longipes	Long-Stalk Clover	FACW
Veratrum californicum	California False Hellebore	FACW

KEY: UPL = Upland; FACU = Facultative Upland; FAC = Facultative; FACW = Facultative Wetland; OBL = Obligate wetland; ---- = insufficient taxonomic information to assign indicator status; NL = Not Listed (Upland for wetland delineation purposes)

¹Lichvar, RW, DL Banks, WN Kirchner, and NC Melvin. 2016. US Army Corps of Engineers State of California 2016 Wetland Plant List. May 12, 2016. Available at: *http://wetland-plants.usace.army.mil* Accessed March 15, 2017.

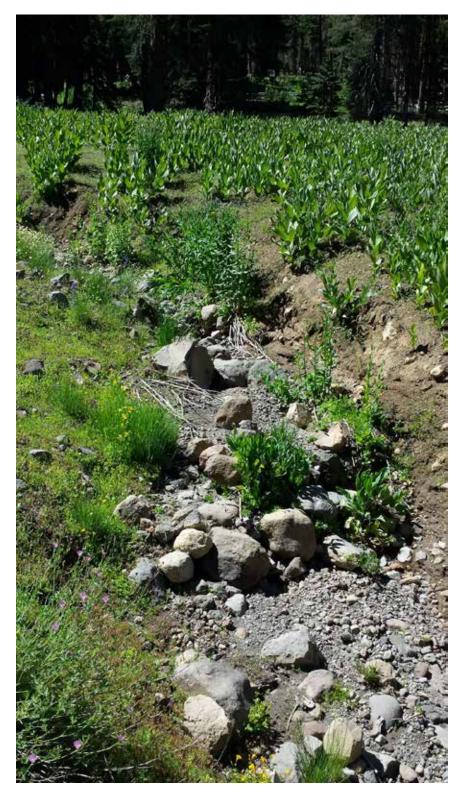
²Alternative scientific name = *Eleocharis montevidensis* var *decumbens;* FACW indicator status for this species.

³Alternative scientific name = *Sidalcea malviflora*; FACW indicator status for this species.















Sample Point 7



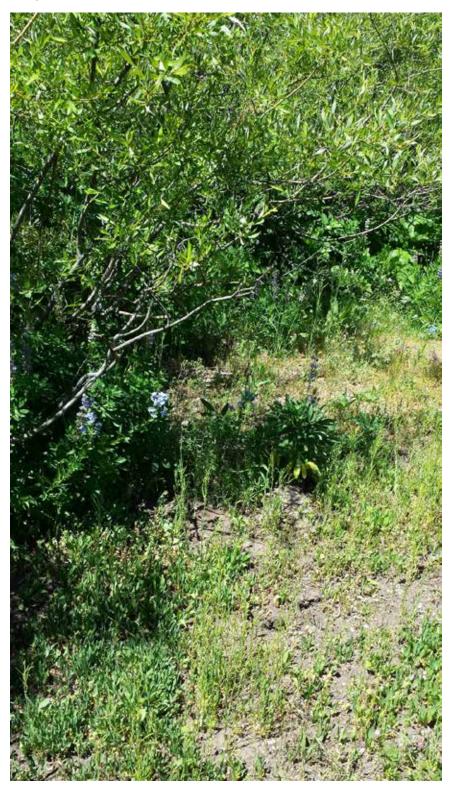












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Applicantowner Stanislaus Na	Chirotophy -	Calavetas Co. sampling Date: July 7, 2016
investigator(s): Leslie Mink.		State: CA Sampling Point: 2pics
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	naturally problematic?	(If needed, axplain any answers in Remarks.)
		int locations, transects, important features, etc.
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and a second		FAC species 5 Max 3 - Martin -
o Stratum (Plot size:)	Total Cover	FACU species
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		e present, unless disturbed or problematic.
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Attachment 6 – Field Forms

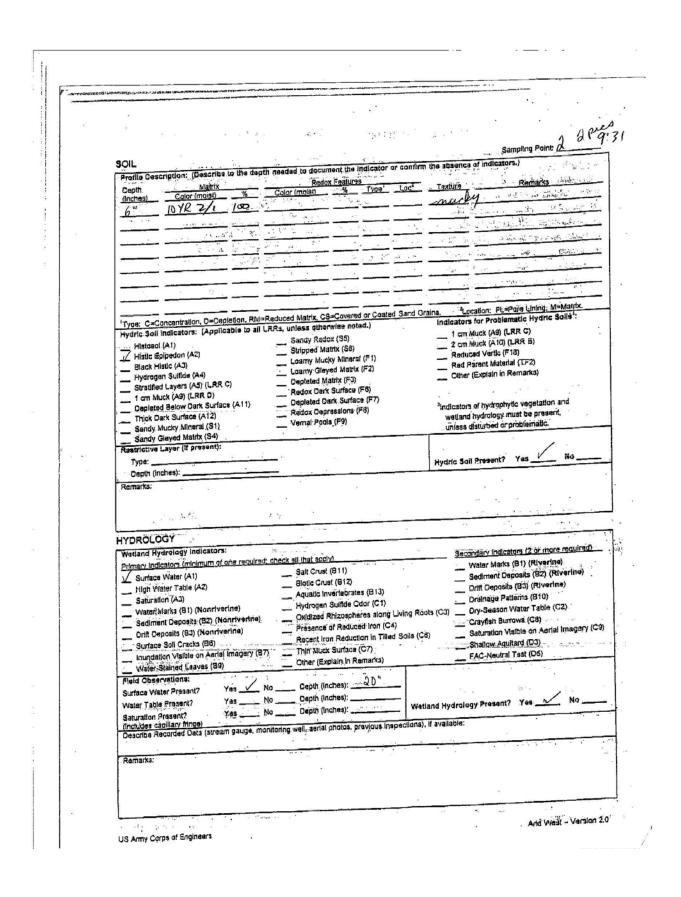
n ge i sti Sampling Point SOIL at the indicator or confirm the absence of ind of bebeen dtoeb adt of a Praile Description: (Desc Redox Features Remarks Texture Matrix Ceath. Color (maist) Anche YR 10 ð 11 . . ²Location: PL=Pore Lining, M=Matrix ¹Type: C=Concentration, D=Cecletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) In Indicators for Problematic Hydric Solis¹: 1 cm Muck (A9) (LRR C) Sandy Redox (55) 2 cm Muck (A10) (LRR B) Stripped Matrix (S6) Reduced Vertic (F18) Loamy Mucky Mineral (F !) Red Parent Material (TF2) Loamy Gleyed Matrix (F2) Hydrogen Sulfide (A4) Other (Explain in Remarks) Oepleted Matrix (F3) Stratified Layers (A5) (LRR C) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Oark Surface (F7) Indicators of hydrophytic vegetation and Depleted Below Oark Surface (A11) Radox Depressions (F3) welland hydrology must be present, unless disturbed or problematic. Thick Dark Surface (A12) Vernal Pools (F9) Sandy Mucky Mineral (S1) Sandy Glayed Matrix (S4) Restrictive Layer (If present): No Hydric Soil Present? Yes Type: Depth (Inches); Domarks: 6, 4.55, HYDROLOGY Secondary indicators (2 or more required) Watland Hydrology Indicators: all that accivit Primary Indicators (minimum of one required: check Water Marks (B1) (Riverine) Salt Crust (811) Sediment Deposits (82) (Rivertine) Surface Water (A1) Biotic Crust (B12) High Water Table (A2) Orift Deposits (83) (Riverine) Aquatic Invertebrates (B13) Oralnage Patterns (810) Saturation (A3) Hydrogen Sulfide Cdor (C1) Dry-Season Water Table (C2) Water; Marks (81) (Nonriverine) Oxidizad Rhizospheres along Living Roots (C3) Sediment Deposits (82) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Oritt Deposits (83) (Nonriverine) Recent Iron Reduction In Tilled Solis (C8) Surface Soli Cracks (86). Shallow Aquitard (D3) - The second Thin Muck Surface (C7) Inundation Visible on Aerial Imagary (87) FAC-Neutral Test (D5) Other (Explain In Remarks) 18 Water-Stained Leaves (89) w. Anne Fleid Observations: Depth (inches): 60" Hurs FP Surface Water Present? 12 Depth (Inches): Mo Water Table Present? Yas Wetland Hydrology Present? Yes NO Depth (Inches): No Yas Saturation Present? ary mrge) rded Data (stream gauge, monitoring well, aerial photos, pravious inspections), if available: (Includes capillary fringe) Describe Recorded Data not for incision, there would not be surfice water it is m subamfree. And West - Version 2.0 US Army Carps of Engineers

WETLAND DETERMINATION DATA FORM - And West Region

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Rhuburb	5		Morphological Adaptation data in Remarks or on	e (Provide supporting	
			Problematic Hydrophytic	a separate sheet)	
dy Vine Stratum (Plot size:	* Tat	al Cover		AdReamou (exbigiu)	
		'Ini	dicators of hydric soil and w present, unless disturbed o	elland hydroitogy must	
			present, unless disturbed o	r problemiatio:	
-		1 Mars	trophytic	1	
re Ground in Herb Stratum	- * Cover of Biotic Crust	Pre	sent? Yas	No	
lrks:					
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Attachment 6 – Field Forms



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	Projectisite: Mattley Meadow City/Gound	A FORM - Arid West Region provention of the second proventing provention of the second provention of the second proventin
	Applicant/Owner. Stanislaus National Forest	State State
	investigator(s): Leslie Mink Section, To	winship, Range: TTN COSS LITES8
	Landform (hillslope, lerrace, etc.): foraced flood plain Local relief	(concave, convex, none):Slope (%):
	Subregion (LRR):	6963 Long: -120. 12403 Datum: NAD 83
	Soll Map Unit Name:	NWI classification: UPL
	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 Circumstancas" present? Yes No
	Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any anawers in Remarks.)
1	SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, transects, important features; etc.
- [Hydrophylic Vegetation Present? Yes No	
	Hydric Soil Present? Yes No	Sampled Area
·L	ND_V	a Walland? Yes No
	Remarks:	
	·· • • •	R. N.
Ŀ		
V	EGETATION - Use scientific names of plants.	
G	Tree Stratum (Plot size: Y 4 Cover Species? Species? Species?	dicator Dominance Test worksheet:
	Lear Stratum (For states? States? St	Number of Cominant Species
2		That Are OBL, FACW, or FAC: (A)
3		Total Number of Dominant Species Across All Strata: (B)
4.		
S	apling/Strub Stratum (Plot size:) = Total Cover	That Are OBL, FACW, or FAC: (A/B)
1.		Prevalence Index worksheet:
2.		Total % Cover of: Multiply by:
13.		OBL species x 1 =
5.	and the second sec	FACW species 30 x 2 =
	= Total Cover	FAC speciesX 3 = 1/5
Her	Stratum (Plot size:	UPL species
2	Lupenus' polyphyllus 5 FAC	Column Totals: 37 (A) TO (B)
1	Delishinium poliveladon 5. FAC	
4		Hydrophytic Vegetation Indicators:
5		Dominance Test is >50%
7		Prevalence Index is \$3.0"
8.		Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
	= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Waad 1.	(v Vine Stratum (Plot size:)	
2.		¹ Indicators of hydric soll and wetland hydrology must be present, unless disturbed or problematic;
	= Total Cover	Hydrophytic
% 8an	e Ground in Harb Stratum % Cover of Blotic Crust	Vegetation
Remar	source of a state of a	Present? Yes No
4		

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Attachment 6 – Field Forms

医尿道管 化 Sampling Point SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Matrix Remarks Depth Type Lac Texture alor (moist) (moist) 4/4 ot (Inchas) 1071 0-36 OYR 3/2 36-50 a. ²Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils¹: Type: C=Concentration, D=Oepletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) In 1 cm Muck (A9) (LRR C) ____ Sandy Redox (S5) 2 cm Muck (A10) (LRR B) Histosoi (A1) Stripped Matrix (S6) Reduced Vertic (F18) Histic Epipedon (A2) Loamy Mucky Mineral (F1) Red Parent Material (TF2) Black Histic (A3) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Hydrogen Sulfide (A4) Depleted Matrix (F3) Stratified Layers (A5) (LRR C) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Indicators of hydrophytic vegetation and Redox Cepressions (F8) wetland hydrology must be present, unless disturbed or problematic. Thick Dark Surface (A12) Vernal Pools (F9) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Hydric Soli Present? No Type: Yes Depth (Inches): Remarks: HYDROLOGY Secondary indicators (2 or more required) Watland Hydrology Indicators: Primary indicators (minimum of one required; check all that apply) Water Marks (B1) (Riverine) Salt Crust (811) Sediment Deposits (82) (Riverine) Surface Water (A1) Blotic Grust (B12) High Water Table (A2) Orift Deposits (B3) (Riverine) Aquatic Invertebrates (B13) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (81) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Orift Deposits (83) (Nonrivarina) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Shallow Aguitard (D3) Thin Muck Surface (C7) Inundation Visible on Aarial Imagery (87) FAC-Neutral Test (D5) Other (Explain in Remarks) Water-Stained Leaves (89) He channel, not on fp 60 1 2 Field Observations: No Depth (Inches): Yes Surface Water Present? Depth (Inches): No Yas_ Water Table Present? Wetland Hydrology Present? Yas No Depth (Inches)! (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aarial photos, previous inspections), if available: Yas Remarks: Arid West - Version 2.0 US Army Carps of Engineers

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WEILAND DETERMINA	TION DATA FORM	- Arid West Ragion
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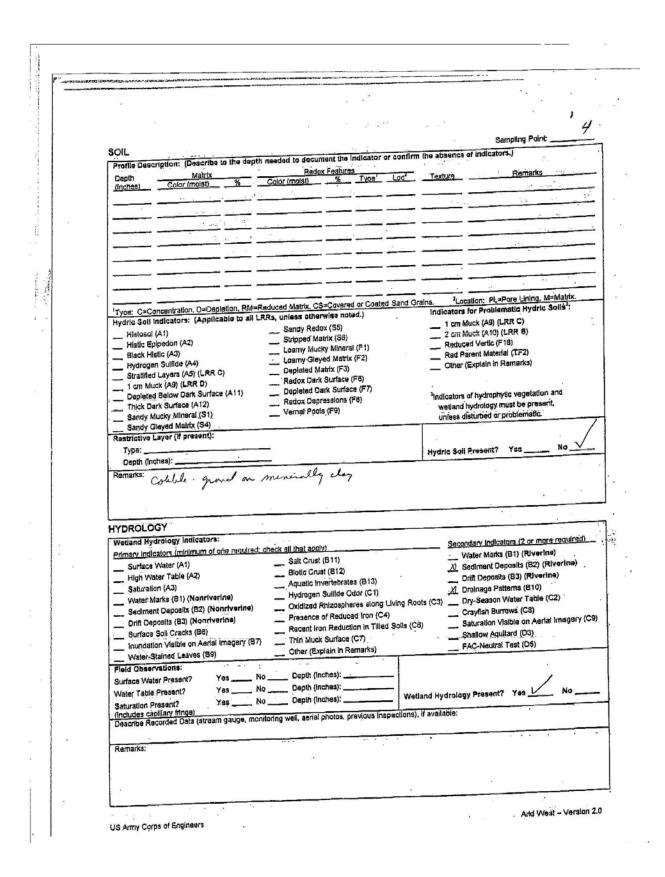
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		channel liserse	Local relief (conca	ave, convex, none): _ convey.	Slope (%):
			38.45960	2 Long: -120.12414	Batum Jerro C C
Ace climate	Init Name: <u>197Entic Cr</u> c/hydrologic conditions on the	yom prepts, dee			
Are Vegeta	ition Soil or Hi	rate typical for this time of	10000	o (If no, explain in Remarks.)	
Are Vegeta	tion, Soll, or Hy	drology significa		Are "Normal Circumstances" present?	
				if needed, explain any answers in Ren It locations, transects, impor	iarka.)
Hydrophyd Hydric Sal	ic Vegetation Present? Present? vdrology Present?	Yes No Yes No Yes No	le the Samp within a Wat	led Area	
	· · · · · · · · · · · · · · · · · · ·	s.'			
	~ 8			54	
<u></u>				\ \	
VEGETAT	ION -'Use scientific na			· ·	· ·
1 2 3	1 (Plot size:)	ABBOUU % Cave	e Dominant Indicator r <u>Soacles? Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	
4				Species Across All Strata:	(8)
Sanifra/Shout	Stratum (Plot size:		= Total Cover	Percent of Cominant Species That Are OBL, FACW, or FAC:	(A/B)
1				Prevalence Index worksheet:	(40)
2	•				duitioly by:
3				OBL species _ Z x1=	· Z
4.	1. N. A. 1997	· · · · · · · · · · · · · · · · · · ·		FACW species x2=	- 64
				FAC species 3 =	12
Hero Stratum		100 M	* Total Cover	FACU species X 4 = UPL species X 5 =	
	tensia auttatu		<u>- 681</u>	Column Totals: 1 (A)	20 (8)
3 Blueba		ua I	- FAC	Prevalence Index -= B/A =	
4.				Hydrophytic Vegetation Indicators	
s. Salde	igo canadensis	? 3	FACU	Dominance Test la >50%	· .
6	<u> </u>			Prevalence Index is s3.0"	
4.		······		Morphological Adaptational (Prov data in Remarks or on a sepa	ide supporting
		10	Total Cover	Problamatic Hydrophytic Vegetat	on' (Explain)
Woody Vine Strat	um (Plot size:	<u> </u>		· · ·	
2.			[]	indicators of hydric soil and welland i e present, unless disturbed or proble	iydrology must
100	·····			ydrophytic	
6 Bare Ground in	Herb Stratum 90	% Cover of Blotic Crust	V	egetation	
Remarks:		a dorar or biolic Critist	P	resent? Yes V_ No	<u> </u>
	-			·· ·	
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Attachment 6 – Field Forms



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	ley Meadow	_ City/County Cal	averas Co.	Sampling Date: July 7, 2016	Sec. Sec.
	islaus National F	orest	State: CA	Sampling Point: 5	40
Investigator(s): Leslie	mink	Section, Township, E		GES, 17	
Landform (hillslope, terrace, etc.	1: meadow	and the second s	, convex, none): Con		
Subregion (LRR):	AZZA Lat.	3.8.46013	Lang: -120.12		ر
Soil Map Unit Name: 107-EA	the second se	1-10,70 Slop	esNWI dassific		
Are dimatic / hydrologic condition	ns on the site typical for this time of	year? Yes No	(If no, explain in Re		÷
	ar Hydrology significant			ssent? Yas No	
Are Vegetation, Soil		iroblematic? (If n	eded, explain any anawers	In Remarks)	
SUMMARY OF FINDINGS	- Attach site map showin	g sampling point l	ocations, transects,	important features: etc.	
Hydrophylic Vegetation Present	Yes No				
Hydric Soil Present?	Yas No V	is the Sampled	.3.5	./	τ.
. Weitand Hydrology Present?	Yes No	within a Wallan	d7 Yes	No	
Ramarks: Arough	1 + Amonat of	enous +	an macture	0.	
. chen		A		marces	
		the meador	rand	· · · · · · · · · · · · · · · · · · ·	
VEGETATION -Use scient					
Tree Stratum (Plot size:	Absolute % Cover	Scarlag? Sintern	Dominance Test workshe		
1 · · · · ·	·		Number of Cominant Speci That Are OBL, FACW, or F.	es AC:(A)	
2			Total Number of Dominant	······································	Ĵ.
3			Species Across All Strata:	(8)	·
	· · · · · · · · · · · · · · · · · · ·	Total Cover	ercent of Dominant Specie	s	
Saoling/Shrub Stratum (Plot size: _		Total Cover T	hat Are OBL, FACW, or FA	C: (A/B)	
1	-	P	revalence index workshe	et:	
3.			Total % Cover of:	Multiply by:	.5
4	1		BL species CW species70	x1= 10	
S				4x3= 1.104	
Wat There in The 7m2	· · · · · · · · · · · · · · · · · · ·	Tatal Cover	CU species	X4*	
		1 10 1 UE			
Hero Stratum (Plot size: 311 - 1. Veratum cilip	ornice 5D	Y Maw	L species	x 5 =	
1. 1/ eratum cilif 2. Sidalcen asp	ulla 10	FAcu? Co	lumn Totals: <u>RO</u>	(A) <u>150</u> (B)	
1. Veratum cilip 2. Sidalcen appr 3. Cerex netraste	ella 10 mais 18	FACUL? CO	fumn Tatala: <u>RO</u> Prevalence Index = B/A	(A) <u>150</u> (B)	
1. <u>Verahum cilip</u> 2. <u>Sidalses asp</u> 3. <u>Carex nutraste</u> 4. Achratherum	<u>ella 10</u> <u>neco 16</u> 10	FACUL? CO	lumn Talais: <u>20</u> Prevalence Index = B/A Iraphytic Vegetation Indi	(A) <u>150</u> (B) - <u>1-9</u> kšt. Cators:	
1. Veratum colif 2. Sidalaen app 3. Careze nitraste 4. Achartherum 5. Routher curvices	ella 10 mais 18	Y FACW? Co FACW? OBL	lumn Talais: <u>RO</u> Prevalence Index = B/A Iraphytic Vegetation Indi Dominance Tast is >50%	(A) <u>150</u> (B) - <u>1-9</u> kšt. Cators:	
1. Veratum colip 2. Sidalaen app 3. Careze netraste 4. Achartherum 5. Pourpa curvipeas 1. Cellinala spars	<u>illa 10</u> <u>10</u> <u>10</u> <u>5</u>		lumn Tatals: <u>RO</u> Prevalence: IndeX = B/A frophytic Vegetation Indi Daminance Tast is > 50% Prevalence Index is \$30°	(A) <u>150</u> (B) <u>41</u> <u>1968</u> . Cators:	
1. Veratum colip 2. Sidalaen app 3. Careze netraste 4. Achartherum 5. Pourpa curvipeas 1. Cellinala spars	illa 10 10 10 5 illon 5	Y Priew co FAcus OBL F FAcus FAcus	fumn Talais: <u>RO</u> Pravalence Index' = B/A draphytic Vegetation Indi Daminance Tast is >50% Pravalence Index is >50% Morphological Adaptations data in Ramarks or or i	(A) <u>ISO</u> (B) <u>e.tors</u> : (Provide supporting separate sheet)	
1. Veraturn colif 2. Sidalsen ann 3. Cerex netraste 4. Achartherum 5. Rougha convigent Collinatio provision 4. Hyprophyllum re	illa 10 ness 10 10 5 cidented 5	Y Priew co FAcus OBL F FAcus FAcus	fumn Talais: <u>RO</u> Prevalence Index: = B/A draphyllo Vegetallon Indi Daminance Tast is = 500° Prevalence Index is ±0° Morphological Adaptation	(A) <u>ISO</u> (B) <u>e.tors</u> : (Provide supporting separate sheet)	
1. Veraturn colif 2. Sidalsen ann 3. Cerex netraste 4. Achartherum 5. Rougha convigent Collinatio provision 4. Hyprophyllum re	illa 10 ness 10 10 5 cidented 5	Y FACW Co FACW? FACW? FACW FACW tal Cover	fumn Talais: <u>RO</u> Prevalence Index' = B/A Iraphytic Vegetation Indi Daminance Tast is >50% Prevalence Index is ±30° Morphological Adaptations data in Remarks or on tata in Remarks or or Problematic Hydrophytic V	(A) <u>ISO</u> (B) <u>e. (B)</u> cators: (Provide supporting a separate sheet) egetation ¹ (Explain)	
1. Veratum colip 2. Sidalaen app 3. Careze netraste 4. Achartherum 5. Pourpa curvipeas 1. Cellinala spars	illa 10 ness 10 10 5 cidented 5	Y FACW Co FACW? OBE FACW FACW tal Cover	fumn Talais: <u>RO</u> Pravalence Index' = B/A draphytic Vegetation Indi Daminance Tast is >50% Pravalence Index is >50% Morphological Adaptations data in Ramarks or or i	(A) <u>ISO</u> (B) = <u>uel 968</u> . cators: (Provide supporting t apparate sheet) egetation ¹ (Explain) tland hydrology must	
1. Veraturn colif 2. Sidalsen ann 3. Cerex netraste 4. Achartherum 5. Rougha convigent Collinatio provision 4. Hyprophyllum re	illo 10 10 5 illon 5 cidental 5 - To	Y Priew Co FActu? Co OBE Hy FActur FActur tal Cover al Cover	Frevalence Index = B/A Frevalence Index = B/A frephytic Vegetation Indi Dominance Tast is >50% Prevalence Index is >50% Prevalence Index is >30% Morphological Adaptations data in Remarks or on Problematic Hydrophytic V cators of hydric soil and we seept, unless disturbed or ophytic	(A) <u>ISO</u> (B) = <u>uel 968</u> . cators: (Provide supporting t apparate sheet) egetation ¹ (Explain) tland hydrology must	
1 colip 2 Sidalsen app 3 conserved app 4. Achartherum 5. Pourphe constrained Collinate prove - Hypophylum re tody Vine Stratum (Piat size: Bare Ground in Herb Stratum	illo 10 10 5 illon 5 cidental 5 - To	Y Priew Co FAcus Co OBL Hy FAcus Hy FAcus I tal Cover I India be pr all Cover Hydr	fumn Talais: <u>RO</u> Prevalence Index = B/A traphytic Vegetation Indi Dominance Tast is = 50% Prevalence Index is ±0° Morphological Adaptations data in Ramarks or or i Problematic Hydrophytic V cators of hydric soil and we easil, unleas disturbed or ophytic tation	(A) <u>ISO</u> (B) cators: (Provide supporting t separate sheet) egetation ¹ (Explain) tland hydrology must problematic.	
1 colip 2 Sidalsen app 3 conserved app 4. Achartherum 5. Pourphe constrained Collinate prove - Hypophylum re tody Vine Stratum (Piat size: Bare Ground in Herb Stratum	10 10 10 5 illor 5 cidental 5 	Y Priew Co FACW? Co OBL F PACW FACW tal Cover tal Cover al Cover	fumn Talais: <u>RO</u> Prevalence Index = B/A traphylic Vegetation Indi Dominance Tast is = 50% Prevalence Index is = 50% Morphological Adaptations data in Ramarks or or i Problematic Hydrophytic V cators of hydric soil and we easil, unleas disturbed or ophytic tation	(A) <u>ISO</u> (B) = <u>uel 968</u> . cators: (Provide supporting t apparate sheet) egetation ¹ (Explain) tland hydrology must	
1 colip 2 Sidalsen app 3 conserved app 4. Achartherum 5. Pourphe constrained Collinate prove - Hypophylum re tody Vine Stratum (Piat size: Bare Ground in Herb Stratum	10 10 10 5 illor 5 cidental 5 	Y Priew Co FAcur Co OBL F FAcur FAcur FAcur FAcur T tal Cover India	fumn Talais: <u>RO</u> Prevalence Index = B/A traphytic Vegetation Indi Dominance Tast is = 50% Prevalence Index is ±0° Morphological Adaptations data in Ramarks or or i Problematic Hydrophytic V cators of hydric soil and we easil, unleas disturbed or ophytic tation	(A) <u>ISO</u> (B) cators: (Provide supporting t separate sheet) egetation ¹ (Explain) tland hydrology must problematic.	
1. Veraturn colif 2. Sidalsen ann 3. Cerex netraste 4. Achartherum 5. Rougha convigent Collinatio provision 4. Hyprophyllum re	10 10 10 5 illor 5 cidental 5 	Y Priew Co FAcur Co OBL F FAcur FAcur FAcur FAcur T tal Cover India	fumn Talais: <u>RO</u> Prevalence Index = B/A traphytic Vegetation Indi Dominance Tast is = 50% Prevalence Index is ±0° Morphological Adaptations data in Ramarks or or i Problematic Hydrophytic V cators of hydric soil and we easil, unleas disturbed or ophytic tation	(A) <u>ISO</u> (B) Cators: (Provide supporting t separate sheet) egetation ¹ (Explain) tland hydrology must problematic.	

Attachment 6 – Field Forms

------2 1.7' Sampling Point 5 2 mics 11:00 SOIL the absence of indicators.) Profile Cescription: (Describe to the depth needed to do ument the Indicator or co 12 Redox Features Remarks Matrix Texture Ceoth (Inches Color (maist Sandy 8" 100 4 532 ÷. in' 12 2Location: FL=Pore Lining, M=Matrix ¹Tyge: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains, Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils': 1 cm Muck (A9) (LRR C) Sandy Redox (55) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) 2 cm Muck (A10) (LRR E) Stripped Matrix (S6) Raduced Vertic (F18) Loamy Mucky Mineral (F1) _ Red Parent Material (TF2) Loamy Gleyed Matrix (F2) Deplated Matrix (F3) . Hydragen Suifide (A4) Other (Explain in Remarks) Stratified Layers (A5) (LRR C) Redox Dark Surface (F8) 1 cm Muck (A9) (LRR D) Depleted Dark Surface (F7) indicators of hydrophytic vegetation and Depleted Balow Dark Surface (A11) Radox Depressions (F8) Vernal Pools (F9) wetland hydrology must be present, unless disturbed or problematic. Thick Dark Surface (A12) Sandy Mucky Minaral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (If present): No Hydric Soil Present? Yes Type: Depth (Inches): Demarks' HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (2 or more-regulared) Primary Indicators (minimum of one required; sheck all that apply) Water Marks (81) (Riverine) Salt Crust (B11) Sediment Deposits (82) (Riverine) ___ Surface Water (A1) Biotic Crust (812) High Water Table (A2) Drift Deposits (83) (Riverine) Aquatic invertebrates (B13) Orainage Patternis (810) Saturation (A3) Hydrogen Sulfde Cdor (C1) Water Marks (B1) (Nonriverine) Cry-Season Water Table (C2) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Drift Deposits (83) (Nonriverine) Recent Iron Reduction in Tilted Soils (C8) Surface Soil Cracks (88) Shallow Aquitard (D3) Thin Muck Surface (C7) Inundation Visible on Aarial Imagery (87) FAC-Neutral Test (D5) Other (Explain in Remarks) Water Stained Leaves (89) Field Observations: No X Cepth (inches): Surface Water Present? Yes Depth (Inches): >60" Yas X No Water Table Present? Wetland Hydrology Present? Yes No Depth (Inches): (hchudes cabillary finge) Describe Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available: Yas No. Ramarka: Arid West - Varsion 2.0 US Army Corps of Engineers

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WE	TLAND DETERMINATION	DATA FORM - Arid West Region
Applicant/Owner Stanistau		Jan Seinfang Date: JULY 1) Bar 4
		I State: <u>CA</u> sampling Point: <u>C</u> Idn, Yownship Range: <u>T7N R 16 E S</u> , 17
Landform (hillslope, terrace, etc.): ferra	celfo mealow Loos	I relief (concave, convex, none): _ (On caveSlope (%):
Subregion (LRR):	At Lat: 28	,45988 LANG -120,12520 ALADET
Soil Map Unit Name: 107 Entic Cry	unbrepts deep. 1-1	0.70 Slapes Mind danillanian 1)P/
Are climatic / hydrologic conditions on the s	ite typical for this time of year? Y	45. NO (If an evolution in December)
Are Vegetation Soil or Hyd	rology significantly distur	ad? Are Normal Commetances accessed You
Are Vegetation, Soil, or Hyd	rology naturally problema	llc? (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS - Attac	th site map showing sam	pling point locations, transects, important features, etc.
Hydrophyllo Vegotation Present? Hydric Soll Present? Y		In the Sampled Area Millin + Walland? Yes No
Wetland Hydrology Present?	No V	No V
	• •	
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VEGETATION - Use scientific nam	an of plants	
	Absolute Comina	int Indicator Cominance Test worksheet:
2	= Totas C	Prevalence Index worksheet:
		OBL species 0 x1=10
(<u></u>		FACW species x 2 =
erb Stratum (Plot size:	= Total Co	
Eleo charis acicular	is 5 .	OBL UPL species x5=
Cirex rebriscensis.	5	0.3.2 Column (dtais: (A) (B)
- Lupinus polyphylli Sidalcea	5	FA ZM Prevalence Index = B/A = KH.
Achnetherum		Hydrophytic Vegetation Indicators: Cominance Test is >30%
	· ····································	Provalence Index is \$3.0"
n in start in start		Merchelegical Adaptations' (Provide supporting
	= Total Cove	data in Remarks or on a separate street
tdv Vine Stratum (Plot size:)		
and the second sec		Indicators of hydric soil and wetland hydrology must
r	= Total Cover	
ire Ground in Herb Stratum %	Cover of Blotic Crust	Vegetation
		Present? Yes No
		· · · · · · · · · · · · · · · · · · ·
arks:		1 11
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Attachment 6 – Field Forms

2 pins ι. 11:21 Sampling Point ant the indicator or confirm the absence of indicators.) SOIL crigtion: (Describe to the depth needed to deci Profile Ces Redox Features Remarks Matrix Taxitie Cepth Type alor (moist) 1. 1.3 silt Color (maist) (Inches) 10YR6/1 1.33 0-8 ŵ. Location: PL=Pore Lining, M=Matrix ¹Type: C=Concentration, D=Degletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Indicators for Problematic Hydric Solis': Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) 1 cm Muck (A9) (LRR C) Sandy Redox (35) 2 cm Muck (A10) (LRR B) Histosal (A1) Stripped Matrix (S6) Raduced Vertic (F18) Histic Epipedon (A2) Loamy Mucky Mineral (F1) Red Parent Material (TF2) Black Histic (A3) Loamy Gleyed Matrix (F2) ____ Hydragen Suifide (A4) Other (Explain in Remarks) Depleted Matrix (F3) Stratified Layers (A5) (LRR C) Redox Dark Surface (F8) 1 cm Muck (A9) (LRR D) Depleted Dark Surface (F7) indicators of hydrophytic vegetation and Depleted Balow Dark Surface (A11) Radox Capressions (F8) wetland hydrology must be present, unless disturbed or problematic. Thick Dark Surface (A12) Vernal Pools (F9) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Rastrictive Layer (if present): No Ygs Hydric Soil Present? Type: Depth (Inches): Remarks: HYDROLOGY Secondary Indicators (2 or more required) Watland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Water Marks (B1) (Riverine) Salt Crust (811) Sediment Deposits (82) (Riverine) ____ Surface Water (A1) Blotic Crust (B12) High Water Table (A2) Drift Deposits (B3) (Riverine) Aquatic Invertebrates (813) Drainage Patients (810) Saturation (AJ) Hydrogan Suiftde Oddr (C1) Dry-Season Water Table (C2) Water Marks (81) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Orift Deposits (83) (Nonrivarina) Recent Iron Reduction in Tilled Soils (C8) Surface Soli Cracks (86) Shallow Aquitard (D3) Thirf Muck Surface (C7) Inundation Visible on Aerial Imagery (87) FAC-Neutral Test (05) Other (Explain in Remarks) Water-Stained Leaves (89) 60" Field Observations: Depth (Inches): Surface Water Present? Yas Depth (inches): No Yas Ma Water Table Present? Wetland Hydrology Present? Yes Depth (Inches): Ng_ Yas (Includes capillary filnge) Describe Recorded Data (stream gauge, monitoring well, aertal photos, previous inspections), if available: Saturation Present? Ramarka: & channel pico 11:25 Arid West - Version 2.0 US Army Corps of Engineers

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Applicant/Gwner:			rest	State:		∎: <u>July 7,2016</u> ♥ 11: 7
Investigator(s):			Section, Townshi	P. Range: T7N		
Landform (hillslope, terrace,			Local rellef (cont	ave, convex, none):	in the second	Slape (%):
Subregion (LRR):		Lat:	38.4609	0 Linn -/2	0,12404 0	NAD 83
Soil Map Unit Name: 1076	Entic Cryun bri	epts, deep,	1-10 70 510		lassification:) PL
Are climatic / hydrologic cond	fillions on the sile typical	for this time of yes	17 Yss	No (If no, explai		· · · · · · · · · · · · · · · · · · ·
Are Vegetation Soil	, ar Hydralogy	significantly	disturbed?	Are "Normal Circumstan		No
Are Vegetation, Soil			lemailc? (If needed, explain any a	inswert in Remarks	
SUMMARY OF FINDING	GS - Attach site r	nap showing	sampling poir	nt locations trans	acto Importante I	
Hydrophylic Vegetation Fres	the start				ecia, important i	eatures, etc.
Hydric Soil Present?	ent? Yes V	No	is the Samp	ind Area	1. 1	
Wetland Hydrology Present?		No	within a Wa	land? Yes	NoV	
Remarks:			<u></u>			
···9			5 Sc	5a - 1		· ·
× 4°	- 8V	4	·		* x * 1	
EGETATION - Use scie	antific names of n	ante		2 40 2 - 2		
· · · · · ·	in the state of pr		ominant Indicator	1.0		
te Stratum (Plot size:	<u> </u>	% Cover St	teclea? Status	Number of Dominant		
	and the second			That Are OBL, FACU	N, or FAC:	· (A)
			<u> </u>	Total Number of Don	Sinant	
				Species Across All S	trata:	(B)
			tal Cover	Percent of Dominant	Species	
offna/Shrub Stratum (Plot siz	£)			That Are OBL, FACM	(, or FAC:	(A/B)
	· · · · · · · · · · · · · · · · · · ·			Prevalence Index wo		
	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Total % Cover of	10	
				OBL species	10 x1- 10	·····
<u></u>		1.0		FAC species	x2=	
Stratum (Plot size:	93 ¹¹¹¹ 1	= Tat	al Cover	FACU species		
Hachelin vel	ution	£ .	10.00	UPL species	x5=)	
Sidalcea		5	- TACU?	Column Totals:2	0 (A) 50	(B)
Achnatheru	n	15	THE MAL	Bosuplances Inidad		avīt.
Corese netrosc		10 .	OBE	Hydrophytic Vegetatio		19513.4
Callinson enselfe	aa	20/0		Dominance Tast le	See a since he are a set	4 (¹)
	يـــــــــــــــــــــــــــــــــــــ			Prevalence Index is		
	A			Morphological Adap	tations' (Provide sup	parting
		-		Problematic Wedness	or on a separate she hytic Vegetation ¹ (Eq	
Vine Stratum (Plot size:	·	= Total	Gaver		inde Aefersiou. (FX)	
				ndicators of hydric soil :	and welland hydrolog	vmust
		·		e present, uniesa disturi	bed or problematic.	
P	Fr -	* Total'C		ydrophytic	1 :	
	5 % Cover of	Slotic Crust		egetation resent? Yes	V	
* 11:38 (hole						
Schul						
Call .						1 1
(~1						

-----Sampling Poir SOIL eded to document the indicator or confirm the absence of indicat Profile Cescription: (Describe to the depth ne Redox Features Remark Matrix Texture Type Lac Cepth 2% (maist) grovel silter (Inches) IDD 7.5 Y.R. 61 6-8" ---de. Location: FL=Pore Lining, M=Matrix Tyge: C=Concentration, O=Ospletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains, Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) In Indicators for Problematic Hydric Soils1: 1 cm Muck (A9) (LRR C) Sandy Redox (S5) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Histosol (A1) Stripped Matrix (S6) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) Red Parent Material (TF2) Loamy Gleyed Matrix (F2) Deplated Matrix (F3) Other (Explain in Remarks) . Hydrogen Sulfide (A4) Stradified Layars (A5) (LRR C) -Redox Dark Surface (F8) 1 cm Muck (A9) (LRR D) Depleted Dark Surface (F7) Depleted Selow Dark Surface (A11) Indicators of hydrophytic vegetation and Redox Depressions (F8) wetland hydrology must be present, Thick Oark Surface (A12) Vemal Pools (F9) unless disturbed or problematic. Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (If present): No Hydric Soil Present? Yas Type: Depth (Inches): Remarks: HYDROLOGY Secondary Indicators (2 or more required) Watland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Water Marks (B1) (Riverina) Salt Crust (811) Sediment Osposits (82) (Rivertne) Surface Water (A1) Blotic Crust (B12) Orift Deposits (83) (Riverine) High Water Table (A2) Aquatic Invertebrates (B13) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfde Cdor (C1) Dry-Season Water Table (C2) Water Marks (Bt) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Orift Deposits (83) (Nonriverine) Recent Iran Reduction in Tilled Soils (C6) _ Surface Soil Cracks (B6) Shallow Aquitard (D3) Thin Muck Surface (C7) Inundation Visible on Aartal Imagery (87) FAC-Neutral Tast (DS) -Other (Explain in Remarks) Water-Stained Leaves (89) Field Observations: Depth (Inches): 760" No V Surface Water Present? Yes Depth (Inches): No_ Yas Water Table Present? Wetland Hydrology Present? Yes Depth (Inches): NO. aduration reason ((nctudes capillary finge) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pravious inspections), if available: Saturation Present? Yas Remarks: Arid West - Version 2.0 $\{ C_{i}^{(1)}, \ldots, \widetilde{D} \}$ US Army Corps of Engineers

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investigator(s): Lestie	0	Section, Toy	state: <u>CA</u> Sampling Point: <u></u> mship.Range: <u>T7N</u> R 16 E S, 17	· · · ·
Landform (hills/ope; terrace, etc.):	Fp :	Local rellef (concave, convex, none):Stone (%):	···· (1', 4
Subregian (LRR):ALRA		_Lat: 38.46	152 Long -120, 12342 Data NA	083
Soil Map Unit Name: 107 En His	Cryun brepts	deep. 1-10.70	slopes NM dassification IAPL	
Are climatic / hydrologic conditions of	n the site typical for this	time of year? Yes	No (If no, explain in Remarks.)	
Are Vegetation Soli	or Hydrology 1	gnificantly disturbed?	Are "Normal Circumstances" present? Yes No	
Are Vegetation, Soil			(If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS -	Attach site map s	howing sampling	toint locations, transects, important features,	ata
Hydrophylic Vegetathin Present? Hydric Soll Present? Wetland Hydrology Present? Remarks:	Yes No	In the S	ampled Area Walland? Yes No	
	1. I.I.			
EGETATION - Use scientific	· · · · · · · · · · · · · · · · · · ·	·		·
Las IA How - Use scientific				
Tree Stratum (Plot size:		solute Cominant Indio Cover Species? Sta	ator Dominance Test worksheet: US Number of Dominant Species That Are CBL, FACW, or FAC:(A)	
	1.11		Total Number of Dominant	· ·
			Species Across All Strata: (B)	
aning/Shrub Stratum (Plot size:		* Total Cover	Percent of Cominant Species That Are OBL, FACW, or FAC:	
)			<u>'</u>
			Prevalence Index worksheet: Tatal % Cover of: Multiniv by:	
			OBL species x 1 =	-
A.A.			FACW species 25 x2=	
	14m		FAC species 45	ŧ
o Stratum (Flat size: 5m2	· —	= Fatal Cover	FACU species x 4 =	
metanain dangilo	lian 15	FAC	7 UPL species x 5 = - Column Totals; 70 (A) 185 (B)	
Hadrochullum occu	5	1 P. 1		1
	adrus 5	<u>FAZ</u>		
11 A	riflorism 5.	FAC	Hydrophytic Vegetation Indicators:	1 ľ
Stellaria longipe	5 .5	FACH	/ Commance Tast la >50%	
Vinatruminicalifor	nico 10	FACM		
Hockalia veluting	10	.TAC?	Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)	ŀ
Aconogonon phytola	cofolium 20	= Total Cover FAC	Problematic Hydrophytic Vegetation' (Explain)	
1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	7		Indicators of hydric soil and walland hydrid	
			Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic.	
e Ground in Herb Stratum	% Cover of Biotic C	* Total Cover	Hydrophytic Vegetation Present? Yes No	
ks:			NO	11.
· · · .				
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				11

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-----3151 Sampling Poin Profile Cescription: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) SOIL 1 Redox Features Matrix Taxtur Cepth Type' Color (moist) grove (Inches lts 7.5 0-8 2Location: PL=Pore Lining, M=Matrix Type: C=Cancentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils 1 cm Muck (A9) (LRR C) Sandy Redox (S5) 2 cm Muck (A10) (LRR 8) Histosol (A1) Stripped Matrix (S8) Reduced Vertic (F18) Histic Epipedon (A2) Loamy Mucky Mineral (F1) Red Parent Material (TF2) Black Histic (A3) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Hydrogan Sulfide (A4) Depleted Matrix (F3) Stratified Layers (AS) (LRR C) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Dark Surface (F7) Indicators of hydrophytic vegetation and Depleted Below Dark Surface (A11) Radox Depressions (F8) Thick Dark Surface (A12) welland hydrology must be present, Vemat Pools (F9) Sandy Mucky Mineral (S1) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Restrictive Layer (if present): No Hydric Soil Present? Yes Type: Oroth (Inches): Remarks: HYDROLOGY Secondary Indicators (2 or more required) Wetland Hydrology Indicators: Primary indicators (minimum of one required: check all that apply) Water Marks (B1) (Riverine) Salt Crust (811) Sediment Deposits (82) (Riverine) Surface Water (A1) Blotic Crust (B12) High Water Table (A2) Orlit Deposits (83) (Riverine) Aquatic Invertebrates (B13) Drainage Patterns (810) Saturation (A3) Hydrogen Sulfde Cdor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Orift Deposits (83) (Nonriverine) Recent iron Reduction in Tilled Soils (C8) Surface Soll Cracks (86) Shallow Aquitard (D3) Thin Muck Surface (C7) Inundation Visible on Aartal Imagery (87) FAC-Neutral Test (05) Other (Explain In Remarks) Water-Stained Leaves (89) Depth (Inches): ~84" Field Observations: Surface Water Present? Yes No Depth (Inches): No Wetland Hydrology Present? Yes Yas Water Table Present? Depth (Inches): . No Saturation Present? Yas Anctudes cacillary fitnge) Anctudes cacillary fitnge) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pravious inspections), if available: channel is worus Chimmel & wit M. D.Z.cfs Remarka: fp is dried out due to incision And West - Version 2.0 US Army Corps of Engineers

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		A FORM - Arid West Region
	adow City/Count	Calaveras Co. sampling Date: July 7, 2016
Applicant Cuner Stanislaus Na	tional Forest	State: CA Sampling Point: 9 . 12130
Investigator(s): Leslie Mink		Writhip. Range: T7N R 16 E S. 17
Landform (hillalope, terrace, etc.): <u>Meads</u> Subregion (LRR): <u>MLRA22A</u>	Local relief	(concave, convex, nene):Slope (%):
	Lat: <u>38.4</u> (03/3 LAND -120, 123/64 AMAD 57
Soil Map Unit Name: <u>127 Ea Fic Cryum b</u> Are climatic / hydrologic canditions on the site typic:	septs, deep, 1-10.70	
Are Vegetation Soil or blydrology	al for this time of year? Yes	No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology_		Are "Normal Circumstances" present? Yes No
		(If needed, explain any answers in Remarks.)
	map snowing sampling	point locations, transacts, important features, etc.
Hydrophylic Vagatation Present? Yas V	No le the	Sämpled Area
Hydric Sail Present? Yes Wetland Hydrology Present? Yes		#Walland? Yas No
Remarks:		
<u>.</u>		
· · · · · · · · · · · · · · · · · · ·		
VEGETATION - Use scientific names of J	plants.	
Inse Stratum (Plot size:	Absolute Cominant Ind	lator Dominance Tast worksheet:
t. acturer	% Cover Species? St	Number of Cominant Species
2		That Are OBL, FACW, or FAC: (A)
3		Jotal Number of Dominant Species Across All Strata:
4		
Saoling/Shrub Stratum (Plot size:	= Total Cover	Percent of Cominant Species That Are OBL, FACW, or FAC: (A/B)
2		Pravalence index workstreet; Total % Cover of:Muittofy by:
2 3		Pravalence Index worksheet;
2		Prevalence index worksheet;
	= Tatal Caver	Prevalence index worksheet;
2 3 4 5 Hero Stratum (Plot itize: 3m ²) 1. V Iratum Californica		Prevalence index worksheet;
Hero Stratum (Plot dize _ 3m² .) 1. Veraturn californica 2. Silia Patiplora	= Total Cover <u>35</u> <u>75</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u> <u>76</u>	Prevalence index worksheet;
Hero Stratum (Poi in 3m ²) 1. Veraturn californian 2. Milia latifina 3. Delphinium Polycladon	35 FA	Pravalence index worksheet;
Hero Stratum (Plot non 3m ²) 1. Veraturn Californian 2. Sile's Patifina 3. Delphinium polycladon 4. Palyavnum minimum	35 25 5 5 FAC	Prevalence index worksheet;
Hero Stratum (Poi in 3m ²) 1. Veraturn californian 2. Milia latifina 3. Delphinium Polycladon	<u>35</u> <u>75</u> <u>5</u>	Prevalence index worksheet; Tatal % Cover of Multicly by: OBL species $x = 1 =$ PACU species $2 =$ PACU species $y =$ VDL species $x =$ Column Tatals: $5 =$ V No Prevalence (Index ~ B)A = $2 =$ V Prevalence (Index ~ B)A = V Mydrophytic Vegetation Indicators; Z Daminance Tast is >50%
Hero Stratum (Plot non 3m ²) 1. Veraturn Californian 2. Sile's Patifina 3. Delphinium polycladon 4. Palyavnum minimum	35 25 5 5 FAC	Prevalence index worksheet; Tatal % Cover of Multicly by: OBL species $x = 1 =$ PACW species $2 =$ PACU species $y =$ VDL species $x =$ VDL species $x =$ Column Tatals: 50 V Prevalence (hidex + B/A) = V Mydrophytic Vegetation indicators; Z Cominance Tast is >50% Prevalence (index is sto)
Hero Stratum (Plot non 3m ²) 1. Veraturn Californian 2. Sile's Patifina 3. Delphinium polycladon 4. Palyavnum minimum	35 25 5 5 FAC	Pravalance index worksheet;
Hero Stratum (Poi in 3m ²) 1. Veraturn californian 2. Miles latiflina 3. Delphinium polycladon 4. Palyanum minimum 5. Meilensindlongifolin 8.	35 25 5 5 FAC	Prevalence index worksheet; Tatal % Caver at Multicly by: OBL species $x = 1 = 1$ FACW species $3 \le x 2 = 1$ FACW species $5 \times 2 = 1$ FACW species $5 \times 2 = 1$ FACW species $5 \times 4 = 20$ UPL species $5 \times 5 = 10$ Column Tatals: $5 0 (A) 120 (B)$ Prevalence index = $B/A = 10^{-10}$ 120^{-10} Q Hydrophytic Vegetation indicators: D Commission Tast is 30% Prevalence index is 50^{-1} 70^{-10} Mumbulacical adaptations' forwards unconding
Hero Stratum (Moi in: 3m ²) 1. Veraturn Californian 2. Delphinium Polycladon 3. Delphinium milimum 5. Mentonounderngifolin 8.	35 25 5 5 10 5 5 5 5 5 5 5 5 5 5 5 5 5	Prevalence index worksheet; Tatal % Cover of Multicly by: OBL species x 1 = PAC species $3 \le x 2 = 7 \cdot 0^{4}$ PACU species $3 \le x 2 = 7 \cdot 0^{4}$ PACU species $5 \times x 2 = 7 \cdot 0^{4}$ PACU species $5 \times x 4 = 20^{4}$ UPL species $5 \times x 4 = 20^{4}$ UPL species $5 \times x 4 = 20^{4}$ UPL species $5 \times x 5 = 1^{4}$ QU Prevalence (hidox + B)A = 10^{4} - 120^{4} V Prevalence (hidox + B)A = 10^{4} - 120^{4} V Prevalence index is \$50^{4} Morphological Adaptations (Provide supporting data in Ramarks or on a separate sheet) Problematic Hydrophytic Vegetation' (Explain) 'indicators' of hydro soil and waitand bydrology or use
Hero Stratum (Moi in: 3m ²) 1. Veraturn Californian 2. Delphinium Polycladon 3. Delphinium milimum 5. Mentonounderngifolin 8.	35 25 5 5 10 5 5 5 5 5 5 5 5 5 5 5 5 5	Prevalence index worksheet;
Hero Stratum (Plot size: Mr	35 25 5 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC FAC FAC FAC FAC FAC FAC FAC	Prevalence index worksheet;
Hero Stratum (Plot size:	35 25 5 5 FAC 10 FAC 10 FAC 10 FAC	Pravalance index worksheet;
Hero Stratum (Plot size: Mr	35 25 5 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC FAC FAC FAC FAC FAC FAC FAC	Pravalance index worksheet;
Hero Stratum (Plot size:	35 25 5 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC FAC FAC FAC FAC FAC FAC FAC	Pravalance index worksheet;
Hero Stratum (Plot size:	35 25 5 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 5 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC 7 FAC FAC FAC FAC FAC FAC FAC FAC	Pravalance index worksheet;

9 Sampling Point SOIL the absence of indicators.) Profile Description: (Describe to the depth needed to document the indicator or confirm Redox Features Remarks Matrix Taxture Depth Color (moist) 1. 34 Color (maist) not. (Inches 100 754R 6 0.8" 2Location: PL=Pore Uning, M=Matrix Type: C=Cancentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains, Indicators for Problematic Hydric Solis¹: Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) _ 1 cm Muck (A9) (LRR C) Sandy Redox (S5) 2 cm Muck (A10) (LRR B) Histosal (A1) Stripped Matrix (S6) Reduced Vertic (F18) Histic Epipedon (A2) Loamy Mucky Mineral (F1) Red Parent Material (TF2) Black Histic (A3) Loamy-Gleyed Matrix (F2) Other (Explain in Remarks) Hydragen Sulfide (A4) Depleted Matrix (F3) Stratified Layers (A5) (LRR C) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Dark Surface (F7) Depleted Below Dark Surface (A11) Indicators of hydrophytic vegetation and Radox Depressions (F8) welland hydrology must be present, Thick Dark Surface (A12) Vamal Pools (F9) unless disturbed or problematic. Sandy Mucky Minaral (S1) Sandy Gleyed Matrix (S4) Rastrictive Layer (If present): No > Hydric Sail Present? Yes Type: Depth (Inches): Remarks: HYDROLOGY Watland Hydrology Indicators: Secondary Indicators (2 or more required) Primary indicators (minimum of one mouldad: check all that accivit Water Marks (81) (Riverine) Salt Crust (811) Sediment Deposits (82) (Riverine) Surface Water (A1) Blatic Crust (B12) Orift Deposits (83) (Riverine) High Water Table (A2) Aqualic Invertebrates (813) Drainage Patterns (810) Saturation (A3) Hydrogen Sulfde Odar (C1) Ory-Season Water Table (C2) Water Marks (B1) (Nonriverine) Oxidized Rhizospheres along Uving Roots (C3) Sediment Deposits (B2) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Orift Oeposits (83) (Nonriverine) Recent Iron Reduction in Tilled Soils (C8) Surface Soli Cracks (86) Shallow Aquitard (D3) Thin Muck Surface (C7) Inundation Visible on Aartai Imagery (87) FAC-Neutral Test (D5) Other (Explain in Remarks) Water-Stained Leaves (89) 7.80" Field Observations: Cepth (Inches): Surface Water Present? Yas No Oeplh (inches): No Yas _ Mo Water Table Present? Wetland Hydrology Present? Yes Cepih (Inches): No _ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Saturation Present? Yas Remarks: 12:47 pie of meating channel And West - Version 2.0 US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM - Arid West Region

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Landform (hillslope, terrace, etc.): mead ou	<u> </u>	ocal relief (conca	Range: <u>77N R 16 E S, 17</u> we, convex, none): <u>Converx</u> Slope (%):	
Subregion (LRR): MLRA22A	Lat:	38.4632	4 Long: -120.12522 Datum: NAD 8	3
Sail Map Unit Name: 107 Entic Cryum br	epts deep. 1.	10,70 5/01	pes Man dansidiantian ()Pl	
Are climatic / hydrologic conditions on the site typica	t for this time of year?	Yss No	c (If no, explain in Remarks.)	
Are Vegetation, Soil or Hydrology _	significantly dist		re "Normal Circumstances" present? Yes No	
Are Vegetation, Soil, or Hydrology		matic? (if	needed, explain any answers in Remarks)	
SUMMARY OF FINDINGS - Attach site	map showing sa	mpling point	locations, transects, important features, etc.	
Hydrophylic Vegelation Present? Yes Hydric Soli Present? Yes Welland Hydrology Present? Yes Remarks:	No '	is the Sample within a Ngila	id Arua	
	*		·	
EGETATION - Use scientific names of p	lante			
	Absolute Comi			
Tree Stratum (Plot size:)	% Cover Scec	ies? Status	Pominence Test worksheet: Number of Cominant Species	
1			That Are CBL, FACW, or FAC:(A)	
			Total Number of Dominant	
			Spacies Across All Strata: (B)	
aolina/Strub Stratum (Plot size:)	- Total	Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:	
Solar formonia?	25			
			Prevalence index worksheet:	
£.1			FACW spacies 25 x2= - SOH	
and the second			FAC spacies 45 45 12 13-5	
O Stratum (Flot size:)	= Total C		FACU species x 4 #	
Perideria: porishi	5	LAC L	PL species x 5 = column Tatals: 85 (A) 7.00 (B)	
Viritium calif.	25	FRCW-	······································	
Sidalar	<u>40</u> 5	FACT	Prevalence Index = 8/A = 2.4 + 2.4 + 1.	
Eleocharia acicularis	15	OBL	ydrophytic Vegetation Indicators:	
			_ Cummance Fast is >0% _ Pravalence Index is \$20°	
Same and		12	Merphelogical Adaptations' (Provide supporting data in Remarks or on a separate sheet)	
· · · · · · · · · · · · · · · · · · ·			data in Remarks or on a separate sheet)	
v Vine Stratum (Plot size:)	= Total Con	ver	Problematic Hydrophytic Vegetation! (Explain)	
			dicators of hydric soil and wetland hydrology must	
	1. <u></u>		dicators of hydric soil and wetland hydrology must preasing, unless disturbed or problematics.	2
	= Total Cov	er Hyd	drophytic /	
	Slotic Crust	Pres	sent? Yes No	1
ks:				
		,		
· .				
·	· ·			

----1.1 10 -----Sampling Point Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) SOIL Redox Features Remarks Matrix Taxture Cepth TYDE 1.3 (Inches Color (moist 7.5 YR 3 0-8" 1.53 S. 1 s. Location: PL=Pore Lining, M=Matrix Type: C=Concentration, D=Cepietion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Indicators for Problematic Hydric Soila': Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) 1 cm Muck (A9) (LRR C) Sandy Redox (55) Histosol (A1)
 Histic Epipedon (A2)
 Black Histic (A3) 2 cm Muck (A10) (LRR B) Stripped Matrix (S6) Reduced Vertic (F18) Loamy Mucky Mineral (F1) Red Parent Material (TF2) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Other (Explain in Remarks) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) Redox Dark Surface (F6) 1 cm Muck (AS) (LRR D) Depleted Dark Surface (F7) Indicators of hydrophytic vegetation and Depleted Below Dark Surface (A11) Redax Capressions (FS) wetland hydrology must be present, unless disturbed or problematic. Thick Dark Surface (A12) Vemal Pools (F9) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (If present): No Hydric Sall Present? Yes Type: Dapth (Inches): Damarks' HYDROLOGY Secondary Indicators (2 or more required) Watland Hydrology Indicators: Primary indicators (minimum of one required: check all that apply) Water Marks (B1) (Riverine) Sediment Deposits (82) (Riverine) Salt Crust (B11) ____ Surface Water (A1) Blotic Crust (812) High Water Table (A2) Drift Deposits (83) (Riverine) Aquatic invertebrates (B13) Drainage Patterns (810) Saturation (A3) Hydrogen Suifide Cdor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (52) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Orift Deposits (83) (Nondvarine) Recent Iron Reduction in Tilled Soils (C8) Surface Soil Cracks (B6) Shallow Aquitard (03) Thir Muck Surface (C7) Inundation Visible on Aeriai Imagery (87) FAC-Neutral Test (D5) Other (Explain in Remarks) Water-Stained Leaves (89) Field Observations: Depth (Inches): >73" No Surface Water Present? Yes Depth (Inches): No Water Table Present? Yas Wetland Hydrology Present? Yes No Depth (Inches): (Includes catillary finge) Describe Recorded Cata (stream gauge, monitoring well, serial photos, previous inspections), if available: Yas Na Remarka: Arid West - Version 2.0 US Army Corps of Engineers

44

WEILAND	DETERMINATION	DATA	FORM - Arid	West Region

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-		122A	Lat:	3.8.4629	5 Long: -120. 122	Slope (%):	
Soit May	Unit Name: 107 En H	c Cryun br	epts deep.	1-10.70 51	opesNWI dassification		
Are aim	atic / hydralogic conditions	on the site typical			No (If no, explain in Rema	rks.)	
	stationSoil				Are "Normal Circumstances" prese	nt? Yas No	
		, ar Hydralagy		bismatic?	(If needed, exclain any answers in	Remarks 1	
SUMM	ARY OF FINDINGS -	Attach site	nap showing	sampling poi	nt locations, transects, im	portant features; etc.	
	vilic Vagelation Present?	SYes V	No	i interne			
	all Present?	Yas	No	in the Sam			
Remarka	Hydralogy Present?	Yss	No	Within a We	Wand? Yes 1/	Ko	
		e				· · · · · · · · · · · · · · · · · · ·	
L	, ş				<i>a</i>		
Ľ		· · ·				· · · · · ·	
VEGETA	TION - Use scientifi	c names of p		· ·			
Tree Strat	m (Plot siza:		Absolute (Cominant Indicato	Dominance Test worksheet:		
1	Sec. Sec.		<u></u>	Declear Status	I Humber of Commant apecies	- · · · · · · · · · · · · · · · · · · ·	
2				1.00	That Are OBL, FACW, or FAC:	(A).	2
3					Total Number of Dominant Species Across All Strata:		
4					Percent of Dominant Species		
Saolina/Shr	ub Siratum (Plot size:)	*1	Total Cover	That Are OBL, FACW, or FAC:	(A/B)	
1					Prevalence index worksheet:		
2	• •				Total % Cover of	Multiply by:	
3					OBL species K	1= 60	
5					FACW species X	2 =	4
8		1. S.		tal Cover	FAC species FACU species	3=	
Herb Stratum		2.0		10 00101	UPL species x		
	chins: quing		30	OBL	Column Tatala: 60 (A)	75 (B)	
1 min		and the second	5	FAC			
-	icam anagall	oides	10 -	OBL	Prevalence Index*= 8/A = Hydrophytic Vegetation Indicate		
S_ Pio	li cress 4white a	le los -	70		Dominance Tast is >50%	1736 ····	
a Cere	e r nebrasconsis	7.	15	OBL?	Prevalence Index is \$3.0"	an a' -	
	disciple in	Boechera			Morphological Adaptations' (P data in Remarks or on a se	rovide supporting	
·		stricta			data in Remarks or on a se	parate sheet)	
Voody Vine Str	atum (Plot size:	·	= Tota	Cover	Problematic Hydrophytic Vege	auon' (Explain)	
·		<u> </u>		!!	Indicators of hydric soil and wetlan	d hydrollogy must	
			1. <u>1. 1.</u> 1. 1.		Indicators of hydric soil and wetten or present, unless disturbed or pro-	stematic.	ÿ.
	26	-	= Total	1	ydrophytic /		
	n Harb Stratum _ 25	% Cover of	Blotte Crust		egetation resent? Yes	No	T
marks:	6 (M)						
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5 4 2 Sampling Point cription: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) SOIL -Profile Ce Redox Features Remarks Taxture Matri Cepth Lac 3. A Color (maist) (Inches 40 7.5 YR 41 0-8 1 11, 7/1 10 0-8 4/2 50 14 Location: PL=Pore Lining, M=Matrix ¹Type: C=Concentration. O=Depletion, RM=Raduced Matrix, CS=Covered or Coated Sand Grains Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils¹; 1 cm Muck (AS) (LRR C) Sandy Redox (S5) 2 cm Muck (A10) (LRR 8) Histosal (A1) Stripped Matrix (56) Raducad Vertic (F18) Histic Epipedon (A2) Loamy Mucky Mineral (F1) Red Parent Material (TF2) Black Histic (A3) Loamy Gleyed Matrix (F2) Hydrogen Sulfide (A4) Other (Explain in Remarks) Depleted Matrix (F3) Stratified Layers (A5) (LRR C) Redox Dark Surface (F8) 1 cm Muck (A9) (LRR D) Depleted Dark Surface (F7) Depleted Below Dark Surface (A11) Indicators of hydrophytic vegetation and Radox Depressions (F8) wetland hydrology must be present, Thick Dark Surface (A12) Vemal Pools (F9) unless disturbed or problematic. Sandy Mucky Mineral (S1) Sandy Glayed Matrix (S4) Rastrictive Layer (if present): No Hydric Soil Present? Yes Type: Depth (Inches): Remarks: HYDROLOGY Watland Hydrology Indicators: Secondary Indicators (2 or more required) Primary indicators (minimum of one required; check all that acciv) Water Marks (B1) (Riverine) Sait Crust (811) Sediment Deposits (B2) (Riverine) Surface Water (A1) Blotic Crust (B12) Drift Deposits (B3) (Riverine) ____ High Water Table (AZ) Aquatic Invartebrates (B13) Orainage Patterns (810) Saturation (A3) Hydrogen Suifde Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) (Nonriverin Crayfish Burrows. (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Drift Deposits (83) (Nonriverine) Recent iron Reduction in Tilled Soils (C6) Shallow Aquitard (D3) Surface Soil Cracks (B6) Thin Muck Surface (C7) inundation Visible on Aerial Imagery (87) FAC-Neutral Tast (D5) Other (Explain In Remarks) Water-Stained Leaves (89) 12" Field Observations: Depth (Inches): Surface Water Present? Yes No Depth (inches): No Yas Water Table Present? Wetland Hydrology Present? Yes Ospin (inches): NO. Saturallan Present? Yas (Includes capillary finge) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Artd West - Version 2.0 US Army Corps of Engineers

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investigator(s): <u>Lestie</u> M Landform (hillelope, lerrace, etc.): Ju-A	mentow peop		hip_Bange: <u>77N R</u>	·	- <u></u>
Subregion (LRR): MLRA22	-A Lat	38.462	63 Long: -120.	12714 Datum: NA	and the second second second
Salt Map Unit Name: 107 Entic Cr	yun breats dee	0. 1-10.70 51	lopes NWI dassil	111	
Are climatic / hydrologic conditions on the	site typical for this time of	f year? Yss	No (if no, explain in		
Are Vegetation Soil or his	drology significa		Are "Normal Circumstances"	present? Yes No	-
Are Vegetation, Soil, or Hy			(If needed, explain any answe	urs in Remarks.)	
SUMMARY OF FINDINGS - Atta	ch site map show!	ng sampling po	int locations, transects	, important features;	, etc.
	Yas / No	- In the Sam	pled Area	1	
	Yes No Yes No	within a W	· · · · · · · · · · · · · · · · · · ·	Na	
Remarks:					
<i>. ģ</i>			x	• •	1
·	ж				· · ·
VEGETATION -Use scientific nam	nes of plants.		ξ. ·		. L
Tree Stratum (Plot skza:y	Absolute % Cover	Cominant Indicato Species? Status		Contract of the second s	
1	· · · · · · · · · · · · · · · · · · ·		Number of Cominant Spe That Are CBL, FACW, or	Ges FAC: (A)	s I .
1			Tatal Number of Dominan		
4			- Species Across All Strata	(8)	
		* Total Cover	Percent of Cominant Spec	les .	· ·
Sapilno/Shrub Stratum (Plot size:			That Are OBL, FACW, or I		B)
2.			Prevalence Index workst	test:	-1
L			OBL species	Multiply by:	
k			FACW species	x1=	
			FAC species	ANT STATES	
ero Stratumi (Plat size:)		Total Cover		x4=	
Tribolium longinges	15	FACW	UPL species	_ x5=	
Eleochous .		···· (SBLZ	Column Lotais:	_ (A) (B)	
icarer, hebrascensis ?	70	<u>GBL2</u>	Prevalence Index + 8		ſ
UPPLUS CREAT			Hydrophytic Vegetation in Cominance Test is >509	dicators;	٦.
			Prevalence index is \$3.0		
and the second			Morphological Adaptatio	na' (Provide supporting	
			data in Remarks or or Problematic Hydrophytic		
dy Vine Stratum (Plot size:	, <u> </u>	otal Cover	- Fromentauc Hydrophyde	vegetation, (Explain)	
	<u> </u>		Indicators of hydric soil and y	welland hydrology must	1
	<u></u>	<u> </u>	ae present, unless disturbed o	u problematic.	· ·
re Ground in Herb Stratum		1.	Hydrophytic Agetation	/	
a aloring in Light Oragini	Cover of Blatic Crust_		resent? Yes		1
					1 Ì
łika:					
			· .		

2 21.22 2 pic 13:33 Sampling Point Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) SOIL 1 Redox Features Remarks Matrix Taxture Lac Cepth Tupe alor (mois . 6. 6 (Inches Color (maist) 10YR 2/1 100 0-2 5YR 3/2 A 2-6 ³Location: PL=Pore Uning, M=Matrix Indicators for Problematic Hydric Soils¹; Type: C+Concentration, O=Ceptetion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) 1 cm Muck (A9) (LRR C) Sandy Redox (55) 2 cm Muck (A10) (LRR 8) Histosol (A1) Stripped Matrix (S6) _____ Histic Epipedon (A2) Reduced Vertic (F18) Loamy Mucky Mineral (F1) Red Parent Material (TF2) Black Histic (A3) 2 Loamy Gleyed Matrix (F2) Hydragen Sulfide (A4) Other (Explain in Remarks) Depleted Matrix (F3) Stratified Layers (AS) (LRR C) Redox Dark Surface (F8) 1 cm Muck (A9) (LRR D) Depleted Oark Surface (F7) indicators of hydrophytic vegetation and Depleted Below Dark Surface (A11) Radox Capressions (F8) wetland hydrology must be present, Thick Dark Surface (A12) Vernal Pools (F9) Sandy Mucky Minaral (S1) unless disturbed or proble Sandy Glayed Matrix (S4) Rastrictive Layer (it present): No Hydric Sail Present? Yes Type: Depth (Inches): Permarks: HYDROLOGY Secondary Indicators (2 or more required) Wotland Hydrology Indicators: Primary indicators (minimum of one required; check all that apply) Water Marks (B1) (Rivertne) Salt Crust (B11) Sediment Deposits (82) (Riverine) Surface Water (A1) Biolic Crust (B12) High Water Table (A2) Drift Deposits (83) (Riverine) Aqualic Invertebrates (B13) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (81) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Onft Deposits (83) (Nonriverine) Recent Iron Reduction in Tilted Soils (C6) Surface Soll Cracks (B6) Shallow Aquitard (D3) Thin Muck Surface (C7) Inundation Visible on Aartal Imagery (87) FAC-Neutral Test (DS) Other (Explain In Remarks) Water-Stained Leaves (89) Field Observations: Depth (Inches): No Surface Water Present? Yes Depth (Inches): V No Yes _ Mc Water Table Present? Wetland Hydrology Present? Yes Depth (Inches): No. Yas Seturation Present? (Includes capillary finge) Cescribe Recorded Data (stream gauge, monitoring well, aerial proces, previous inspections), if available: Remarka: And West - Version 2.0 US Army Corps of Engineers

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WETLAND DETERMINATION DATA FORM - Add West Region 1.12 .

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Subregian (LRR): MLRA22 Sail Map Unit Name: 107 Entic Cry	Lat Lat		21 Long: -120.12457 Datum: NAL	183
Are climatic / hydrologic conditions on the si				· · ·
Are Vegetation	ologysignifica		lo (If oo, explain in Remarks.)	
	A	-	Ara "Normal Circumstances" present? 'Yas No If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attac			it locations, transects, important features, e	
and the state of t		ng sampning pom	it locations, transects, important features, e	tc.
Hydrophylic Vegetation Present?	15 <u> </u>	- le the Samp	Ad Area	1
	s No	within a Wat	Tang? Yes No	
Remarks:				-
		5 Sc.	A .	1
· · · · · · · · · · · · · · · · · · ·	52 S			
EGETATION - Use scientific name	s of plants.			
Trae Stratum (Plot size:	Absolute	Cominant Indicator	Cominance Test worksheet:	7
1	- A Cover	Scecies? Status	Number of Dominant Species	1
l	:		That Are OBL, FACW, or FAC: (A)	1
			Total Number of Dominant Species Across All Strata: (5)	1 .
·			Percent of Dominant Species	ſ .
aning/Shrub Stratum (Plot size:		= Total Cover	That Are OBL, FACW, or FAC: (A/B)	1
Saly	15		Prevalence Index worksheet:	1
			Tatal % Cover of:Multiply by:	<u>ا</u>
			OBL species x1=S	
A.A.			FAC species 10 4x 3 = 3'0'	
o Stratumi (Plot size:)			FACU species x4= 20	
Veraturne calif.	25		Column Totals: 60 (A) 135 (B)	
So Penderidia parishi Bromus inermis		FAC		
Eleochino quinquet	lora 5	FACU	Pravalence Index = 8/A = 2 - 3.	
Sidalcea	5	<u> </u>	lydrophytic Vegatation Indicators:	
Milia atiflora	10		Prevalence Index is st.0'	
Alorner unus	15	FACW	_ Morphelogical Adaptations' (Provide supporting	
in princip			data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)	
v Vine Stratum (Plot size:)		otal Cover		
		'Ir	dicators of hydric soil and weiland hydrology must	
		Sec. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	present, unless disturbed or problematic.	
a Ground in Herb Stratum_10 %		Ve	drophytic getation	
ks:	Cover of Blotic Crust_	Pn	sant? Yas No	1
and pie 13:49 Ney: d				
			pic 10 btin 14:01]	

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-----2012 Sampling Point -----SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) -----Redox Features Remark Matro T.axlu Cepth Type Loc Color (moist) nor (maist) (Inches) 50 75 YR 61 0-36" 7VR 5/2 2.5 36-46 7.5.YC 5 Location: PL=Pore Uning, M=Matrix Type: C+Concentration, D=Ceptetion, RM=Reduced Matrix, CS=Covered or Coated Sand Graine Indicators for Problematic Hydric Solis¹: Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) 1 cm Muck (A9) (LRR C) Sandy Redox (S5) 2 cm Muck (A10) (LRR B) Histosal (A1) Stripped Matrix (S6) Reduced Vertic (F18) Histic Epipedon (A2) Loamy Mucky Minaral (F1) Red Parent Material (TF2) Black Histic (A3) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) . Hydrogen Sulfide (A4) Depleted Matrix (F3) Stratified Layers (A5) (LRR C) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Dark Surface (F7) Depleted Below Dark Surface (A11) indicators of hydrophytic vegetation and Redox Depressions (F8) wetland hydrology must be present, Thick Dark Surface (A12) Vemal Pools (F9) unless disturbed or problematic. Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Rastrictive Layer (if present): No Hydric Soil Present? Yes TYD8: Dapth (Inches): Remarks: HYDROLOGY Secondary indicators (2 or more required) Watland Hydrology Indicators: Primary indicators (minimum of one required; theck all that sociy) Water Marks (B1) (Riverine) Salt Grust (B11) Sediment Deposits (B2) (Riverine) Surface Water (A1) Blotic Crust (B12) Drift Deposits (83) (Riverine) High Water Table (A2) Aquatic Invertebrates (B13) Orainage Patterns (B10) Saturation (A3) Hydrogen Sulfde Cdor (C1) Water Marks (81) (Nonriverine) Dry-Season Water Table (C2) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (82) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Orift Deposits (83) (Nonriverine) Recent Iron Reduction in Tilled Soils (C8) Suifaca Soli Cracks (86) Shallow Aquitard (D3) Thin Muck Surface (C7) inundation Visible on Aarlat Imagary (87) FAC-Neutral Tast (05) Other (Explain in Ramarks) Water-Stained Leaves (89) Depth (Inches): 56 II Field Observations: Surface Water Present? Yes No Depth (inches): No Yas Water Table Present? Wetland Hydrology Present? Yas Depth (Inches): Na Saturation Present? Yas ugi lata (stream gauge, monitoring well, aerial protos, previous inspactions), if available: (Includes capillary fringe) Describe Recorded Data Remarks: And West - Version 2.0 US Army Corps of Engineers

	WETLAND DETERMINATION	EDATA FORM – Add West Region
	y Meadow city	"County: Cala vetas Co. sampling Date: July 7, 2016 The
	aus National Fores	State: CA Sampling Point: 14 (7) (4:2
investigator(s): Leslie	mink sec	Von, Township, Range: T7N R 16 E S. 17
Landform (hillelope, terrace, etc.):	606	al rellef (concave, convex, none); Concerne Sione (%);
Subregian (LRR):		3.46/13 LONG -120, 12315 0 1/40 57
Sun wap one Name: 10 + EA Fic	Cryum brepts, deep, 1-1 The site typical for this time of year?	10.20 slopes NWI dassification:)PL
Are Vegetation Soil		
Are Vegetation Soil		NO
		llic? (If needed, explain any answers in Remarka.)
	mater are map snowing sam	pling point locations, transects, important features; etc.
Hydrophylic Vegetation Present? Hydric Soil Present?	Yes No	in the Sampled Area
Wetland Hydrology Present?	Yes No V	Within a Walland? Yas No
Remarks:		
		· · · · · · · · · · · · · · · · · · ·
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VEGETATION - Use scientific	names of plants.	
4	-7444	Total Number of Dominant Speckea Across Alf Strata: (B)
4	= Total C = Total C = Total Co = Total Co	Special Across All Strata: (B) Parcent of Cominant Species (A/B) Prevalence Index worksheet: (A/B) Pravalence Index worksheet: (A/B) PAC species x1 = FACW species x2 = FAC species (A/B) Ver (A/B) species Ver (A/B) species Column Totals: (A/C) (A/B) (A/B)
Szalina/Strub Stratum (Plat size:1		Species Across All Strats: (B) Percent of Cominant Species (B) Prevalence index worksheet: (A/B) Pravalence index worksheet: (A/B) OBL species x1 = FAC species x2 = FAC species 15 X4 = (A/B)
Szalina/Strub Stratum (Plat size:		Species Across All Strats: (B) Percent of Cominant Species (A/B) Pravalence index worksheet: (A/B) PACU species x1 = PACU species x2 = PACU species 15 X4 = (A) Pravalence index = B/A = (B) Pravalence index = B/A = (B) Pravalence index = I/A = (B)
Saulina/Shrub Stratum (Plat size:12		Species Across All Strats: (B) Parcent of Cominant Species (A/B) Provalence Index worksheet: (B) Provalence Index worksheet:
Sapina/Strub Stratum (Plat size:		Special Across All Strata: (B) Parcent of Cominant Species (A/B) Prevalence Index worksheet: (A/B) Prevalence Index = 15 (A) Prevalence Index = 8/A = (A/B) (B) Prevalence Index = 8/A (B) Prevalence Index is \$20% (B) Prevalence Index is \$20% (B)
Sapina/Strub Stratum (Plat size:		Special Across All Strata: (B) Percent of Cominant Species (A/B) Prevalence Index worksheet: (A/B) Pravalence Index worksheet: (A/B) PAC species x 1 = PAC species x 2 = PAC species (X 4 =
Sapilna/Sirub Stratum (Plat size:		Species Across All Strata: (B) Parcent of Cominant Species (A/B) Prevalence index worksheet: (A/B) Provalence index = X =
Sapina/Strub Stratum (Plat size:		Special Across All Strata: (B) Parcent of Cominant Species (A/B) Prevalence index worksheet: (A/B) Provalence index worksheet: (A/B) PAC species x 1 = PAC species x 2 = PACU species 12 - PACU species 15 - PACU species 15 - PACU species 13 - Provalence index = B/A = 3 - Provalence index = B/A = 3 - Provalence index is \$30% Prevalence index is \$30% Provalence index is \$30% Provalence index is \$30% Problematic Hydrophytic Vegetation* (Explain) 1/Indicators* of hydrids soil and waitand hydrologic and anti-
Sapilna/Sirub Stratum (Plat size:	15 15 15 15 20 5 5 15 20 5 5 15 20 5 5 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15	Special Across All Strata: (B) Parcent of Cominant Species (A/B) Inat Are OBL, FACW, or FAC: (A/B) Prevalence index worksheet: (A/B) Provalence index worksheet: (A/B) Provalence index worksheet: (A/B) Provalence index worksheet: (A/B) Provalence index worksheet: (A/B) PACU species x1 = FAC species x2 = PACU species x = PACU species x = Column Totals: (A) Prevalence Index = B/A = (B) Provalence Index is x5 = (B) Provalence Index is x50% (B) Prevalence Index is x50% (B) Provalence Index is x50% (Provide supporting data in Remarks or or a separate sheet)' Problematic Hydrophytic Vegetation* (Explain) (Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapilna/Sirub Stratum (Plat size:	15 15 15 15 15 15 15 15 15 15 15 16 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Special Across All Strata: (B) Parcent of Cominant Species (A/B) Prevalence index worksheet: (A/B) Pravalence index worksheet: (A/B) Provalence index worksheet: (A/B) Pravalence index worksheet: (A/B) Pravalence index worksheet: (A/B) Pravalence index worksheet: (A/B) Pravalence index worksheet: (A/B) PAC species x 1 = PAC species x 2 = PAC species 15 Yer PACU species PACU species 15 Yer PACU species Provalence index = B/A (B) Provalence index = B/A (B) Provalence index is \$30'/ (B) Pravalence index is \$30'/ (B) Provalence index is \$30'/ (Provide supporting data in Remarks or or a separate sheet) Problematic Hydrophytic Vegetation* (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Hydrophytic
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Sapilna/Sirub Stratum (Plat size:	15 15 15 15 15 15 15 15 15 15 15 16 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Special Across All Strata: (B) Parcent of Cominant Species (A/B) Prevalence index worksheet: (A/B) Prevalence index is \$2 =
Sapilna/Sirub Stratum (Plat size:	15 15 15 15 15 15 15 15 15 15 15 16 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Special Across All Strata: (B) Parcent of Cominant Species (A/B) Prevalence index worksheet: (A/B) Prevalence index is \$2 =

14 Sampling Point Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators,) SOIL Redox Features Remarks Texture Matrix Ceath ----di la (Inches Color (moist) rilt 7.5. YR 4/ 0.6 - 1 - 17 5 Location: PL=Pore Lining, M=Matrix ¹Type: C=Concentration, D=Cepietion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) In Indicators for Problematic Hydric Soils': 1 cm Muck (A9) (LRR C) Sandy Redox (S5) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) 2 cm Muck (A10) (LRR B) Stripped Matrix (S6) Reduced Vertic (F18) Loamy Mucky Mineral (F1) -Red Parent Material (TF2) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) . Other (Explain in Remarks) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Oark Surface (F7) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Depleted Below Dark Surface (A11) Radox Capressions (F8) Thick Dark Surface (A12) Vernal Pools (F9) Sandy Mucky Mineral (S1) Sandy Glayed Malrix (54) Rastrictive Layer (If present): No Hydric Soil Present? Yes Type: Depth (inches): Damaras. HYDROLOGY Secondary Indicators (2 or more required) Wetland Hydrology Indicators: Primary indicators (minimum of one required; check all that apply) Water Marks (B1) (Riverine) Sediment Deposits (82) (Riverine) Salt Crust (811) Surface Water (A1) Blotic Crust (812) ____ High Water Table (A2) Drift Deposits (B3) (Riverine) Aqualic Invertebrates (B13) Drainage Patterna (810) Saturation (A3) Hydrogen Suifide Cdor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Oxidized Rhizospheres atong Living Roots (C3) _____ Sediment Deposits (B2) (Nonriverine) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Orift Deposits (83) (Nonriverine) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Shallow Aquitart (D3) Thin Muck Surface (C7) Inundation Visible on Aarial Imagery (87) FAC-Neutral Test (D5) Other (Explain in Remarks) Water-Stained Leaves (89) 96" fer 50 Field Observations: Deoth (Inches): Surface Water Present? Yes Depth (Inches): No Water Table Present? Yas Wetland Hydrology Present? Yes Mo Depth (Inches): arurauon reasant. (Includes cacillary finge) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pravious inspections), if available: No Remarks: Artd West - Version 2.0 US Army Corps of Engineers



USDA United States Department of



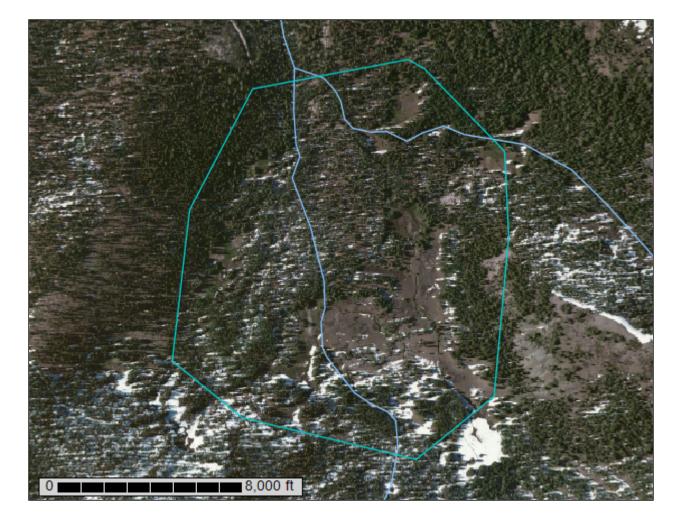
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Attachment

7 **Custom Soil Resource Report for Stanislaus National** Forest, California, **Parts**

Mattley Meadow Preliminary Wetland Delineation



Stanislaus National Forest, California, Parts

107—Entic Cryumbrepts, deep, 1 to 10 percent slopes

Map Unit Setting

National map unit symbol: hlvg Elevation: 6,000 to 9,000 feet Mean annual precipitation: 50 to 65 inches Mean annual air temperature: 36 to 46 degrees F Frost-free period: 30 to 60 days Farmland classification: Not prime farmland

Map Unit Composition

Entic cryumbrepts, deep, and similar soils: 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Entic Cryumbrepts, Deep

Setting

Landform: Alluvial flats Landform position (two-dimensional): Footslope, toeslope Landform position (three-dimensional): Flat Down-slope shape: Concave Across-slope shape: Linear Parent material: Alluvium derived from igneous rock

Typical profile

H1 - 0 to 8 inches: loamy sand H2 - 8 to 60 inches: loamy sand

Properties and qualities

Slope: 1 to 10 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4s Hydrologic Soil Group: A

Minor Components

Unnamed, light colored surface

Percent of map unit: 10 percent

Unnamed

Percent of map unit: 5 percent

114—Gerle family, bouldery-Rock outcrop complex, 5 to 35 pe rcent slopes

Map Unit Setting

National map unit symbol: hlvp Elevation: 6,000 to 8,000 feet Mean annual precipitation: 45 to 65 inches Mean annual air temperature: 39 to 46 degrees F Frost-free period: 75 to 100 days Farmland classification: Not prime farmland

Map Unit Composition

Gerle family, bouldery, and similar soils: 50 percent Rock outcrop: 25 percent Minor components: 25 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gerle Family, Bouldery

Setting

Landform: Moraines Landform position (two-dimensional): Footslope, backslope Landform position (three-dimensional): Lower third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Till derived from granite

Typical profile

H1 - 0 to 10 inches: bouldery sandy loam
H2 - 10 to 50 inches: stony sandy loam
H3 - 50 to 60 inches: weathered bedrock

Properties and qualities

Slope: 5 to 35 percent
Percent of area covered with surface fragments: 0.1 percent
Depth to restrictive feature: 50 to 54 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: A

Description of Rock Outcrop

Setting

Landform: Mountains, moraines

Landform position (two-dimensional): Backslope, footslope Landform position (three-dimensional): Lower third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Granite

Typical profile

H1 - 0 to 10 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 35 percent
Depth to restrictive feature: 0 to 0 inches to lithic bedrock
Natural drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8

Minor Components

Gerle family, moderately deep Percent of map unit: 10 percent

Gerle family, deep Percent of map unit: 10 percent

Wintoner family

Percent of map unit: 5 percent

115—Gerle family, bouldery-Rock outcrop complex, 35 to 50 p ercent slopes

Map Unit Setting

National map unit symbol: hlvq Elevation: 6,000 to 8,000 feet Mean annual precipitation: 45 to 65 inches Mean annual air temperature: 39 to 46 degrees F Frost-free period: 75 to 100 days Farmland classification: Not prime farmland

Map Unit Composition

Gerle family, bouldery, and similar soils: 50 percent *Rock outcrop:* 30 percent *Minor components:* 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gerle Family, Bouldery

Setting

Landform: Moraines Landform position (two-dimensional): Footslope, backslope Landform position (three-dimensional): Lower third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Till derived from granite

Typical profile

H1 - 0 to 10 inches: bouldery sandy loam *H2 - 10 to 50 inches:* stony sandy loam *H3 - 50 to 60 inches:* weathered bedrock

Properties and qualities

Slope: 35 to 50 percent
Percent of area covered with surface fragments: 0.1 percent
Depth to restrictive feature: 50 to 54 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: A

Description of Rock Outcrop

Setting

Landform: Mountains, moraines Landform position (two-dimensional): Backslope, footslope Landform position (three-dimensional): Lower third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Granite

Typical profile

H1 - 0 to 10 inches: unweathered bedrock

Properties and qualities

Slope: 35 to 50 percent Depth to restrictive feature: 0 to 0 inches to lithic bedrock Natural drainage class: Excessively drained Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8

Minor Components

Lithic xerumbrepts Percent of map unit: 5 percent

Gerle family, deep Percent of map unit: 5 percent

Gerle family, moderately deep Percent of map unit: 5 percent

Wintoner family Percent of map unit: 5 percent

166—Lithic Cryumbrepts-Rock outcrop-Windy family, moderatel y deep complex, 5 to 35 percent slopes

Map Unit Setting

National map unit symbol: hlxb Elevation: 4,190 to 8,000 feet Mean annual precipitation: 50 to 65 inches Mean annual air temperature: 36 to 46 degrees F Frost-free period: 75 to 100 days Farmland classification: Not prime farmland

Map Unit Composition

Lithic cryumbrepts and similar soils: 40 percent *Rock outcrop:* 30 percent *Windy family, moderately deep, and similar soils:* 20 percent *Minor components:* 10 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Lithic Cryumbrepts

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 5 inches: loam *H2 - 5 to 15 inches:* unweathered bedrock

Properties and qualities

Slope: 5 to 35 percent Depth to restrictive feature: 5 to 9 inches to lithic bedrock Natural drainage class: Excessively drained Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 5.95 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None

Available water storage in profile: Very low (about 0.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: D

Description of Rock Outcrop

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Tuff breccia

Typical profile

H1 - 0 to 10 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 35 percent
Depth to restrictive feature: 0 to 0 inches to lithic bedrock
Natural drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8

Description of Windy Family, Moderately Deep

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 5 inches: gravelly coarse sandy loam

H2 - 5 to 30 inches: very gravelly sandy loam

H3 - 30 to 60 inches: weathered bedrock

Properties and qualities

Slope: 5 to 35 percent Depth to restrictive feature: 30 to 34 inches to paralithic bedrock Natural drainage class: Well drained Runoff class: Medium

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: B

Minor Components

Unnamed Percent of map unit: 5 percent

Lithic xerumbrepts

Percent of map unit: 5 percent

167—Lithic Cryumbrepts-Rock outcrop-Windy family, moderatel y deep complex, 35 to 70 percent slopes

Map Unit Setting

National map unit symbol: hlxc Elevation: 4,190 to 8,000 feet Mean annual precipitation: 50 to 65 inches Mean annual air temperature: 36 to 46 degrees F Frost-free period: 75 to 100 days Farmland classification: Not prime farmland

Map Unit Composition

Lithic cryumbrepts and similar soils: 40 percent Rock outcrop: 25 percent Windy family, moderately deep, and similar soils: 20 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lithic Cryumbrepts

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 5 inches: loam H2 - 5 to 15 inches: unweathered bedrock

Properties and qualities

Slope: 35 to 70 percent
Depth to restrictive feature: 5 to 9 inches to lithic bedrock
Natural drainage class: Excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 0.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: D

Description of Rock Outcrop

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Tuff breccia

Typical profile

H1 - 0 to 10 inches: unweathered bedrock

Properties and qualities

Slope: 35 to 70 percent
Depth to restrictive feature: 0 to 0 inches to lithic bedrock
Natural drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8

Description of Windy Family, Moderately Deep

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 5 inches: gravelly coarse sandy loam

H2 - 5 to 30 inches: very gravelly sandy loam

H3 - 30 to 60 inches: weathered bedrock

Properties and qualities

Slope: 35 to 70 percent
Depth to restrictive feature: 30 to 34 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B

Minor Components

Windy family, deep Percent of map unit: 10 percent

Lithic xerumbrepts Percent of map unit: 5 percent

193—Windy family, deep-Moderately deep complex, 5 to 35 per cent slopes

Map Unit Setting

National map unit symbol: hly5 Elevation: 4,190 to 8,000 feet Mean annual precipitation: 50 to 65 inches Mean annual air temperature: 39 to 46 degrees F Frost-free period: 75 to 100 days Farmland classification: Not prime farmland

Map Unit Composition

Windy family, deep, and similar soils: 50 percent Windy family, moderately deep, and similar soils: 25 percent Minor components: 25 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windy Family, Deep

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 7 inches: gravelly sandy loam H2 - 7 to 52 inches: very gravelly sandy loam H3 - 52 to 60 inches: weathered bedrock

Properties and qualities

Slope: 5 to 35 percent
Depth to restrictive feature: 52 to 56 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: A

Description of Windy Family, Moderately Deep

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 5 inches: gravelly coarse sandy loam
H2 - 5 to 30 inches: very gravelly sandy loam
H3 - 30 to 60 inches: weathered bedrock

Properties and qualities

Slope: 5 to 35 percent
Depth to restrictive feature: 30 to 34 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: B

Minor Components

Rock outcrop Percent of map unit: 10 percent

Lithic xerumbrepts Percent of map unit: 10 percent

Holland family, deep, dark surface Percent of map unit: 5 percent

194—Windy family, deep-Moderately deep complex, 35 to 50 pe rcent slopes

Map Unit Setting

National map unit symbol: hly6 Elevation: 4,190 to 8,000 feet Mean annual precipitation: 50 to 65 inches Mean annual air temperature: 39 to 46 degrees F Frost-free period: 75 to 100 days Farmland classification: Not prime farmland

Map Unit Composition

Windy family, deep, and similar soils: 45 percent Windy family, moderately deep, and similar soils: 25 percent Minor components: 30 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windy Family, Deep

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 7 inches: gravelly sandy loam

- H2 7 to 52 inches: very gravelly sandy loam
- H3 52 to 60 inches: weathered bedrock

Properties and qualities

Slope: 35 to 50 percent *Depth to restrictive feature:* 52 to 56 inches to paralithic bedrock *Natural drainage class:* Well drained *Runoff class:* Medium

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: A

Description of Windy Family, Moderately Deep

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 5 inches: gravelly coarse sandy loam H2 - 5 to 30 inches: very gravelly sandy loam H3 - 30 to 60 inches: weathered bedrock

Properties and qualities

Slope: 35 to 50 percent
Depth to restrictive feature: 30 to 34 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: B

Minor Components

Unnamed, clay loam subsoil Percent of map unit: 10 percent

Holland family, deep, dark surface Percent of map unit: 10 percent

Unnamed, light colored surface Percent of map unit: 10 percent

196—Windy family, moderately deep-Deep complex, 35 to 60 pe rcent slopes

Map Unit Setting

National map unit symbol: hly8 Elevation: 4,190 to 8,000 feet Mean annual precipitation: 50 to 65 inches Mean annual air temperature: 39 to 46 degrees F Frost-free period: 75 to 100 days Farmland classification: Not prime farmland

Map Unit Composition

Windy family, moderately deep, and similar soils: 50 percent Windy family, deep, and similar soils: 30 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windy Family, Moderately Deep

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 5 inches: gravelly coarse sandy loam

H2 - 5 to 30 inches: very gravelly sandy loam

H3 - 30 to 60 inches: weathered bedrock

Properties and qualities

Slope: 35 to 50 percent
Depth to restrictive feature: 30 to 34 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: B

Description of Windy Family, Deep

Setting

Landform: Mountains Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Upper third of mountainflank Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from tuff breccia

Typical profile

H1 - 0 to 7 inches: gravelly sandy loam

- H2 7 to 52 inches: very gravelly sandy loam
- H3 52 to 60 inches: weathered bedrock

Properties and qualities

Slope: 35 to 50 percent
Depth to restrictive feature: 52 to 56 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: A

Minor Components

Lithic xerumbrepts

Percent of map unit: 10 percent

Rock outcrop

Percent of map unit: 10 percent

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Mattley Meadow Restoration Project Impacts to Aquatic Resources Calaveras County, CA 51.89 acres Attachment 8 Calaveras Dome and Tamarack USGS Quads

Please refer to delineation maps for more detail of aquatic resources. Direction of streamflow is to the north and northwest. Without intervention, xeric-trending meadow is likely to continue conversion to coniferous forest. Intervention entails filling gullied channels and returning system to sheetflow drainage.

Base imagery source: USDA-FSA Aerial Photography Field Office. 2012. National Agricultural Imagery Program. Published August 28, 2012. Map prepared by Leslie Mink, February 20, 2020

								1997 B	Marine Constant
					Existing	Proposed			
			Existing	Proposed	Length	Length	Impact	Impact	Impact Type
Map Area	Label	Туре	Area (ac)	Area (ac)	(ft)	(ft)	(ac)	(ft)	(cubic yards)
									fill: 358 soil,
Mattley Creek	MC1	R4SB3 ¹	0.22	0.20	700	633	0.11	345	5 rock (6")
Mattley Creek	MWF1	PEM1 ²	0.02	1.56			0	0	0
Mattley Creek	MP1	L10W ³	0.00	0.01					
Mattley Meadow	MC2	R4SB3	0.08	0.06	1652	1293	0.53	1504	fill: 4,418 soil
Mattley Meadow	MC3	R4SB5⁴	0.02	0	839	0	0.15	839	fill: 11,215 soil
Mattley Meadow	MWF2	PEM1	0.77	29.3			0	0	0
Mattley Meadow	MP2-9	L10W	0.00	1.6					
Subtotal Riverine			0.32	0.26	3191	1926	0.79	2688	fill: 15,996
Subtotal Palustrine	e		0.78	30.86			0		
Subtotal Open wat	ter		0.00	1.61			0		
Subtotal All Wetla	nd Types		<u>1.10</u>	<u>32.73</u>	<u>3191</u>	<u>1926</u>	<u>0.79</u>	<u>2688</u>	<u>fill: 15,996</u>
Mattley Creek	MUF1	Upland	8.72	7.19			0.2		cut: 358 soil
Mattley Meadow	MUF2	Upland	42.07	11.97			3.2		cut: 15,633 soil
Subtotal All Uplan	<u>d</u>		<u>50.79</u>	<u>19.16</u>			<u>3.4</u>		<u>cut: 15,991</u>
Total Project Area			51.89	51.89	3191	1926	4.19	2688	
¹ Riverine, Intermit	tent, Str	eambed, C	obble-Grav	vel					
² Persistent, Emerg	ent, Palu	ustrine							
³ Lacustrine, Open	Water, U	nknown Bo	ottom						

⁴Riverine, Intermittent, Streambed, Mud

0 120240 480 720

960

MC₃



MP

Legend

Cross-section

- Existing Swale (Proposed Low Flow)
- ====== Existing Trail

1 inch = 240 feet

----- Proposed Trail Reroute

Existing Channel
Proposed Palustrine Expansion

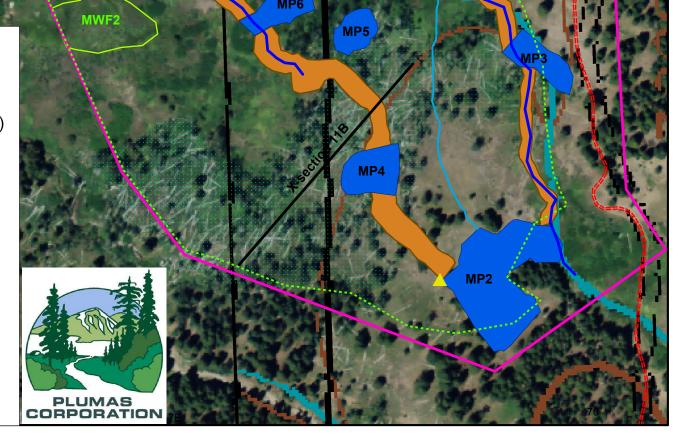
Proposed Borrow Ponds

Project Area Boundary

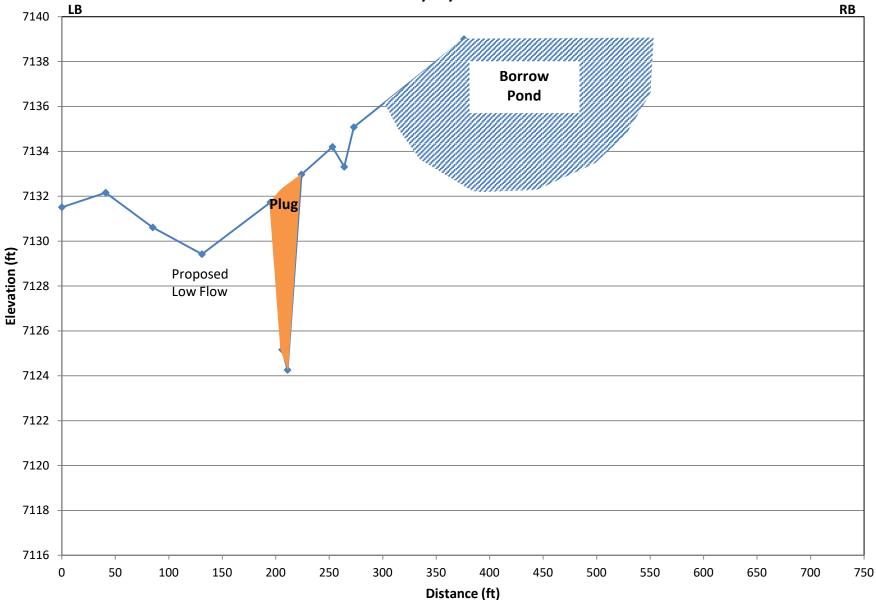
Plugs

Existing Palustrine

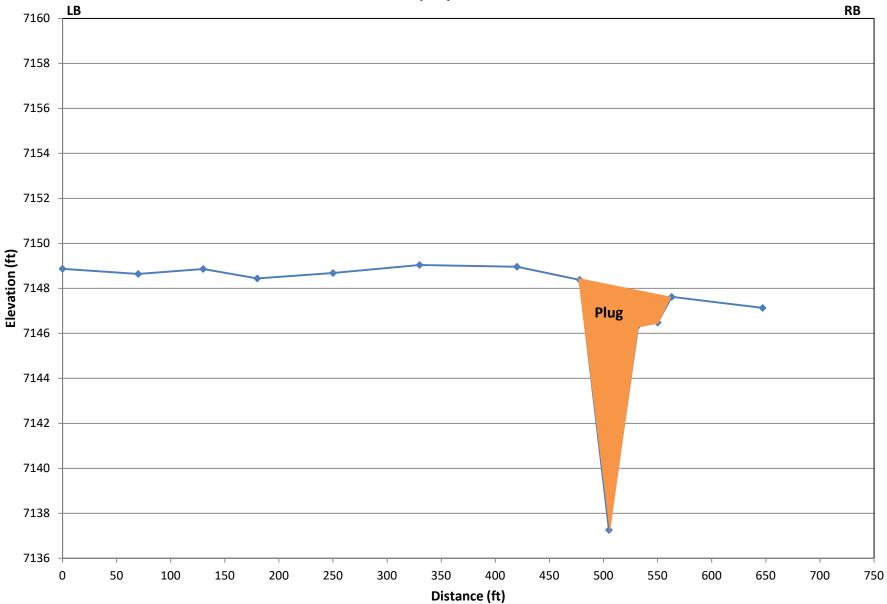
Control Point



Mattley Meadow East- X-section #7 (proposed) 7/11/2014



Mattley Meadow West- X-section #11B (proposed) 7/21/2014



Mattley Creek- X-section #1 (proposed) 7/24/2014

