Appendix 2A Consequence of No Action

JACOBS



Final Technical Memorandum

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Subject	Consequence of No Action
Project Name	Renewable Placer: Waste Action Plan
Attention	Western Placer Waste Management Authority
From	Janet Goodrich/CH2M Lyndsey Lopez/CH2M
Date	February 6, 2019
Copies to	Project File

This technical memorandum summarizes the materials that were prepared to document the potential consequence of "No Action." The majority of this information was developed in April 2018.

As Western Placer Waste Management Authority (WPWMA) staff continued to engage key stakeholders, it became increasingly clear that ongoing dialog of the WPWMA's master planning effort needed to include a discussion of the consequences of delaying or foregoing modifications to the WPWMA's facilities. Staff and the CH2M Team identified several possible operating scenarios assuming the master planning and subsequent California Environmental Quality Act (CEQA) efforts were not successful and that future operations were limited to the currently permitted facilities. The table in Attachment 1 summarizes the various scenarios.

These scenarios acknowledge that the WPWMA will not be able to fully meet the needs of the Member Agencies in the long term. Providing ongoing services constrained to only the existing site would necessitate either modifying and expanding materials recovery facility (MRF) and composting operations at the expense of landfill capacity or phasing out MRF and composting operations to maximize landfill capacity. In the former scenario, an alternative, existing, non-WPWMA disposal location would need to be identified that could accept the WPWMA's waste in the future. In the latter scenario, the Member Agencies would likely need to arrange for their own waste diversion and processing operations to meet regulatory and legal mandates.

After an initial discussion with the Member Agency Advisory Committee (MAAC), the general consensus was that, as long as future disposal capacity could be identified at a third-party landfill, it was preferred the WPWMA continue to provide waste processing and diversion services by maintaining a viable MRF and composting operation. WPWMA Staff and CH2M conducted preliminary research on possible alternative disposal locations for the purposes of estimating the budgetary-level cost impact of offsite disposal. The results of this preliminary research are shown in Attachment 2. Staff and CH2M looked at 10 alternative disposal sites with publicly available information. Out of these 10 sites, several existing facilities have capacity currently (can accept additional tonnage daily in permit and have capacity to accept a large amount of waste). WPWMA would need new infrastructure to enable use of these sites (either long-haul or rail-haul to transport waste). There is no guarantee that the capacity will be available when WPWMA needs it or that the owners of these facilities would be willing or able to accept the WPWMA's materials. Based on this preliminary evaluation, it appears to be technically feasible, but we do not have a detailed economic evaluation nor commitments from receiving facilities.

Attachment 1 No Action Potential Scenarios

JACOBS' ch2m:

"No Project" Description	Collection	Transfer & Process	Disposal	
No Project 1a – Long Term MRF/Transfer/Limited Organics & Construction and Demolition (C&D) Phased closing of WPWMA Facility (Except for MRF and compost facility with <u>NO</u> compost or C&D expansion) CEQA likely required for Transfer	No change for One Big Bin Self Haul accepted for same materials as current; continue using existing area, may do small upgrades, no major changes Some organics managed by jurisdictions Some C&D managed by jurisdictions	MRF becomes MRF/Transfer; upgrades for transfer required Compost facility upgrades needed to meet current regulatory requirements; does not include expansion and will not be adequately sized to address all organics needs of jurisdictions to comply with pending regulatory requirements. Some organics will need to be managed separately, by jurisdictions C&D facility will not be sized to handle all C&D needs of jurisdictions; some C&D will need to be managed separately, by jurisdictions	Western Regional Sanitary (WRS) Landfill closes when existing capacity is filled After closed, long-haul municipal solid waste (MSW) to other existing disposal facility under contract ^a	 Keeping existing compost and C&D areas than permitted capacity dictates If not privatized, siting and developing faci infrequently sited in California in last 30 ye Lose at least partial control of rates for org Puts partial burden on jurisdictions to achie their own system, supply staffing to complete their own system.
No Project 1b – Long Term MRF/Transfer/Organics & C&D with Expansions Phased closing of WPWMA Facility (Except for MRF, C&D and compost facility with compost and C&D expansion) CEQA needed for C&D and compost facility expansions.	No change for One Big Bin , organics, or C&D Self Haul accepted for same materials as current; continue using existing area, may do small upgrades, no major changes	 MRF becomes MRF/Transfer; upgrades for transfer required. Also need to expand & upgrade to address regulatory requirements for organics and provide adequate organics capacity for all jurisdictions C&D facility will be expanded to address needs of jurisdictions 	WRS Landfill capacity sacrificed to provide capacity for recycling, organics, and C&D After landfill capacity filled, long-haul MSW to other existing facility under contract ^a	 Expanding existing compost and C&D are closing sooner than permitted capacity dic Siting and developing facilities is a 5- to 10 California in last 30 years) CEQA needed for Compost and C&D Lose at least partial control of disposal rate Puts partial burden on jurisdictions to achi their own system, provide staffing to comp
No Project 2 – Long Term MRF/Transfer/No Organics or C&D Phased closing of WPWMA Facility (Except for MRF/Transfer) CEQA likely required for Transfer	No change for One Big Bin Organics managed by jurisdictions C&D managed by jurisdictions Self Haul accepted for MSW; continue using existing area, may do small upgrades, no major changes	 MRF becomes MRF/Transfer; upgrades for transfer required Each jurisdiction will need to contract for organics and C&D processing C&D and organics operations must be removed from facility for availability of permitted landfill space 	WRS Landfill closes when existing capacity is filled After closed, long-haul MSW to other existing facility under contract ^a	 Removing organics and C&D operations a Siting and developing facilities is a 5- to 10 California in last 30 years) Lose control of rates for organics and C&E Puts partial burden on jurisdictions to achieve their own system, provide staffing to composite the system.
No Project 3a – Entire Site Closure and Waste Removal Services not provided by WPWMA. Site is closed to operations, landfill removed (clean closed), and site restored to "original" condition CEQA needed for landfill clean closure and possibly for actions implemented by each jurisdiction.	Each jurisdiction contracts on their own; multiple contracts Changes in collection methods for MSW/recycling/organics/C&D depending what facility they go to (i.e. move to 3 bins, private facilities) Self Haul facility closed at this site, must be addressed by jurisdictions.	Each jurisdiction will need to either site their own processing and transfer facility(ies) or contract for facilities/service Demolish MRF and other infrastructure at the facility	Cease disposal in the landfill immediately. Clean close landfill (excavate and remove waste, fill hole) Each jurisdiction will need to either site their own disposal facility or contract for facilities/service for MSW	 Clean closure is a major endeavor (both the Siting and developing facilities is a 5- to 10 California in last 30 years) Existing contracts would need to execute the Lose control of rates and enter a re-contrationger have local control over system Economic impact by exporting jobs out of new Model flagship facility goes away Puts full burden on jurisdictions to achieve their own system, provide staffing to comp
No Project 3b – Entire Site Closure, no Waste Removal Services not provided by WPWMA. Site is closed to operations, facilities removed, landfill closed but not removed CEQA possibly needed for actions implemented by each jurisdiction.	See #3a above	See #3a above	Cease disposal in the landfill as soon as reasonable final grades are reached Each jurisdiction will need to either site their own disposal facility or contract for facilities/service for MSW	 Siting and developing facilities is a 5- to 10 California in last 30 years) Existing contracts would need to execute the Lose control of rates and enter a re-contration longer have local control over system Economic impact by exporting jobs to out of Model flagship facility goes away Puts full burden on jurisdictions to achieve their own system, provide staffing to comp

Note:

^a Initial discussions of a new disposal location following the closure of WRS Landfill did not rule out a new in-county facility. However, upon further review of available areas from previous siting efforts, the team was not able to identify suitable in-county locations.

Notes

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Attachment 2 Alternate Disposal Sites

JACOBS ch2m:

Landfill Name	Address	Facility Hours	Facility Owner (Public or Private)	Contact Information	Tipping Fees (per ton)	One Way Distance from WRSL (miles)ª	Round Trip Distance from WRSL (miles)	Current Permitted Disposal Acreage	Available Capacity (CY)/Date of Basis	Date of Last Permit Issued	Daily Permitted Max (tons)	Waste Received Daily ^g (tons)	Waste Received Annually/Date of Basis ^g (tons)	Estimated Closure Date	Receives Waste by Rail (Y/N)	Notes
Recology Ostrom Road LF Inc.	5900 Ostrom Road, Wheatland, CA 95692	Monday - Friday: 6AM - 3:30PM	Private	Christine Maguire (707) 235-2586	\$65⁵	21.5	43	225	39,223,000 (2007)	2002	3,000	490	179,000 (2015- 16)	2066	Y*	*May receive waste by rail. Joint Technical Document (JTD) describes a proposed railroad spur.
Sacramento County Landfill (Kiefer)	12701 Kiefer Blvd, Sloughhouse, CA 95683	Monday - Friday: 6:30AM - 4:30PM Saturday and Sunday: 8:30AM - 4:30PM	Public	(916) 875-4557	\$30	30.8	61.6	660	112,900,000 (2005)	1999	10,815	2,200	688,203 (2016)	2064	N	
Yolo County Central Landfill	44090 County Road 28H, Woodland CA 95776	Monday - Saturday: 6:30AM - 4PM Sundays: 8AM - 4PM	Public	(530) 666-8856	\$54°	39.1	78.2	473	35,171,142 (2017)	2008	1,800	~600	176,963 (2014- 15)	2081	N	
Recology Hay Road	6426 Hay Road, Vacaville, CA 95687	Open Daily: 8AM - 4PM	Private	(707) 678-4718	\$60	57.9	115.8	256	30,433,000 (2010)	2013	2,400		615,326 (2016)	2050	N	
Potrero Hills Landfill	3675 Potrero Hills Lane, Suisun City, CA 94585	Monday - Friday: 8:30AM - 3:30PM Saturday: 9AM - 3:30PM	Private	(707) 432-4627	\$75	73.4	146.8	340	13,872,000 (2006)	2012	4,330	2434 ^f	701,030 ^f (2017)	2048	N	
Forward Landfill	9999 S. Austin Road, Manteca, CA 95336	Monday - Friday: 8AM - 5PM Saturday: 8AM - 12PM	Private	Mark (209) 456-2696		80.5	161	354.5	22,100,000 (2012)	2012	8,668		923,311 (2016)	2020	Y*	May accept waste by rail. The facility is 3.2 miles away from a railyard.
Anderson Landfill	18703 Cambridge Road, Anderson, CA 96007	Monday - Friday: 7AM - 3:30PM	Private	(530) 347-5236	\$47.60 ^d	137	274	130	11,914,025 (2008)	2008	1,850		91,599 (2016)	2055	N	
Altamont Landfill	10840 Altamont Pass Road, Livermore, CA 94551	Monday - Friday: 6AM - 4PM	Private	Dave Huffman (925) 421-5164	\$65°	108	216	472	65,400,000 (2014)	2005	11,150		841,804 (2016)	2025	N	
Lockwood Regional Landfill	2700 East Mustang Road, Sparks, NV 89434	Monday - Saturday: 8AM - 4:30PM	Private	Fallon Honeycut (775) 326-2308	\$19.30	132	264	856.5	42,850,240 (2009)	2013		5,000	1,071,537 (2009)	2032	Y	
East Carbon Landfill (ECDC)	1111 W Highway 123, East Carbon, UT 84520	Monday - Friday: 8AM - 5PM Saturday: 8AM - 12PM	Private	(949) 673-1247		776	1552		300,000,000						Y	

^a Miles calculated using Google Maps.

^b This is an estimate - fees will vary depending on the volume of the load and the time of day the material is being hauled.

^c Minimum fee of \$14.

^d Plus an environmental fee starting at \$16 - it varies per load depending on what is being disposed.

^e This is an estimate - fees may vary depending on total waste volume and haul frequency.

^fAccording to the JTD, these numbers are projected refuse tonnages based on an assumed waste inflow to increase by 2% annually until 3,400 ton/day is met.

^g Information found in facilities JTDs, individual websites, or CalRecycle.

Attachment 2: Alternate Disposal Sites

Appendix 2B Waste Stream Projections



TECHNICAL MEMORANDUM

Date: To:	Sept. 27, 2017 Janet Goodrich,	F
From:	Will Dickinson	
cc:	Rich Haughey	
RE:	WPWMA WASTE STREAM PROJECTION	S

 Project No.:
 1649494

 Company:
 CH2M

Golder Associates has prepared this Technical Memo (TM) pursuant to Task 3.3 of the Scope of Services authorized by CH2M Agreement No. 10381-7-116920, which requires a TM under the heading of Waste

1.0 PURPOSE

Stream Projections.

The purpose of preparing these waste stream projections is to assist the consulting team in calculating current and future facility requirements, as the type and quantity of materials handled at the site is a basic design parameter. This information is also important for analyzing environmental impacts and establishing permit limits for concerns such as traffic and throughput tonnage.

2.0 METHODOLOGY

The Scope of Services for this subtask was described as: "Consultant shall develop estimates of annual waste tonnages received and processed at the WPWMA's facility by major material classification (e.g. municipal solid waste, construction and demolition debris, green waste, wood waste, inert materials, etc.) and by delivery method (i.e.: commercial and larger haulers versus self-haul) over the next fifty (50) years following a methodology developed by Consultant in agreement with WPWMA. Consultant shall utilize WPWMA's historical material receipt data as well as current and historical population rates or other appropriate demographic data, SACOG or other regional growth estimates, current development plans for each of the municipalities in the WPWMA's service area and best estimates of changes in the waste stream due to changes in applicable laws and regulations."

Golder's approach to developing the waste stream projections is described in Section 2.1.

During the period between scoping this project and receiving notification to proceed, the Governor signed Senate Bill 1383 (SB 1383), the short-lived climate pollutants bill, which dramatically changed the outlook for waste management in California. As a result, Golder requested and received authorization to revise the waste stream projections to take SB 1383 into consideration. SB 1383 and the revision process are described in Section 2.2.

Waste projection tech memov6.docx

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2.1 Initial Waste Stream Projections

Golder performed the following tasks to develop the first set of waste stream projections, which do not take into account the anticipated impact of SB 1383:

- Obtained available recorded tonnage and yardage information by major material classification (as defined by tipping fee categories) from WPWMA staff. Recorded quantity information for the material classification "MSW" started in 1997, while quantities for other classifications (e.g. Green Waste) were not recorded until later years, resulting in shorter periods of time to establish trends.
- 2. The annual data was entered into a custom-designed Excel spreadsheet.
- 3. Searched for government data relating to indicators that may influence the quantities of materials accepted. Several indicators were identified, including: Population, Total Employment, New Homes Permitted, Households and Taxable Retail Sales. Where different government agencies had inconsistent actual or projected data, we chose the source that appeared most credible, as follows:
 - Total Employment, New Homes Permitted, Households: "California County-Level Economic Forecast 2015 – 2040", produced for the California Department of Transportation by The California Economic Forecast.
 - b. Population, historical: California Department of Finance "E-4 Population Estimates for California State and Counties", January 1, 1981 to January 1, 1990, and 2011-2016. For projections: Department Of Finance P-2 "Total Population Projections for California and Counties: July 1, 2015 to 2060 in 5-year Increments".
 - c. Taxable Retail Sales: State of California Board of Equalization.
- 4. Where necessary, Golder extrapolated data out to the year 2060. Note: 2060 was chosen because it is the longest period for which any government projections exist – i.e. the California Department of Finance's estimates for Population. All other data sets required some degree of extrapolation from agency projections. Extrapolations were performed as follows:
 - a. Total Employment from 2041 to 2060 was based on a 0.07% increase over the previous year.
 - b. New Homes Permitted were assumed to remain constant at 1,861 from 2041 to 2060.
 - c. Taxable Retail Sales from 2041 to 2060 was based on a 3.0% increase over the previous year.
- 5. Created charts comparing data for the quantities (tons and/or yards) of each waste classification accepted by WPWMA through 2016 versus the indicators Population, Taxable Retail Sales, New Home Permits, and Total Employment for those years. These indicators were selected as most relevant to predicting the generation of solid waste accepted by WPWMA. The charts developed for analyzing Municipal Solid Waste (MSW) are included as Exhibit A.
- 6. Compared trend lines for each of the twelve classifications of waste to determine a best fit for the data.
- Identified past and future influences on quantities of waste accepted, as shown in Table 1. In consideration of these influences and the trend lines identified, chose appropriate combinations of indicators to project future waste acceptance through 2060 (Exhibit B).
- 8. To check the accuracy of the MSW Accepted projections, used 1997 as the starting point and applied the methodology used for projecting the years 2017-2060. The correlation between projected and actual tons and yards through 2016 was very good.
- Developed the following formula to predict waste disposed at the landfill through 2060 based on projections of waste accepted: Waste Disposed = MSW Tons*0.7 + MSW Yards*0.8/8 + C&D Tons*0.5 + C&D Yards*0.5/6 + Sludge and Mixed Inerts + Commercial Food Waste.



Table 1 - Influences on Material Quantities Accepted

Material ¹	Past Influences	Future Influences	Indicator Used
MSW tons	Population growth and employment.	Same, plus: agency participation in WPWMA (flow control); packaging changes; future SS recycling programs (e.g. food); consumer habits; changes in regulations.	50% Population 50% Employment
MSW yards	Population growth and employment.	Same, plus: packaging changes; pricing at WPWMA vs. competing waste facilities.	50% Population 50% Employment
C&D tons	Retail sales and employment show best trend lines, although these may not be indicative over long term. New permits and population logically also important. Competition from other waste facilities has skewed trend lines.	Same, plus: agency participation in WPWMA (flow control); construction practice changes; future SS recycling programs; pricing at WPWMA vs. competing waste facilities; changes in regulations.	50% Employment 25% Retail Sales 25% New Home Permits
C&D yards	Population and Employment show best trend lines.	Same, plus: construction practice changes; pricing at WPWMA vs. competing waste facilities; changes in regulations.	50% Population 50% Employment
Green Waste tons	Historical record not indicative due to ramp up of SS programs during early years and fall off more recently due to drought conditions.	Continuing reductions in plantings due to drought conditions; changes in regulations; increase in generation due to maturing trees and shrubs.	75% Population 25% Employment
Green Waste yards	Population, Taxable Retail Sales and Employment fit trend lines.	Same, plus: Continuing reductions in plantings due to drought conditions; changes in regulations (AB 1826 ²); increase in generation due to maturing trees and shrubs; pricing at WPWMA vs. competing waste facilities.	75% Population 25% Employment
Wood Waste tons	Employment showed best fit, although trend for wood is down rather than up. New Home Permits trended down, but more steeply. Strongest influence may be hauling companies that have a choice of taking debris boxes to other waste facilities.	Same, plus: agency participation in WPWMA (flow control); construction practice changes; future SS recycling programs; pricing/capacity at WPWMA vs. competing waste facilities; changes in regulations.	70% Employment 30% New Home Permits
Wood Waste yards	Employment showed best fit, although trend for wood is down rather than up. New Home Permits trended down,	Same, plus: construction practice changes; changes in regulations; availability and cost of alternative waste facilities.	70% Employment 30% New Home Permits

¹ "Material" is as defined by tipping fee categories established by WPWMA. Material charged by the ton is typically delivered by large commercial haulers, while material charged by the yard is typically delivered in pickup trucks or small trailer and is directed to the Public Tipping Area. ² Assembly Bill 1826, Mandatory Commercial Organics Recycling



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	but more steeply. Strongest		
	influence may be pricing at WPWMA vs. other waste		
	facilities.		
Sludge & Mixed Inerts tons	New Home Permits showed closest fit, although New Home Permits showed more serious downward trend. Since 2008, Population, Retail Sales and Employment showed good correlation.	Same, plus: addition of digester at Pleasant Grove plant could significantly decrease sludge production and allow marketing to Synagrow rather than disposal; changes in regulations governing sludge land application could increase disposal.	50% Population 50% Employment
SS Inerts tons	Population shows best fit, with downside adjustment likely influenced by New Home Permits.	Same, plus: pricing at WPWMA vs. competing waste facilities; changes in regulations; major construction projects either using fill or generating fill.	75% Population 25% New Home Permits
SS Inerts yards	Employment, followed by Population.	Same, plus: pricing at WPWMA vs. competing waste facilities; changes in regulations.	25% Population, 50% Employment 25% New Home Permits
Comm. Food Waste tons	Choices made by haulers (primarily Roseville) re which loads to segregate for landfill disposal vs. commingle with commercial MSW.	AB 1826 compliance programs will likely decrease this category significantly, and perhaps eliminate it altogether if reduced food content in generator loads allows remainder to be sent as MSW.	Eliminate category in 2019 and move that material to MSW

Golder also reviewed the websites of local planning departments to determine if the supply of residential and commercially zoned land would keep up with demand as represented by the Department of Finance population estimates This does appear to be the case, as the City of Roseville, City of Lincoln and the County of Placer are each planning for significant growth within their jurisdictions.

For example, the 2016 City of Roseville General Plan Update shows the potential for population growth of 65,000 to buildout, which they project will occur sometime after the year 2035. This estimate includes three relatively new specific plan areas - Sierra Vista, Creekview and Amoruso Ranch – as well as other areas in various stages of buildout. It is likely that Roseville will continue to grow and annex beyond their current identified boundaries, thus accommodating more growth and extending the time within which complete buildout would occur.

The County of Placer has also indicated their interest in continued growth through various actions, including planning related to the Placer Vineyards, Riolo Ranch, Placer Ranch, Regional University, Curry Creek, Sunset Area Plan and Bickford Ranch project areas.

Although Rocklin has been an engine for growth in the waste shed, it appears this will taper off in the next ten to twenty years. The 2011 General Plan Update for Rocklin estimates a residential buildout date of the year 2028 using a mid-range growth rate and a population of 76,136 (an approximate increase of 11,000 from 2017). This early buildout date is not unexpected due to the current city limit constraints and the high degree of existing concentrated development.

The City of Lincoln has much more potential for growth due to the lightly populated agricultural lands surrounding the existing city limits. Various Lincoln City Councils have demonstrated their support for continued growth through General Plan amendments and infrastructure planning.



In summary, it is unlikely that the supply of housing will be a constraint on population growth and utilization of WPWMA services for the foreseeable future; rather, demand (including ability to pay) for new housing will be the limiting factor. The creation of new jobs in the region will be the major driver of demand. Secondary influences could include new university students and Bay Area transplants seeking lower housing costs.

2.2 Revisions Necessary Due to SB 1383

SB 1383 established targets to achieve a 50 percent reduction in disposed organic waste by 2020 and a 75 percent reduction by 2025, as compared to 2014 disposed levels. In conjunction with the overall reduction in disposed organic waste, SB 1383 requires a 20 percent reduction in edible food sent to landfills. Because the WPWMA "MSW", "Green Waste", "Sludge", "Commercial Food Waste", "Wood Waste" and "C&D" material categories all contain organic materials, waste accepted and materials diverted from each of these classifications must be reviewed based on the requirements of SB 1383. This additional task required development of assumptions regarding what programs WPWMA and its Member Agencies might adopt to comply with SB 1383.



5

The following tasks were performed to revise the waste stream projections:

- 1. Applied CalRecycle statewide waste disposal composition factors³ to 2014 WPWMA waste disposed quantities to estimate 2014 organic material disposal tonnage (see Exhibit C). Separately determined sewage sludge tons disposed as that material category is not included in the CalRecycle study.
- 2. Determined and calculated a 2025 organic disposal target for WPWMA at 75% of the 2014 rate.
- Applied CalRecycle 2014 waste disposal composition factors to projected 2025 WPWMA waste disposal tonnage to determine what disposal level would be expected without new programs for organics.
- 4. Based on site knowledge and discussions with WPWMA staff, assumed percentage reduction factors on specific waste types for SB1383 compliance programs to arrive at an assumed disposal tonnage. The outcome was a 62% reduction from 2014 levels rather than the statewide goal of 75%.
- 5. Reduced "accepted" and "disposed" tonnages for relevant material types in year 2025 as appropriate (shown in detail in Exhibit C and summarized in Exhibit D). Source separation programs implemented by the Participating Agencies would reduce material acceptance (and therefore disposal) while separation taking place at the MRF only impacts disposal amounts.
- 6. Revised projections for years 2021-2024 and 2026-2060 based on the 2025 projections.

3.0 RESULTS

Exhibit E shows the resulting projection of materials accepted and disposed after the adjustment for assumed SB 1383 program implementation. Projections are shown on an annual basis through the year 2025 and every five years from 2025 to 2060.

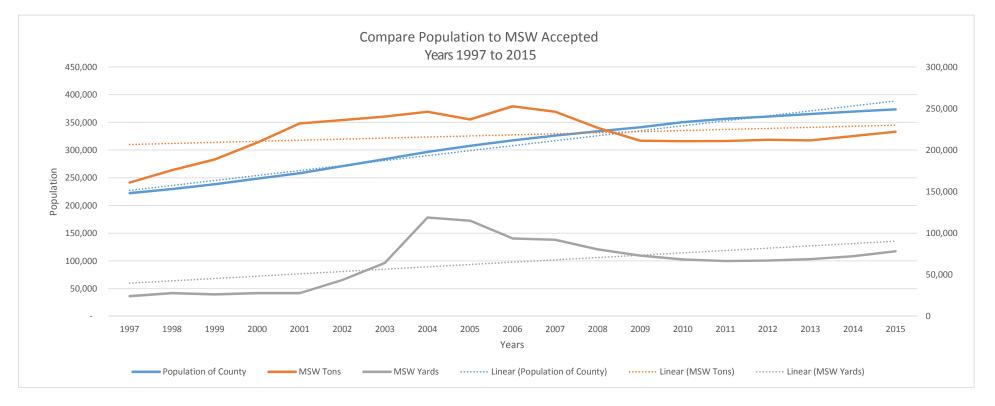
Exhibits: A-E

³ "2014 Disposal-Facility-Based Characterization of Solid Waste in California", October 6, 2015, produced by Cascadia Consulting Group under contract to CalRecycle.

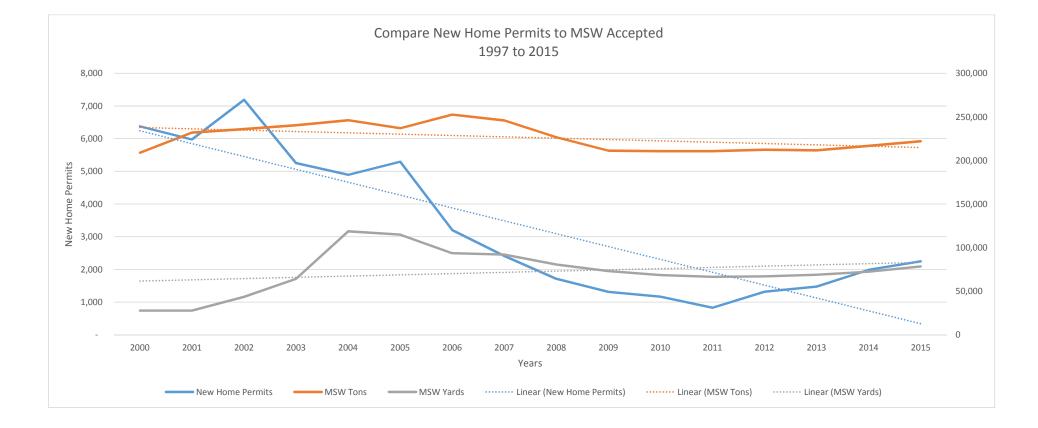


Exhibit A

MSW Series







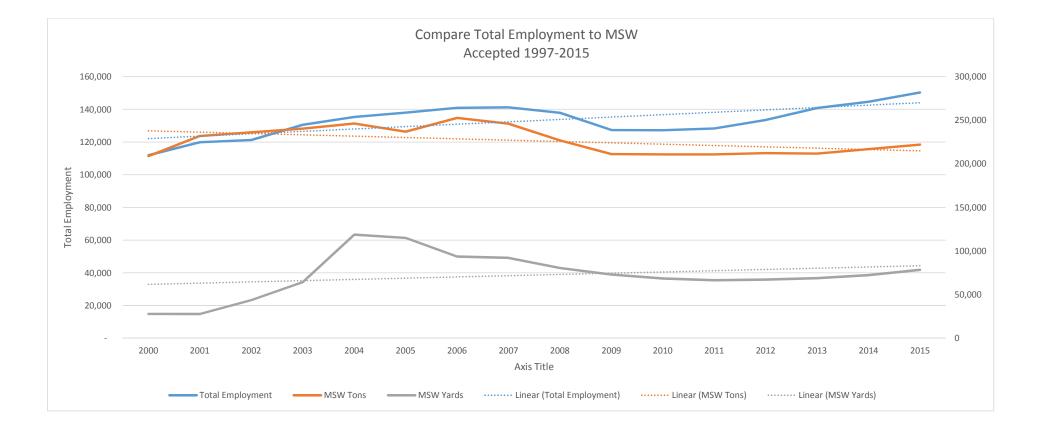


Exhibit B

WPWMA Waste Stream Projections

Not Adjusted for SB 1383

							Pr	ojections															
Material Type Accepted	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2035	2040	2045	2050	2055	2060
Municipal Solid Waste																							
MSW tons	210,742	210,781	212,368	211,700	216,822	222,028	223,385	227,745	231,959	245,525	248,884	251,773	254,581	257,440	260,685	263,564	278,869	295,961	312,582	327,068	341,299	355,217	369,589
MSW yards	68,511	66,490	67,142	68,885	72,375	78,390	78,869	80,408	81,896	83,344	84,484	85,465	86,418	87,389	88,490	89,468	94,663	100,465	106,107	111,024	115,855	120,579	125,458
Construction/Demolition																							
C&D tons	43,623	38,667	36,650	46,026	50,393	59,237	61,551	63,743	66,108	66,985	66,916	67,105	67,221	67,627	68,666	69,593	74,056	79,389	83,899	88,616	93,598	98,861	104,419
C&D yards	20,416	25,037	24,733	31,604	33,847	37,250	38,705	39,460	40,190	40,901	41,460	41,942	42,409	42,886	43,426	43,906	46,455	49,303	52,071	54,485	56,855	59,174	61,568
Sludge & Mixed Inerts - tons	17,952	19,265	21,581	23,459	24,108	25,196	25,828	26,332	26,820	27,294	27,667	27,988	28,301	28,618	28,979	29,299	31,000	32,900	34,748	36,358	37,940	39,488	41,085
Green Waste																							
GW tons	47,904	45,949	48,166	46,076	43,888	40,414	40,661	45,294	45,988	46,677	47,281	47,843	48,399	48,968	49,577	50,155	53,197	56,644	60,113	63,227	66,233	69,110	72,078
GW yards	36,263	38,923	40,372	37,121	31,694	31,701	31,895	32,392	32,888	33,380	33,813	34,214	34,612	35,019	35,454	35,868	38,043	40,508	42,990	45,216	47,366	49,423	51,546
Wood Waste																							
Wood tons	1,383	1,167	1,201	1,228	1,324	1,500	1,515	1,556	1,602	1,607	1,580	1,566	1,551	1,545	1,556	1,562	1,605	1,651	1,682	1,724	1,766	1,810	1,855
Wood yards	3,976	4,028	4,187	4,970	4,191	4,789	4,976	5,110	5,263	5,276	5,188	5,143	5,095	5,075	5,112	5,129	5,271	5,422	5,524	5,661	5,801	5,945	6,092
Food Waste - Tons	14,523	13,550	12,388	12,017	12,100	11,747	9,465	9,465	9,465														
SS Inert Materials																							
SS Inert tons	15,743	18,411	12,233	15,431	16,866	17,504	17,504	17,770	18,116	18,077	17,830	17,751	17,668	17,668	17,802	17,916	18,623	19,426	20,171	21,033	21,843	22,594	23,361
SS Inert yards	6,497	6,770	7,676	9,577	8,550	12,270	12,270	12,553	12,878	12,920	12,762	12,698	12,627	12,614	12,714	12,780	13,219	13,698	14,087	14,536	14,979	15,416	15,863
Appliance - each	9,599	8,147	6,295	6,332	6,411	8,067	8,556	8,656	8,761	8,868	8,976	9,085	9,195	9,308	9,422	9,538	10,141	10,834	11,553	12,215	12,845	13,437	14,047
Water Treat Sludge - tons	1,111	1,039	1,407	1,546	1,327	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160
total accepted tons							408,329	420,870	429,581	436,071	440,261	444,343	448,242	452,629	458,365	463,478	490,330	520,722	549,635	576,009	602,174	628,050	654,880
Disposed Tonnage																							
Residue	164,395	160,649	161,800	173,951	180,187	197,201																	
Direct	43,789	40,602	40,642	42,049	41,713	41,050																	
total disposed tons	208,185	201,251	202,442	216,000	221,900	238,251	233,550	238,419	243,248	244,396	247,248	249,824	252,294	254,953	258,260	261,196	276,575	293,923	310,455	325,257	339,972	354,559	369,683

Note - Where conversion from cubic yards to tons was necessary (e.g. for determining "Total Accepted Tons"), the following conversion factors were used: MSW yards/8 = MSW Tons; C&D Yards/6 = C&D Tons; Green Waste Yards/8 = Green Waste Tons; Wood Waste Yards/6 = Wood Waste Tons; Inert Yards/2 = Inert Tons.

Exhibit C Assumed Approach to WPWMA Compliance with SB 1383

Organic Material included in disposed waste: 2014										Dispose	ed Organics														2025 Target Organic Disposal
disposed waste. 2014	Sewage																(75%)								
	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	tons
disposed organic material: tpy and as																									•
% of disposed waste stream ¹	10.9%	24,108	17.4%	34,416	18.1%	35,800	3.8%	7,516	3.1%	6,132	1.7%	3,362	0.6%	1,187	4.0%	7,912	1.8%	3,560	4.3%	8,505	11.9%	23,537	70%	156,036	39,009

Organic Material included in							_			Dispose	ed Organics														
disposed waste: 2025, pre-SB1383	Sewage S	ludge	Pa	per	Food		Leaves an	nd Grass	Prunings/Tr	rimmings	Branches ar	d Stumps	Man	ures	Text	iles	Carp	pet	Remai	nder	Lum	ber	Total O	rganic	
	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	
disposed organic material: tpy and as																									
% of disposed waste stream ¹	13.2%	29,299	17.4%	40,350	18.1%	41,973	3.8%	8,812	3.1%	7,189	1.7%	3,942	0.6%	1,391	4.0%	9,276	1.8%	4,174	4.3%	9,972	11.9%	27,596	70%	183,974	

Organic Material included in										Dispose	d Organics													
disposed waste: 2025, post-SB1383	Sewage S	ludge	Pa	per	Food	I	Leaves an	nd Grass	Prunings/T	rimmings	Branches ar	d Stumps	Man	ures	Text	iles	Carp	et	Remai	nder	Lum	ber	Total O	rganic
	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons	percent	tons
reduction target (compared to 2025																								
projected): tpy and % reduction	90%	26,369	60%	24,210	60%	25,184	50%	4,406	50%	3,594	50%	1,971	0%	-	75%	6,957	75%	3,131	75%	7,479	75%	20,697		123,998
material diverted pre-WPWMA:tpy		26,369		-		3,100		-		-		-		-		-		-		-		-		29,469
material handled on site: tpy		2,930		40,350		38,873		8,812		7,189		3,942		1,391		9,276		4,174		9,972		27,596		154,505
material diverted on-site: tpy		-		24,210		22,084		4,406		3,594		1,971		-		6,957		3,131		7,479		20,697		94,529
disposed organic material: tpy		2,930		16,140		16,789		4,406		3,594		1,971		1,391		2,319		1,044		2,493		6,899	44%	59,977

Notes: 1) sludge has been subtracted from the disposed waste stream to calculate all non-sludge organic components.

2) a 75% reduction in organics disposed was not assumed for WPWMA waste; rather, it has been assumed that a 62% reduction is a more realistic contribution to the State-side effort.

Exhibit D

Western Placer Waste Management Authority Impact of SB 1383 Program Implementation

		Waste Accep	oted - Tons Per Year		
Madaviel Truce	2014	2025	2025 Adjusted for SB1383		Change in 2025 Waste Disposed due to
Material Type	2014	Pre-SB1383	Compliance	SB1383	SB1383
Municipal Solid Waste	216 022		240 500	22.070	
MSW tons	-	263,564			
MSW yards	/2,3/5	89,468	89,468	0	
Construction/Demolition					-
C&D tons	-	69,593	-		
C&D yards	33,847	43,906	43,906	0	
Sludge & Mixed Inerts - tons	24,108	29,299	2,930	-26,369	
Green Waste					
GW tons	43,888	50,155	70,031	19,876	
GW yards	31,694	35,868	35,868	0	
Wood Waste					-
Wood tons	1,324	1,562	1,562	0	
Wood yards	4,191	5,129	5,129	0	
Food Waste - Tons	12,100	0	0	0	
SS Inert Materials					-
SS Inert tons	16,866	17,916	17,916	0	
SS Inert yards	8,550	12,780	12,780	0	
Appliance - each	6,411	9,538	9,538	0	
Source separated food waste	0	0	3,100	3,100	
Water Treat Sludge - tons	1,327	1,160	1,160	0	
Disposed Tonnage	221,900	261,196	137,198	-26,369	-123,998

Exhibit E

WPWMA Waste Stream Projections

Adjusted for SB 1383

							Pr	ojections															
Material Type Accepted	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2035	2040	2045	2050	2055	2060
Municipal Solid Waste																							
MSW tons	210,742	210,781	212,368	211,700	216,822	222,028	223,385	227,745	231,959	242,387	245,703	244,680	243,662	242,647	241,637	240,589	254,560	270,161	285,333	298,557	311,547	324,252	337,371
MSW yards	68,511	66,490	67,142	68,885	72,375	78,390	78,869	80,408	81,896	83,344	84,484	85,465	86,418	87,389	88,490	89,468	94,663	100,465	106,107	111,024	115,855	120,579	125,458
Construction/Demolition																							
C&D tons	43,623	38,667	36,650	46,026	50,393	59,237	61,551	63,743	66,108	66,985	66,916	67,105	67,221	67,627	68,666	69,593	74,056	79,389	83,899	88,616	93,598	98,861	104,419
C&D yards	20,416	25,037	24,733	31,604	33,847	37,250	38,705	39,460	40,190	40,901	41,460	41,942	42,409	42,886	43,426	43,906	46,455	49,303	52,071	54,485	56,855	59,174	61,568
Sludge & Mixed Inerts - tons	17,952	19,265	21,581	23,459	24,108	25,196	25,828	26,332	26,820	27,294	27,667	20,750	15,563	11,672	8,754	2,930	3,100	3,290	3,475	3,636	3,794	3,949	4,109
Green Waste																							
GW tons	47,904	45,949	48,166	46,076	43,888	40,414	40,661	45,294	45,988	46,677	47,281	51,670	56,453	61,685	67,449	70,031	74,278	79,090	83,935	88,283	92,480	96,496	100,641
GW yards	36,263	38,923	40,372	37,121	31,694	31,701	31,895	32,392	32,888	33,380	33,813	34,214	34,612	35,019	35,454	35,868	38,043	40,508	42,990	45,216	47,366	49,423	51,546
Wood Waste																							
Wood tons	1,383	1,167	1,201	1,228	1,324	1,500	1,515	1,556	1,602	1,607	1,580	1,566	1,551	1,545	1,556	1,562	1,605	1,651	1,682	1,724	1,766	1,810	1,855
Wood yards	3,976	4,028	4,187	4,970	4,191	4,789	4,976	5,110	5,263	5,276	5,188	5,143	5,095	5,075	5,112	5,129	5,271	5,422	5,524	5,661	5,801	5,945	6,092
Food Waste - Tons	14,523	13,550	12,388	12,017	12,100	11,747	9,465	9,465	6,000							0							
SS Inert Materials																							
SS Inert tons	15,743	18,411	12,233	15,431	16,866	17,504	17,504	17,770	18,116	18,077	17,830	17,751	17,668	17,668	17,802	17,916	18,623	19,426	20,171	21,033	21,843	22,594	23,361
SS Inert yards	6,497	6,770	7,676	9,577	8,550	12,270	12,270	12,553	12,878	12,920	12,762	12,698	12,627	12,614	12,714	12,780	13,219	13,698	14,087	14,536	14,979	15,416	15,863
Appliance - each	9,599	8,147	6,295	6,332	6,411	8,067	8,556	8,656	8,761	8,868	8,976	9,085	9,195	9,308	9,422	9,538	10,141	10,834	11,553	12,215	12,845	13,437	14,047
Source Separated Food Waste - tons									3,100	3,138	3,176	3,215	3,254	3,294	3,334	3,375	3,589	3,834	4,088	4,322	4,545	4,755	4,971
Water Treat Sludge - tons	1,111	1,039	1,407	1,546	1,327	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160
total accepted tons							408,329	420,870	429,216	436,071	440,257	437,054	435,892	436,901	440,298	437,384	462,790	491,592	519,023	544,153	569,068	593,688	619,219
Disposed Tons	208,185	201,251	202,442	216,000	221,900	238,251	233,550	238,419	239,784	242,200	245,021	193,509	163,568	147,380	144,619	137,198	147,110	156,443	165,250	173,240	181,228	189,196	197,475

Note - Where conversion from cubic yards to tons was necessary (e.g. for determining "Total Accepted Tons"), the following conversion factors were used: MSW yards/8 = MSW Tons; C&D Yards/6 = C&D Tons; Green Waste Yards/8 = Green Waste Tons; Wood Waste Yards/6 = Wood Waste Tons; Inert Yards/2 = Inert Tons.

Appendix 2C Aquatic Resources Report REPORT

Aquatic Resources Delineation Report for the Western Placer Waste Management Authority Master Planning Project, Placer County, California

Prepared for Western Placer Waste Management Authority

March 2018



Executive Summary

This aquatic resources delineation report presents the findings of the waters of the United States (U.S.) delineation for the Western Placer Waste Management Authority (WPWMA) Master Planning Project in Placer County, California. WPWMA proposes to expand existing operations at the Western Regional Sanitary Landfill and Materials Recovery Facility near Roseville, California. The delineation methodology followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008).

Across all areas surveyed, 170 seasonal wetlands (totaling 8.51 acres), 13 swales (totaling 11.29 acres), 2 irrigation ponds (totaling 2.45 acres), 2 irrigated wetlands (totaling 1.04 acres), and 1 excavated drainage (totaling 0.02 acre) were delineated. The eastern property included the greatest number and acreage of wetland and aquatic features, followed by the northwest and southwest properties, and the south triangle, respectively.

The delineation results and conclusions presented in this report are considered preliminary, pending verification by the U.S. Army Corps of Engineers Regulatory Branch.

Contents

Section				Page	
Executi	ve Sumi	mary		ES-1	
Acrony	ms and	Abbrevi	ations	v	
1	Introdu 1.1 1.2 1.3	Backgro Report	ound and Location Objectives Imental Setting Land Use and Vegetation Types. Climate and Hydrology Soils	1-1 1-2 1-2 1-2 1-3	
2	Regula 2.1 2.2	Section	401	2-1	
3	Methoo 3.1 3.2	Prefield	I Investigation Irveys Definitions Methodology for Delineating Wetland and Other Aquatic Resources of the United States	3-1 3-1 3-1	
4	Results 4.1 4.2	Site Co	nditions d and Other Aquatic Resources Eastern Property Northwest Property Southwest Property South Triangle	4-1 4-1 4-1 4-5 4-8	
5	Conclus	sions		5-1	
6	References				
Append	dixes				
А	Figures				

- B Representative Site Photographs
- C Wetland Determination Data Sheets, Arid West Region
- D Plant Species Observed

Tables

4-1
4-1
4-2
4-5
4-8
4-9

Figures

- 1 Regional Location Map
- 2 Project Survey Areas
- 3 Soil Types
- 4 National Wetlands Inventory and National Hydrography Dataset Features
- 5 Jurisdictional Wetlands and Other Aquatic Resources East Property
- 6 Jurisdictional Wetlands and Other Aquatic Resources Northwest Property
- 7 Jurisdictional Wetlands and Other Aquatic Resources Southwest Property
- 8 Jurisdictional Wetlands and Other Aquatic Resources South Triangle

Acronyms and Abbreviations

°F	degree(s) Fahrenheit
CDFW	California Department of Fish and Wildlife
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EPA	U.S. Environmental Protection Agency
FAC	Facutative
FACU	Facultative upland
FACW	Facultative wet
FEMA	Federal Emergency Management Agency
GPS	Global Positioning System
NL	Not listed
NRCS	Natural Resources Conservation Service
OBL	Obligate
PEM	palustrine emergent
PLSS	Public Land Survey System
project	Western Placer Waste Management Authority Master Planning Project
UPL	Upland
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USGS	U.S. Geological Survey
WPWMA	Western Placer Waste Management Authority

Introduction

This aquatic resources delineation report presents the methods and results of the waters of the United States (U.S.) delineation for the Western Placer Waste Management Authority (WPWMA) Master Planning Project (project) in Placer County, California. This introductory section provides a summary-level description of the project background and location, report objectives, and environmental setting.

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1.1 Background and Location

The WPWMA proposes to expand existing operations at the Western Regional Sanitary Landfill and Materials Recovery Facility (Active Facility) near Roseville, California. The Active Facility (landfill, compost facility, materials recovery facility, and ancillary operations) is located approximately 2 miles west of Highway 65 and north of Roseville in Placer County (Figure 1; all figures cited in this report are located in Appendix A). The Active Facility can be accessed by exiting State Route 65 at Twelve Bridges Drive, heading west to Industrial Avenue, south to Athens Avenue, and west to the intersection of Athens Avenue and Fiddyment Road. The Active Facility is situated in the southeast corner of the intersection of Athens Avenue and Fiddyment Road at 3033 Fiddyment Road, Roseville, California 95747. The survey areas for the delineation encompass three properties owned by WPWMA on the east and west sides of the Active Facility (Figure 2). Table 1-1 shows the total acreages and locational descriptions of each survey area property.

	Approximate			
Survey Area	Acres	PLSS	Latitude/Longitude	Location Description
Eastern Property	155	11N 06E 05	38.83165 -121.33785	South of Athens Avenue on the eastern side or the existing landfill area, approximately 0.5 mile east of Fiddyment Road.
Northwest Property	153	12N 06E 31	38.84233 -121.35406	The portion of the western property north of Athens Avenue, specifically, on the west side of Fiddyment Road south of East Catlett Road, northwest of the Intersection of Athens Avenue and Fiddyment Road.
Southwest Property	306	11N 06E 06	38.83151 -121.35413	The portion of the western property south of Athens Avenue, specifically, on the west side of Fiddyment Road north of Sunset Boulevard West, southwest of the Intersection of Athens Avenue and Fiddyment Road.

Table 1-1. Survey Areas for the WPWMA Expansion Project

South Triangle	17	11N 06E 06	38.825563	Southwest corner of the Active Facility,
			-121.34768	specifically, on the east side of Fiddyment
				Road south of the existing landfill, and
				northeast of the intersection of Sunset
				Boulevard West and Fiddyment Road.

Notes:

PLSS = Public Land Survey System: Township, Range, Section, based on the Mount Diablo Meridian.

All properties are in the Roseville U.S. Geological Survey (USGS) 7.5-minute quadrangle.

Coordinates are decimal degrees, North American Datum 1983.

1.2 Report Objectives

The objective of this aquatic resources delineation report is to present the findings of the waters of the U.S. delineation conducted for the project, and to obtain a preliminary jurisdictional determination from the U.S. Army Corps of Engineers (USACE). The preliminary jurisdictional determination will be used in future project planning and permitting efforts.

1.3 Environmental Setting

The project area is located along the eastern edge of the Hardpan Terraces subsection of the Great Valley Ecological Section (Miles and Goudey, 1997). The Hardpan Terraces subsection features terraces along the eastern edge of the Sacramento and San Joaquin valleys composed predominantly of Pleistocene alluvium derived from granitic, sedimentary, volcanic, and metamorphic sources. The landscape is characterized by gently sloping terraces with small floodplain areas and alluvial fans along the rivers and streams flowing from the Sierra Nevada mountains westward into the Sacramento and San Joaquin Rivers. Elevations throughout the project area range between 110 and 125 feet above mean sea level. The following sections provide additional information on the terrestrial vegetation, climate and hydrology, and soils.

1.3.1 Land Use and Vegetation Types

The eastern property, located south of Athens Avenue and east of Fiddyment Road (Figure 2), is undeveloped land characterized by a mosaic of upland annual grassland, seasonal wetlands (including vernal pools), and low swales. A small motor-cross area, covering approximately 16 acres of the central part of the property, was in operation for a few years starting in 2006 but has been inactive for many years. The property is currently used for seasonal cattle grazing.

The northwest property, located to the northwest of the intersection of Fiddyment Road and Athens Avenue, is mostly open grassland. Small developed areas include a parking lot and a radio-controlled model airplane runway in the northwest corner of the property and a farm residence and barn in the southwest corner of the property. The open grasslands on this property are frequently burned in the summer by the local fire departments as part of their wildland fire training activities.

The southwest property, located southwest of the intersection of Fiddyment Road and Athens Avenue, consists of active agricultural fields that are used to grow center pivot irrigated (circle irrigated) alfalfa. In addition to the alfalfa crops, the grasslands adjacent to the irrigated fields are cut for hay.

The south triangle property, located south of the existing landfill and west of Fiddyment Road, is a small triangular area that is a wetland mitigation area created as part of a previous restoration or mitigation effort. This property is characterized by grassland along with some planted native trees and shrubs and several constructed vernal pool seasonal wetlands.

Descriptions of the terrestrial vegetation communities and land use are provided in the following sections.

1.3.1.1 Annual Grassland

Annual grassland is the most common and widespread plant community in the project area and is characterized by naturalized annual grasses consisting of medusa head (*Elymus caput-medusae*)¹, ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), Italian rye grass (*Festuca perennis*), annual fescue (*Festuca myuros*), slender oat (*Avena barbata*), and hare barley (*Hordeum murinum* ssp. *leporinum*). Common naturalized forbs include longbeak stork's bill (*Erodium botrys*), rose clover (*Trifolium hirtum*), vetch (*Vicia sativa* and *V. villosa*), prickly lettuce (*Lactuca serriola*), and lesser hawkbit (*Leontodon saxatilis*). Scattered native forbs include white brodiaea (*Triteleia hyacinthina*), ookow (*Dichelostemma congestum*), and valley tassels (*Castilleja attenuata*). The grasslands found in the project area include Wild Oat grasslands - *Avena* (*barbata, fatua*) Semi-Natural Herbaceous Stands and Annual brome grasslands – *Bromus* (*diandrus, hordeaceus*) – *Brachypodium distachyon* Semi-Natural Herbaceous Stands, and *Lolium perenne* Semi-Natural Herbaceous Stands (Perennial rye grass fields), as described in *A Manual of California Vegetation* (Sawyer et al., 2009). Seasonal wetlands and swales, described in Section 4 of this report, occur throughout the grassland habitats.

1.3.1.2 Eucalyptus Woodland

Two relatively small groves of Manna gum (*Eucalyptus viminalis*) comprise large, mature trees near the farm residence in the southwestern corner of the northwest property. These woodland areas are classified as *Eucalyptus* Semi-Natural Woodland Stands (Sawyer et al., 2009).

1.3.1.3 Agricultural

Portions of the eastern, northwest, and southwest properties, and the south triangle, support agricultural land uses. The land uses include irrigated alfalfa fields, and grasslands that support wheat (*Triticum aestivum*) and non-native grass species such as wild oat, Italian rye grass, and hood canarygrass (*Phalaris paradoxa*). The alfalfa fields and surrounding grassland on the southwest property are actively managed and cut in the spring for forage and hay. The non-native grassland on the eastern property is grazed by cattle seasonally as forage and to reduce fire hazard. The northwest property is seasonally burned to reduce fire hazard and used for wildland fire training.

1.3.2 Climate and Hydrology

The regional climate is characterized by cool, wet winters and warm, dry summers. Average annual temperatures range from a low of 35 degrees Fahrenheit (°F) in December and January to a high of 96°F in July. Average annual precipitation is 23 inches with the majority of the rainfall occurring between November and March. Less than an inch of total rainfall occurs on average between June and September (Western Regional Climate Center, 2017).

The project area is located within the Auburn Ravine and Pleasant Grove Creek-Cross Canal watersheds with hydrologic unit codes 1802016101 and 1802016103 (USGS, 2017). The watersheds collectively drain 121,135 square acres. The Auburn Ravine watershed flows into the East Side Canal in southeastern Sutter County, and the Pleasant Grove Creek-Cross Canal watershed empties into the Cross Canal and then into the Sacramento River (County of Placer, 2017). The Federal Emergency Management Agency (FEMA) has designated portions of the survey areas as flood zones A and AE, which are considered to have a 1 percent Annual Chance Flood Hazard, or as 100-year floodplain (FEMA, 2017).

¹ Taxonomic nomenclature follows the *Jepson Online Interchange for California Floristics* (University of California, Berkeley, 2017): <u>http://ucjeps.berkeley.edu/interchange/</u>.

1.3.3 Soils

Information on soil types was obtained from the Natural Resources Conservation Service (NRCS) Soil Survey for Placer County, Web Soil Survey (NRCS, 2017a) and official soil series descriptions (NRCS, 2017b). The four project area soil units are described in the following sections and shown on Figure 3.

1.3.3.1 Fiddyment Loam

Fiddyment loam soils were formed in alluvium from mixed sources and occur on level terraces, ridges, and hills. Munsell soil color charts are used to more accurately describe soil colors. The Munsell system has three components: (1) hue (a specific color), (2) value (how light or dark it is), and (3) chroma (color intensity) (NRCS, 2017b). Using the Munsell soil color system, the Fiddyment loam soil surface in a typical profile is a (10YR 5/3) (brown), slightly acid (pH 6.5), fine sandy loam that extends to a depth of 8 inches. Between 8 and 15 inches the soil is a yellowish brown (10YR 5/4), slightly acid (pH 6.5) loam that is underlain by a brown (10YR 5/3), neutral (pH 7.0), clay loam to a depth of 24 inches. Fiddyment loam soils are well drained with slow to medium runoff and very slow permeability. Water perches above the claypan (a dense, slowly permeable layer with a much higher clay content in the subsoil) for short periods after high rainfall events in the winter and early spring months, forming shallowly ponded wetland features (for example, vernal pool seasonal wetlands). Wetland features observed in the project area are described in Section 4.2.

1.3.3.2 Alamo-Fiddyment Complex

This map unit consists of 50 percent Alamo soil, 30 percent Fiddyment soils, and 20 percent minor components. Alamo soils formed in alluvium from mixed sources and occur in basins and drainages on floodplains and fan terraces. In a typical profile, the soil is a dark gray (10YR 4/1) clay to a depth of 27 inches. The surface soil is slightly acid (pH 6.1) and neutral (pH 7.0) below 9 inches. Depth to an indurated duripan (a silica-cemented subsurface horizon that slows water movement through the soil) is 27 inches (typically ranging between 20 and 30 inches). These soils are poorly drained, have very slow permeability and limited runoff, and are frequently ponded during the winter months. Fiddyment soils are described in Section 1.3.3.1.

1.3.3.3 Cometa-Fiddyment Complex

This map unit consists of 35 percent Cometa, 35 percent Fiddyment soils, and 30 percent minor components. Cometa soils were formed in alluvium from granitic sources and occur on level to gently sloping, slightly dissected older stream terraces. In a typical profile, the surface is a brown (10YR 5/3 to 7.5YR 5/4), slightly acid (pH 6.2-6.3), sandy loam to a depth of 17 inches. Between 17 and 27 inches the soil is a reddish brown (5YR 4/4), slightly acid (pH 6.4), sandy clay. Cometa soils are moderately well drained and have slow to moderate runoff and very slow permeability.

1.3.3.4 Fiddyment-Kaseberg Loam

This map unit is composed of 50 percent Fiddyment, 30 percent Kaseberg soils, and 20 percent minor components. Kaseberg soils are shallow and were formed in material weathered from consolidated sediments from mixed sources. Kaseberg soils occur on low-lying terraces and hill slopes. In a typical profile, the surface is a light brownish gray (10YR 6/2), moderate acid (pH 6.0) loam to a depth of 6 inches. Between 6 and 14 inches, the soil is a pale brown (10YR 6/3), slightly acid (pH 6.5) loam underlain by light gray (2.5Y 7/2), slightly acid (pH 6.3) silt loam. A silica-cemented hardpan is present at a depth of 16 inches. Kaseberg soils are well drained with slow or medium runoff and moderate permeability.

Regulatory Overview

The federal Clean Water Act (CWA) seeks to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The CWA establishes water quality standards and discharge limitations, and sets authorization requirements. Authorizations associated with Sections 401 and 404 of the CWA (described in this section) are relevant to the project.

2.1 Section 401

Section 401 of the CWA (governed by 33 *United States Code* [U.S.C.] 1341) and 40 *Code of Federal Regulations* [CFR] 121) requires a water quality certification to be issued by the State, the U.S. Environmental Protection Agency (EPA), or EPA's designee. A water quality certification is required when a project will result in a discharge to waters of the U.S., and needs a federal license or permit (such as a Section 404 permit). The certification may require certain conditions to be met to ensure water quality is adequately protected.

In California, the 401 Water Quality Certification and Wetlands Program regulates discharges of fill and dredged material under CWA Section 401 and the Porter-Cologne Water Quality Control Act. Most projects are regulated by Regional Water Quality Control Boards. The State Water Resources Control Board directly regulates multiregional projects and supports and coordinates the program statewide.

2.2 Section 404

Activities that have the potential to discharge dredged or fill materials into waters of the U.S., including adjacent wetlands, are regulated under Section 404 of the CWA, governed by 33 U.S.C. 1344 and 33 CFR 323, and administered by USACE. Traditionally, USACE has interpreted CWA regulations to define "waters of the United States" within nontidal waters, in the absence of adjacent wetlands, as determined by the ordinary high water mark. Regulated activities may be permitted by a nationwide or individual permit. The Nationwide Permit Program applies to certain activities that have been preauthorized by USACE because USACE has determined that such activities would have minimal individual and cumulative adverse effects on the aquatic environment. The Individual Permit Program applies to projects that do not meet the significance thresholds or general permit conditions of the Nationwide Permit Program. Applications are submitted to USACE for permit issuance in conformance with the National Environmental Policy Act.

SECTION 3 Methods

Aquatic resource delineation field surveys were conducted across the entire survey area between May 1 and May 19, 2017, and on June 26, 2017, by CH2M HILL Engineers, Inc., biologists Russell Huddleston, Victor Leighton, Amy Hiss, and Mia Marek. The purpose of the field surveys was to identify the presence and extent of wetlands and other waters of the U.S., and collect data on vegetation, soils, and hydrologic conditions located within the survey areas. This section describes the field sampling methods used to determine and map the potentially jurisdictional features within the survey areas.

3.1 Prefield Investigation

Before the field survey, available materials pertaining to area conditions, wetlands, and other water resources were reviewed. The following materials were included in this data review:

- Soil maps and descriptions (NRCS, 2017a and 2017b; Figure 3)
- USGS topographic quadrangle maps
- National Hydrography Dataset (USGS, 2017; Figure 4)
- National Wetlands Inventory maps (U.S. Fish and Wildlife Service, 2017; Figure 4)

3.2 Field Surveys

3.2.1 Definitions

The USACE defines a wetland as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (USACE, 2014). Section 404 of the CWA (40 CFR 230.3(s)) is regulated by EPA and defines other waters of the U.S. as follows:

- 1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide
- 2. All interstate waters including interstate wetlands
- 3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
 - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - c. Which are used or could be used for industrial purposes by industries in interstate commerce
- 4. All impoundments of waters otherwise defined as waters of the United States under this definition;
- 5. Tributaries of waters identified in (1) through (4) of this section
- 6. The territorial sea

 Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in (1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA, are not waters of the U.S.

Waters of the State, as defined by the California Water Code, Division 7, Water Quality (Section 13050-13051) defines water of the State broadly as any surface water or groundwater, including saline waters, within the boundaries of the state.

3.2.2 Methodology for Delineating Wetland and Other Aquatic Resources of the United States

The survey methodology followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008).

Because there were no riverine or tidal features in the project area, the delineation focused on wetlands and other aquatic resources within the survey areas. Information on vegetation, soils, and hydrology for wetlands and adjacent uplands within the project area was recorded on wetland determination data sheets. At each sample point, plant species were identified and the percent cover was visually estimated and recorded. The wetland indicator status for the dominant and common associated species at each sample location was determined using the National Wetland Plant List (Lichvar et al., 2016). Dominant species included the most abundant species whose cumulative cover accounted for at least 50 percent of the vegetative cover, as well as any single species that accounted for at least 20 percent of the vegetative cover (Environmental Laboratory, 1987).

Descriptions of soils were made by examining soil pits excavated using tile-spade shovel. Soil pits were generally excavated to depths of 12 inches. At each sample point, notation was made of soil morphological features such as texture, color, and redoximorphic features (soil features formed by the processes of reduction, translocation, or oxidation of iron and manganese oxides, if present) (NRCS, 2016). Given the seasonal nature of surface water in most of the wetland areas, wetland hydrology was determined based on field observations of indicators such as algal matting, defined depressional topography with notable changes in vegetation from the adjacent grassland, and cattle hoof punches (indicative of saturated soils). Long-term rainfall conditions, as well as seasonal rainfall, drainage, landscape position, general topography, and land use, were also taken into consideration while making wetland hydrology determinations.

The wetland boundary was determined based on notable changes in vegetation as well as microtopography. Once the wetland boundary was identified, a Trimble Geo XH Global Positioning System (GPS) or iPad data collectors with Trimble GPS receivers were used to map the boundaries. Both mapping systems have post-processed submeter accuracy. Representative photographs were taken throughout the survey areas and are included in Appendix B.

SECTION 4

Results

This section presents the delineation results for the three proposed expansion properties and the south triangle mitigation area. Section 4.1 describes overall site conditions and Section 4.2 contains a detailed description of the wetlands and other aquatic resources observed on each property.

4.1 Site Conditions

The total amount of rainfall for the 2016-2017 water year in the Sacramento region was nearly double the average with a significant amount of rain falling in January and February of 2017 (California Department of Water Resources, 2017). As a result, many of the seasonal wetlands remained inundated well into April, the time of year the vernal pools would typically be starting to dry and vernal pool plants would be at peak bloom. The surveys therefore commenced in early May. At the time of the May surveys, all but the larger wetlands and irrigation ponds were dry and annual plants were in full bloom. During the May surveys, cattle were present on the eastern property, but grazing was light and was not considered to be a significant disturbance in this area. No recent disturbance was evident on any of the other properties at the time of the surveys.

4.2 Wetland and Other Aquatic Resources

Wetlands and other aquatic resources observed in the project area include seasonal wetlands, swales, irrigation ponds, irrigated wetlands, and excavated drainages (Table 4-1). Land use and disturbance appear to be major factors in both the abundance and type of wetlands and other aquatic resources observed in the project area. The number and quality of wetlands and other aquatic resources found on each property is likely due in part to differences in land use and degree of disturbance. The locations of wetlands are shown on Figures 5 through 8. Data sheets for each wetland sample point can be found in Appendix C. A complete list of plant species observed onsite is included in Appendix D.

Feature	Eastern Property (acres)	Northwest Property (acres)	Southwest Property (acres)	South Triangle (acres)
Seasonal Wetland	5.35	2.22	0	0.94
Swale	6.38	4.88	0.03	0
Irrigation Pond	0	0	2.45	0
Irrigated Wetland	0	0	1.04	0
Excavated Drainage	0	0	0.02	0
Total Wetlands and Other Aquatic Resources	11.73	7.10	3.54	0.94

Table 4-1. Wetlands and Other Ac	nuatic Resources Observed in the	W/DW/MA Project Area
Table 4-1. Wetlands and Other At	qualic Resources Observed in the	wPWWWA Project Area

4.2.1 Eastern Property

Of the three WPWMA properties, the eastern property is the least disturbed and contains the most wetland and aquatic resources (Tables 4-1 and 4-2, Figure 5). Mapping of vernal pool complexes throughout the Central Valley conducted by Dr. Bob Holland between 1995 and 2012, includes the eastern property as part of a large, regional complex of medium-density vernal pool lands (California Department of Fish and Wildlife [CDFW], 2017a). During the 2017 survey, a total of 5.35 acres of

SECTION 4 - RESULTS

seasonal wetlands were identified on this property. Additionally, 6.38 acres of swales that likely convey surface water for brief period of time in response to heavy rainfall events were also identified on this property (Tables 4-1 and 4-2).

Feature ID	Feature Type	Cowardin Class ^a	Area (acres)	Length (linear feet)	Latitude	Longitude
SW-058	Seasonal Wetland	PEM	0.20	-	38.83517	-121.3366847
SW-059	Seasonal Wetland	PEM	0.05	-	38.83145	-121.3371965
SW-060	Seasonal Wetland	PEM	0.12	-	38.83865	-121.3386435
SW-061	Seasonal Wetland	PEM	0.03	-	38.83821	-121.3384037
SW-062	Seasonal Wetland	PEM	0.03	-	38.83875	-121.3359598
SW-063	Seasonal Wetland	PEM	0.01	-	38.83555	-121.3355419
SW-064	Seasonal Wetland	PEM	0.04	-	38.83385	-121.3355288
SW-065	Seasonal Wetland	PEM	0.03	-	38.83404	-121.3381406
SW-066	Seasonal Wetland	PEM	0.18	-	38.83326	-121.3380098
SW-067	Seasonal Wetland	PEM	0.02	-	38.83143	-121.3355367
SW-068	Seasonal Wetland	PEM	0.03	-	38.83089	-121.3359337
SW-069	Seasonal Wetland	PEM	0.10	-	38.83058	-121.335517
SW-070	Seasonal Wetland	PEM	0.05	-	38.82788	-121.3355229
SW-071	Seasonal Wetland	PEM	0.03	-	38.82598	-121.3360804
SW-072	Seasonal Wetland	PEM	0.10	-	38.83754	-121.3392834
SW-073	Seasonal Wetland	PEM	0.04	-	38.83303	-121.3384449
SW-074	Seasonal Wetland	PEM	0.01	-	38.83286	-121.3384012
SW-075	Seasonal Wetland	PEM	0.02	-	38.83268	-121.338041
SW-076	Seasonal Wetland	PEM	0.01	-	38.83215	-121.3381182
SW-077	Seasonal Wetland	PEM	0.00	-	38.83224	-121.3380003
SW-078	Seasonal Wetland	PEM	0.01	-	38.83211	-121.3380785
SW-079	Seasonal Wetland	PEM	0.00	-	38.83155	-121.3384209
SW-080	Seasonal Wetland	PEM	0.00	-	38.83151	-121.3383361
SW-081	Seasonal Wetland	PEM	0.00	-	38.83148	-121.3383016
SW-082	Seasonal Wetland	PEM	0.00	-	38.83117	-121.3383512
SW-083	Seasonal Wetland	PEM	0.05	-	38.83022	-121.3386174
SW-084	Seasonal Wetland	PEM	0.16	-	38.82991	-121.3383449
SW-085	Seasonal Wetland	PEM	0.01	-	38.82929	-121.3383969
SW-086	Seasonal Wetland	PEM	0.09	-	38.82968	-121.3391677
SW-087	Seasonal Wetland	PEM	0.07	-	38.82891	-121.3394825

Table 4-2. Wetlands and Other Aquatic Resources Observed on the Eastern Property

Table 4-2. Wetlands and Other Aquatic Resources Observed on the Eastern Property

Feature ID	Feature Type	Cowardin Class ^a	Area (acres)	Length (linear feet)	Latitude	Longitude
SW-088	Seasonal Wetland	PEM	0.36	-	38.83131	-121.339855
SW-089	Seasonal Wetland	PEM	0.04	-	38.83578	-121.338856
SW-090	Seasonal Wetland	PEM	0.03	-	38.83591	-121.3387475
SW-091	Seasonal Wetland	PEM	0.01	-	38.8355	-121.3397484
SW-092	Seasonal Wetland	PEM	0.00	-	38.83422	-121.3394228
SW-093	Seasonal Wetland	PEM	0.01	-	38.83369	-121.3397577
SW-094	Seasonal Wetland	PEM	0.05	-	38.83861	-121.3397106
SW-095	Seasonal Wetland	PEM	0.03	-	38.83794	-121.3398855
SW-096	Seasonal Wetland	PEM	0.02	-	38.83528	-121.3379235
SW-097	Seasonal Wetland	PEM	0.02	-	38.83518	-121.3376418
SW-098	Seasonal Wetland	PEM	0.00	-	38.82983	-121.3370564
SW-099	Seasonal Wetland	PEM	0.01	-	38.82599	-121.337389
SW-142	Seasonal Wetland	PEM	0.04	-	38.83574	-121.3367939
SW-143	Seasonal Wetland	PEM	0.09	-	38.83232	-121.3383511
SW-144	Seasonal Wetland	PEM	0.05	-	38.83252	-121.3382797
SW-145	Seasonal Wetland	PEM	0.06	-	38.83115	-121.3368606
SW-146	Seasonal Wetland	PEM	0.08	-	38.82958	-121.3388644
SW-147	Seasonal Wetland	PEM	0.06	-	38.8383	-121.3368121
SW-148	Seasonal Wetland	PEM	0.06	-	38.83756	-121.3368169
SW-149	Seasonal Wetland	PEM	0.32	-	38.83819	-121.3360538
SW-150	Seasonal Wetland	PEM	0.12	-	38.83631	-121.3366714
SW-151	Seasonal Wetland	PEM	0.08	-	38.83523	-121.3356036
SW-152	Seasonal Wetland	PEM	0.13	-	38.83149	-121.3364993
SW-153	Seasonal Wetland	PEM	0.10	-	38.82999	-121.3355306
SW-154	Seasonal Wetland	PEM	0.11	-	38.82891	-121.3355105
SW-155	Seasonal Wetland	PEM	0.01	-	38.8316	-121.3382546
SW-156	Seasonal Wetland	PEM	0.11	-	38.83177	-121.3384178
SW-157	Seasonal Wetland	PEM	0.06	-	38.83094	-121.3384166
SW-158	Seasonal Wetland	PEM	0.22	-	38.83304	-121.3391935
SW-159	Seasonal Wetland	PEM	0.03	-	38.83043	-121.3377074
SW-160	Seasonal Wetland	PEM	0.01	-	38.83027	-121.3378847
SW-161	Seasonal Wetland	PEM	0.04	-	38.83038	-121.3386691
SW-162	Seasonal Wetland	PEM	0.01	-	38.82983	-121.3375464

Feature ID	Feature Type	Cowardin Class ^a	Area (acres)	Length (linear feet)	Latitude	Longitude
SW-163	Seasonal Wetland	PEM	0.01	-	38.82981	-121.3376313
SW-164	Seasonal Wetland	PEM	0.11	-	38.82918	-121.3384925
SW-165	Seasonal Wetland	PEM	0.06	-	38.82904	-121.3398258
SW-166	Seasonal Wetland	PEM	0.78	-	38.82968	-121.3397842
SW-167	Seasonal Wetland	PEM	0.46	-	38.83049	-121.3397705
SW-168	Seasonal Wetland	PEM	0.01	-	38.8341	-121.3387481
SW-169	Seasonal Wetland	PEM	0.02	-	38.83541	-121.337259
SW-170	Seasonal Wetland	PEM	0.03	-	38.83381	-121.3376735
S-03	Swale	PEM	1.52	3,166.01	38.83707	-121.336336
S-04	Swale	PEM	0.01	81.03	38.83121	-121.3369606
S-05	Swale	PEM	0.09	153.27	38.83775	-121.33658
S-06	Swale	PEM	0.09	215.77	38.83782	-121.3361795
S-07	Swale	PEM	0.03	89.34	38.83835	-121.3356344
S-08	Swale	PEM	0.64	1,354.03	38.83475	-121.3361366
S-09	Swale	PEM	3.23	5,325.86	38.82566	-121.3375354
S-10	Swale	PEM	0.26	418.28	38.83044	-121.3379537
S-11	Swale	PEM	0.16	264.33	38.8297	-121.3377927
S-12	Swale	PEM	0.34	718.39	38.8344	-121.3390604

Table 4-2. Wetlands and Other Aquatic Resources Observed on the Eastern Property

^a Source: Cowardin et al., 1979.

Notes:

- = not applicable

PEM = palustrine emergent

Seasonal wetlands on this site range from small relatively shallow depressions that were mostly dry at the time of the May 2017 surveys, to large basins that were deep enough to remain inundated until later in the summer. Vegetation around the edge of seasonal wetland basins is generally characterized by naturalized species such as Mediterranean barley, Italian rye grass, lesser hawkbit, curly dock, and hyssop loosestrife. Some seasonal wetlands were characterized almost entirely by these non-native species. The central and deeper areas of vernal pool seasonal wetlands are characterized by native species such as vernal pool buttercup (*Ranunculus bonariensis*), popcorn flower (*Plagiobothrys* spp.), smooth goldfields (*Lasthenia glaberrima*), downingia (*Downingia* spp.), and creeping spikerush (*Eleocharis macrostachya*). One California Rare Plant Rank (CRPR) 2B.2 species, dwarf downingia (*Downingia pusilla*), was observed in flower in a large vernal pool seasonal wetland located at the western edge of the property (Figure 5). Several hundred plants were found within this large wetland feature. A photograph of this species is provided in Appendix B. Soils in seasonal wetlands were typically a dark grayish brown (Munsell soil color 10YR 4/2) silty clay loam with 2 to 10 percent dark brown (Munsell soil color 7.5YR 3/4) iron concentrations in the soil matrix.

Several linear swale features occur throughout this property, including a large swale complex in the southern half of the property (Figure 5) and one in the very northern part of the property, near Athens Avenue. These features are characterized by low, sometimes weakly expressed, linear, topographic

depressions that appear to convey surface water for short durations in response to heavy rainfall. In some instances, these swales either contain seasonal wetlands, or convey surface water into or out of these features. Vegetation throughout the swales includes lesser hawkbit, Mediterranean barley, Italian rye grass, and toad rush (*Juncus bufonius*). Surface soils associated with the swale features within this property are typically a brown (10YR 4/3) silty clay loam with 2 percent strong brown (7.5YR 4/6) iron concentrations in the matrix, underlain by brown (10YR 4/3) silty clay with 5 percent strong brown (7.5YR 4/6) iron concentrations in the matrix.

The general hydrology gradient on this property flows from the northwest to the southeast in the northern half and northeast to southwest in the southern half of the property.

4.2.2 Northwest Property

Some areas of the northwest property, including the model airplane field and farm residence, have been leveled or developed and no wetlands or aquatic resources were observed in these areas. The remaining areas of this property have not been developed, but appear to have a number of compacted roads, altered depressional areas, and a low berm. This property is also used a wildland fire training area and is subject to frequent controlled burns.

Wetlands and aquatic resources observed on this property include natural depressional basins as well as areas along compacted roadways that are likely seasonally inundated and other created depressions that have developed wetland characteristics. There is also a low topographic swale feature along the east side of the property that appears to convey occasional flows in response to high rainfall events (Figure 6). This property was mapped as containing medium-density vernal pool seasonal wetlands by Dr. Holland in 1995, but was not included in subsequent mapping of vernal pool complexes in the area (CDFW, 2017a).

During the 2017 survey, a total of 2.22 acres of seasonal wetlands were identified on the northwest property (Table 4-1). Additionally, a total of 4.88 acres of swales that likely convey surface water for brief period of time in response to heavy rainfall events were identified (Tables 4-1 and 4-3, Figure 6).

Feature ID	Feature Type	Cowardin Class ^a	Area (acres)	Length (linear feet)	Latitude	Longitude
SW-001	Seasonal Wetland	PEM	0.003	-	38.8438	-121.3558458
SW-002	Seasonal Wetland	PEM	0.015	-	38.84361	-121.3558333
SW-003	Seasonal Wetland	PEM	0.003	-	38.84258	-121.3566426
SW-004	Seasonal Wetland	PEM	0.007	-	38.84033	-121.3571562
SW-005	Seasonal Wetland	PEM	0.004	-	38.84029	-121.3575433
SW-006	Seasonal Wetland	PEM	0.029	-	38.84244	-121.3557199
SW-007	Seasonal Wetland	PEM	0.003	-	38.84284	-121.351628
SW-008	Seasonal Wetland	PEM	0.005	-	38.84274	-121.3511549
SW-009	Seasonal Wetland	PEM	0.005	-	38.84274	-121.3506696
SW-010	Seasonal Wetland	PEM	0.009	-	38.84274	-121.3505599
SW-011	Seasonal Wetland	PEM	0.001	-	38.84273	-121.3501694
SW-012	Seasonal Wetland	PEM	0.244	-	38.84598	-121.3561026
SW-013	Seasonal Wetland	PEM	0.036	-	38.84421	-121.3525584
SW-014	Seasonal Wetland	PEM	0.002	-	38.84469	-121.3526374

Table 4-3. Wetlands and Other Aquatic Resources Observed on the Northwest Property

Table 4-3. Wetlands and Other Aquatic Resources Observed on the Northwest Property

Feature ID	Feature Type	Cowardin Class ^a	Area (acres)	Length (linear feet)	Latitude	Longitude
SW-015	Seasonal Wetland	PEM	0.023	-	38.84528	-121.3528074
SW-016	Seasonal Wetland	PEM	0.003	-	38.84537	-121.352926
SW-017	Seasonal Wetland	PEM	0.002	-	38.84522	-121.353068
SW-018	Seasonal Wetland	PEM	0.007	-	38.84559	-121.3538432
SW-019	Seasonal Wetland	PEM	0.002	-	38.84568	-121.3541311
SW-020	Seasonal Wetland	PEM	0.008	-	38.84576	-121.3542567
SW-021	Seasonal Wetland	PEM	0.005	-	38.84223	-121.3522195
SW-022	Seasonal Wetland	PEM	0.008	-	38.84168	-121.351414
SW-023	Seasonal Wetland	PEM	0.001	-	38.83994	-121.3504699
SW-024	Seasonal Wetland	PEM	0.020	-	38.84453	-121.3563305
SW-025	Seasonal Wetland	PEM	0.010	-	38.84437	-121.3558802
SW-026	Seasonal Wetland	PEM	0.111	-	38.84411	-121.3563045
SW-027	Seasonal Wetland	PEM	0.005	-	38.84372	-121.3566044
SW-028	Seasonal Wetland	PEM	0.004	-	38.84291	-121.3560526
SW-029	Seasonal Wetland	PEM	0.008	-	38.84312	-121.3530687
SW-030	Seasonal Wetland	PEM	0.009	-	38.84395	-121.3513913
SW-031	Seasonal Wetland	PEM	0.050	-	38.84582	-121.3539383
SW-032	Seasonal Wetland	PEM	0.008	-	38.8461	-121.3546135
SW-033	Seasonal Wetland	PEM	0.005	-	38.83965	-121.3543443
SW-034	Seasonal Wetland	PEM	0.021	-	38.84057	-121.3535667
SW-035	Seasonal Wetland	PEM	0.007	-	38.84023	-121.3535275
SW-036	Seasonal Wetland	PEM	0.022	-	38.84253	-121.3513988
SW-037	Seasonal Wetland	PEM	0.011	-	38.84129	-121.35023
SW-038	Seasonal Wetland	PEM	0.044	-	38.8411	-121.3501326
SW-039	Seasonal Wetland	PEM	0.002	-	38.84028	-121.3503425
SW-040	Seasonal Wetland	PEM	0.010	-	38.84015	-121.3503501
SW-054	Seasonal Wetland	PEM	0.062	-	38.84608	-121.3508028
SW-055	Seasonal Wetland	PEM	0.119	-	38.84605	-121.3521035
SW-056	Seasonal Wetland	PEM	0.004	-	38.84531	-121.3559196
SW-057	Seasonal Wetland	PEM	0.005	-	38.84542	-121.3559168
SW-100	Seasonal Wetland	PEM	0.006	-	38.84403	-121.3558506
SW-101	Seasonal Wetland	PEM	0.007	-	38.84392	-121.3558544
SW-102	Seasonal Wetland	PEM	0.015	-	38.84271	-121.3531224
SW-103	Seasonal Wetland	PEM	0.010	-	38.84272	-121.3527624

Table 4-3. Wetlands and Other Aquatic Resources Observed on the Northwest Property

Feature ID	Feature Type	Cowardin Class ^a	Area (acres)	Length (linear feet)	Latitude	Longitude
SW-104	Seasonal Wetland	PEM	0.003	-	38.84288	-121.3529544
SW-105	Seasonal Wetland	PEM	0.005	-	38.84288	-121.3528391
SW-106	Seasonal Wetland	PEM	0.016	-	38.8427	-121.3522982
SW-107	Seasonal Wetland	PEM	0.005	-	38.84277	-121.3523168
SW-108	Seasonal Wetland	PEM	0.014	-	38.84272	-121.3519886
SW-109	Seasonal Wetland	PEM	0.065	-	38.84441	-121.3522253
SW-110	Seasonal Wetland	PEM	0.003	-	38.84527	-121.3535416
SW-111	Seasonal Wetland	PEM	0.017	-	38.84525	-121.3536508
SW-112	Seasonal Wetland	PEM	0.006	-	38.84553	-121.3536809
SW-113	Seasonal Wetland	PEM	0.016	-	38.846	-121.3545191
SW-114	Seasonal Wetland	PEM	0.033	-	38.84032	-121.3555297
SW-115	Seasonal Wetland	PEM	0.035	-	38.84244	-121.3523349
SW-116	Seasonal Wetland	PEM	0.028	-	38.84253	-121.3520552
SW-117	Seasonal Wetland	PEM	0.042	-	38.84196	-121.3512494
SW-118	Seasonal Wetland	PEM	0.003	-	38.84484	-121.356121
SW-119	Seasonal Wetland	PEM	0.004	-	38.84438	-121.3559934
SW-120	Seasonal Wetland	PEM	0.069	-	38.84191	-121.3583234
SW-121	Seasonal Wetland	PEM	0.039	-	38.84086	-121.3583207
SW-122	Seasonal Wetland	PEM	0.091	-	38.84048	-121.3582409
SW-123	Seasonal Wetland	PEM	0.005	-	38.84331	-121.3525312
SW-124	Seasonal Wetland	PEM	0.015	-	38.84486	-121.3523921
SW-125	Seasonal Wetland	PEM	0.004	-	38.84501	-121.352474
SW-126	Seasonal Wetland	PEM	0.010	-	38.84525	-121.3524736
SW-127	Seasonal Wetland	PEM	0.008	-	38.84544	-121.3535178
SW-128	Seasonal Wetland	PEM	0.006	-	38.84553	-121.3535966
SW-129	Seasonal Wetland	PEM	0.006	-	38.84613	-121.3546848
SW-130	Seasonal Wetland	PEM	0.550	-	38.84232	-121.3534931
SW-131	Seasonal Wetland	PEM	0.073	-	38.84195	-121.3507094
SW-139	Seasonal Wetland	PEM	0.016	-	38.84483	-121.3558949
SW-140	Seasonal Wetland	PEM	0.008	-	38.84519	-121.3559071
SW-141	Seasonal Wetland	PEM	0.020	-	38.84602	-121.3562418
S-13	Swale	PEM	4.883	3,897.10	38.84282	-121.3522099

^a Source: Cowardin et al., 1979.

Notes:

- = not applicable

PEM = palustrine emergent

SECTION 4 - RESULTS

Seasonal wetlands mapped on this property include both natural depressional basins as well as areas that appear to be associated with compacted roads that were characterized by similar vegetation. Characteristic plant species included vernal pool buttercup, popcorn flower, downingia, woolly marbles, and in some of the deeper areas, creeping spikerush. Soils on this property were more variable than the other properties, with some of the vernal pool areas having a brown (7.5YR 4/3) sandy loam with up to 15 percent strong brown (7.5YR 4/6) concentration in the upper part, and others with a mix of brown (7.5YR 4/2) and dark brown (7.5YR 3/4) silty clay loam in the upper part.

Typical vegetation in these areas includes Mediterranean barley, Italian rye grass, hyssop loosestrife, lesser hawkbit, and Fitch's tarweed (*Centromadia fitchii*). Soils from sample points within this property included mixed brown (7.5YR 4/3; 7.5YR 4/2) and dark brown (7.5YR 3/4) silty clay loams and sandy clay loams.

The large swale feature on the east side of the property is a weakly expressed topographic feature that was generally not evident in the field, other than the culverts at Fiddyment Road and East Catlett Road. This is a blue line feature on the National Wetlands Inventory map (Figure 4). This feature does not have any defined bed and bank characteristic evident during the time of the May survey with the exception of notable scouring near the northern culvert at East Catlett Road. Observations of two dead fish species in this general area, as well as aerial imagery of the property obtained from Google Earth and National Wetlands Inventory maps, all suggest that water at least occasionally flows through this swale. Vegetation throughout this part of the property, including the low swale, is characterized by dense cover of Italian rye grass.

The general hydrology gradient on this property is from the northwest to the southeast of the property.

4.2.3 Southwest Property

The southwest property is the most altered of the three WPWMA properties, consisting of cultivated and irrigated fields. This property appears to have been farmed for a long time as it was not included on the 1995 vernal pool maps or any subsequent vernal pool mapping (CDFW, 2017b). Wetlands and aquatic resources on this property all appear to be the result of agricultural irrigation.

Two constructed ponds on the north side of the center pivot irrigated alfalfa fields are used to capture and hold irrigation water (Figure 7). At the time of the survey, both ponds were full of water, but these ponds appear to dry later in the season after the fields have been harvested and irrigation water is not used. As shown in Table 4-1, 0.03 acre of swales, 2.45 acres of irrigation ponds, 1.04 acres of irrigated wetlands, and 0.02 acre of excavated drainage were mapped. The total amount of wetlands and other aquatic resources on the northwest property is 3.54 acres (Tables 4-1 and 4-4, Figure 7).

1 - 414	
Latituc	le Longitude
38.8384	48 -121.35020
38.837	71 -121.35802
38.837	30 -121.35760
38.824	86 -121.35631
38.827	78 -121.35054
38.832	21 -121.35214
38.824	69 -121.35774
	38.827 38.8322 38.824

^a Source: Cowardin et al., 1979.

Notes:

- = not applicable

PEM = palustrine emergent

Vegetation around the water's edge at the time of the survey included Italian rye grass, Mediterranean barley, hyssop loosestrife, smooth goldfields, popcorn flower, creeping spikerush, and water pygmy weed (*Crassula aquatica*).

Other wetland areas, in the southern part of this property, appear to have developed as the result of excess irrigation water. The irrigated wetland in the southwest corner of this property is characterized by creeping spikerush, vernal pool buttercup, manna grass (*Glyceria x occidentalis*) and Italian rye grass. There is also an irrigated wetland on the east side of the southern alfalfa field, where vegetation includes manna grass, Italian rye grass, Mediterranean barley, tall flatsedge (*Cyperus eragrostis*), hyssop loosestrife, annual bluegrass (*Poa annua*), with some popcorn flower and annual hairgrass (*Deschampsia danthonioides*). In addition to these irrigated wetlands, there are a few small excavated drainages and swales in the southern part of the property that also appear to drain irrigation runoff.

This property has a rise in the central portion with flow gradients from the center to the northwest, northeast, southwest, and southeast corner of the property.

4.2.4 South Triangle

The south triangle contains both naturalized and created seasonal wetlands that were created for wetland mitigation. During the 2017 survey, 0.94 acre of seasonal wetlands were identified on the south triangle. Naturalized seasonal wetlands are located on the western side of this parcel (Tables 4-1 and 4-5, Figure 8) and are characterized by creeping spikerush, curly dock, coyote thistle (*Eryngium castrense*), and Italian rye grass. The entire area appears to have been altered, creating depressional and scraped features. The southwestern portion of the parcel has earthen berms planted with non-native conifers (*Pinus* sp.), which act as a visual buffer for the landfill. These berms retain water and create naturalized wetlands. The created vernal pool seasonal wetlands on this parcel occur in well-defined topographic basins with coyote thistle, smooth goldfields, popcorn flower, Fremont's goldfields (*Lasthenia fremontii*), vernal pool buttercup, Italian rye grass, hyssop loosestrife, and curly dock. The general hydrology gradient on this parcel is from the northeast to the southwest.

Feature ID	Feature Type	Cowardin Class ^a	Area (acres)	Length (linear feet)	Latitude	Longitude
SW-042	Seasonal Wetland	PEM	0.097	-	38.82616	-121.34877
SW-043	Seasonal Wetland	PEM	0.041	-	38.82632	-121.34857
SW-044	Seasonal Wetland	PEM	0.008	-	38.82649	-121.34853
SW-045	Seasonal Wetland	PEM	0.002	-	38.82615	-121.34851
SW-046	Seasonal Wetland	PEM	0.001	-	38.82602	-121.34839
SW-047	Seasonal Wetland	PEM	0.118	-	38.82464	-121.34875
SW-048	Seasonal Wetland	PEM	0.016	-	38.82499	-121.34695
SW-049	Seasonal Wetland	PEM	0.053	-	38.82515	-121.34667
SW-050	Seasonal Wetland	PEM	0.004	-	38.82531	-121.34687
SW-051	Seasonal Wetland	PEM	0.050	-	38.82552	-121.34632
SW-052	Seasonal Wetland	PEM	0.003	-	38.82559	-121.34778
SW-053	Seasonal Wetland	PEM	0.006	-	38.82557	-121.34778
SW-132	Seasonal Wetland	PEM	0.046	-	38.82546	-121.34682
SW-133	Seasonal Wetland	PEM	0.009	-	38.82539	-121.34660

Table 4-5. Wetlands and Other Aquatic Resources Observed on the South Triangle

Table 4-5. Wetlands and Other Aquatic Resources Observed on the South Triangle

Feature ID	Feature Type	Cowardin Class ^a	Area (acres)	Length (linear feet)	Latitude	Longitude
SW-134	Seasonal Wetland	PEM	0.003	-	38.82520	-121.34600
SW-135	Seasonal Wetland	PEM	0.064	-	38.82537	-121.34873
SW-136	Seasonal Wetland	PEM	0.099	-	38.82480	-121.34793
SW-137	Seasonal Wetland	PEM	0.029	-	38.82553	-121.34655
SW-138	Seasonal Wetland	PEM	0.053	-	38.82575	-121.34761
SP-1	Seasonal Wetland (Pond)	PEM	0.237	-	38.82573	-121.34877

^a Source: Cowardin et al., 1979.

Notes:

- = not applicable
 PEM = palustrine emergent

SECTION 5 Conclusions

The delineation identified numerous potentially jurisdictional wetlands and other aquatic resources throughout the survey areas (Table 4-1). The eastern property included the greatest number and acreage of wetland and aquatic features, followed by the northwest and southwest properties, and the south triangle, respectively. The vernal pool seasonal wetlands observed on the south triangle appear to have been constructed as part of a previous restoration or mitigation effort. Relative to the other properties, the southwest property appears the most disturbed as a result of its agricultural use, and contains the lowest-quality wetland and aquatic resources, while the eastern property contains the highest-quality wetland habitat.

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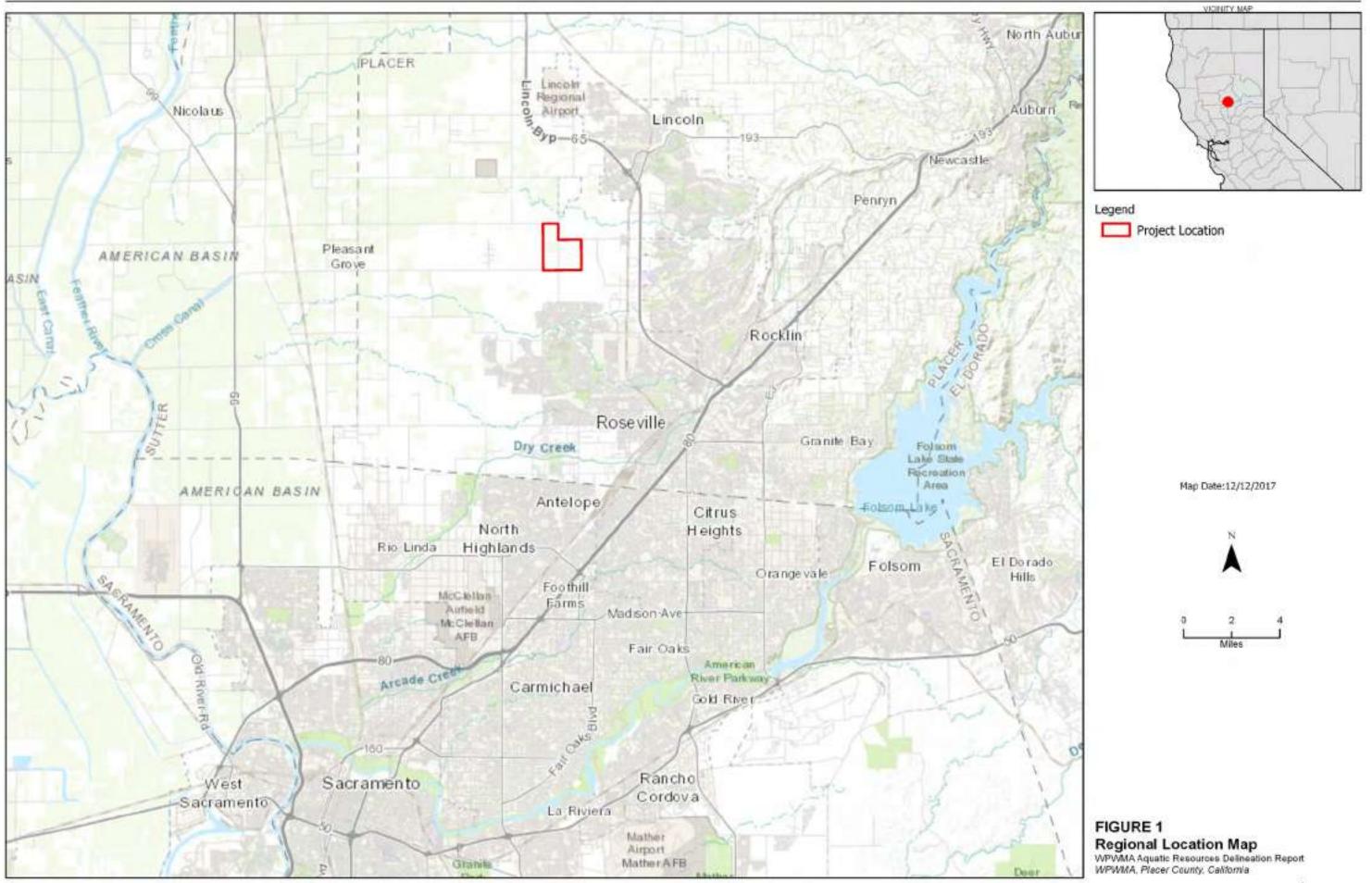
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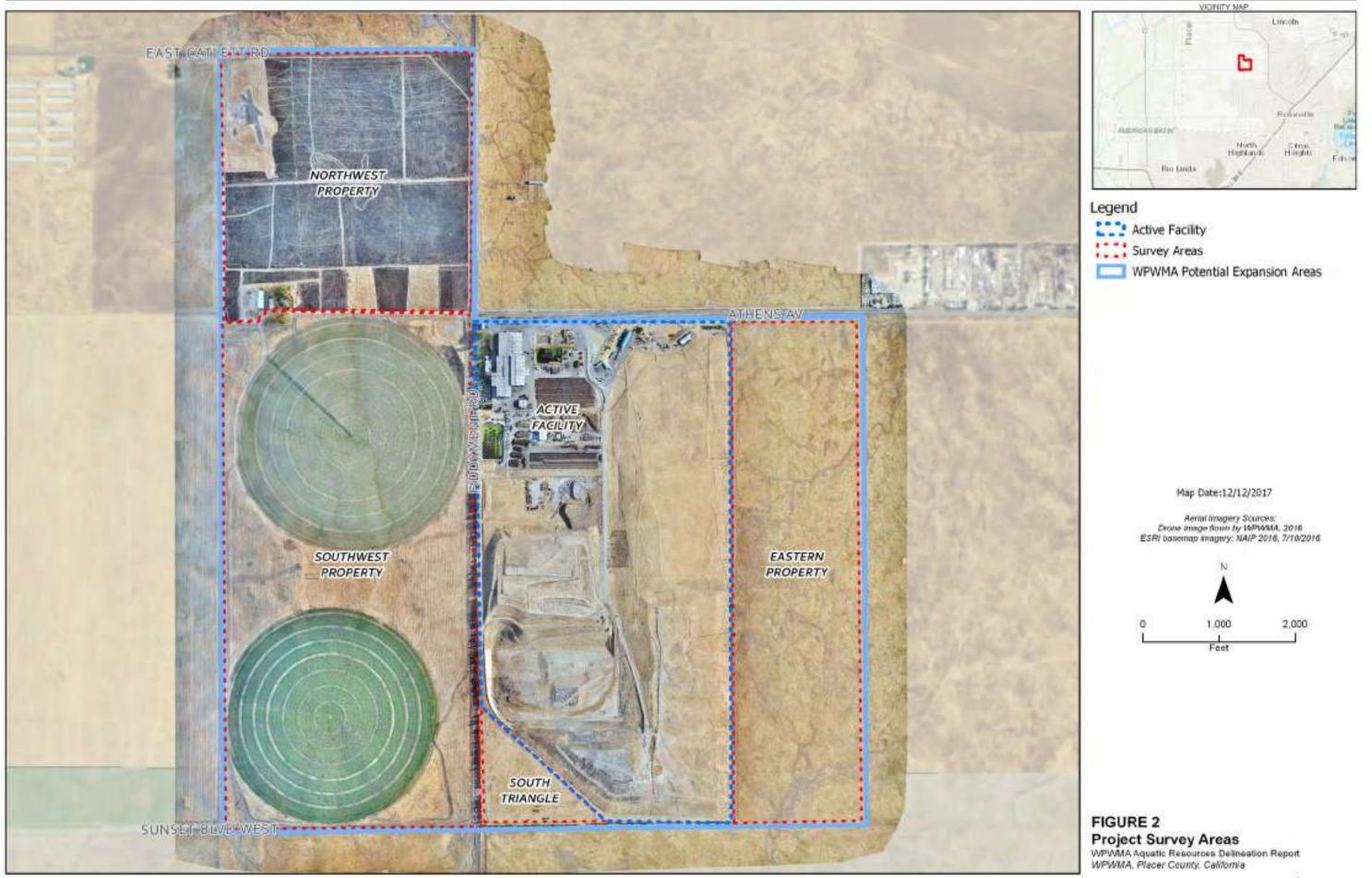
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Appendix A Figures



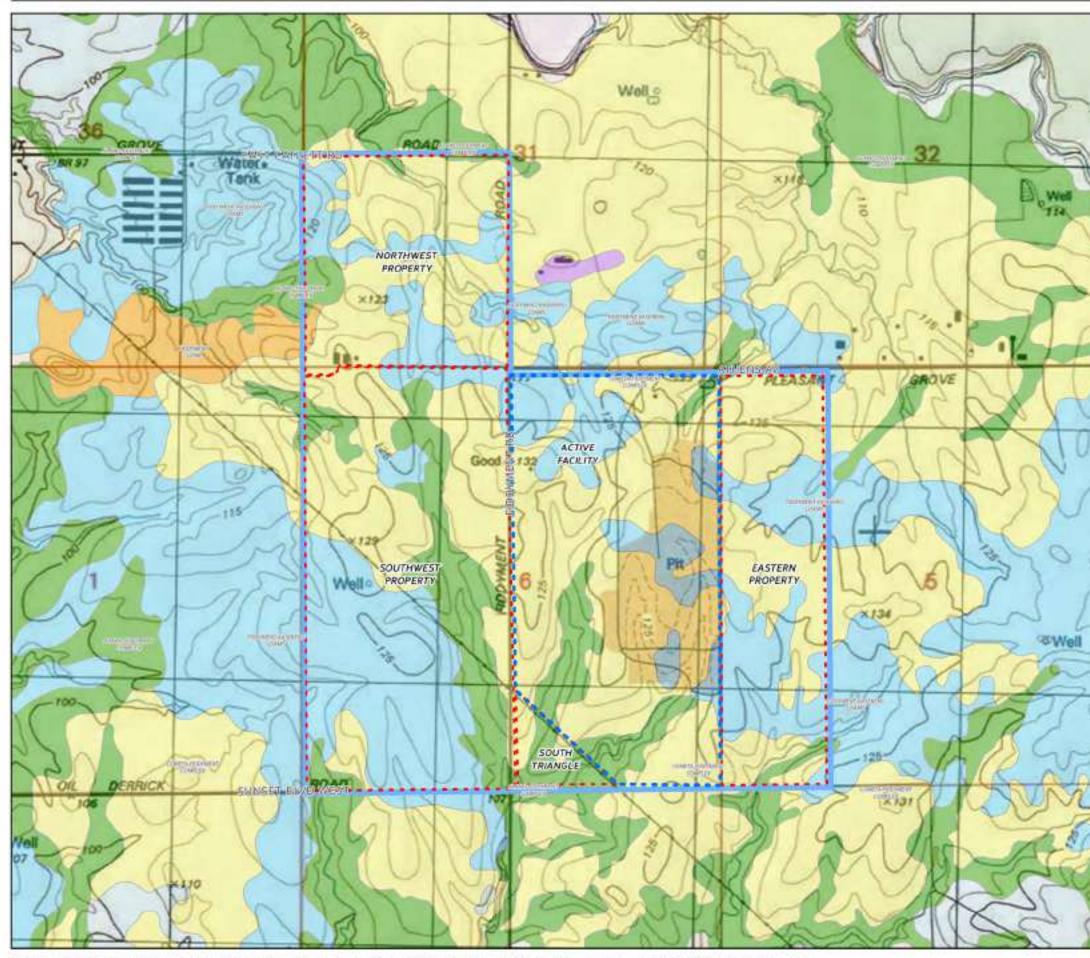
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UNK URROCKSICEAUS, SHAREERBUID, PROJAWARAWARAWARREPORTWRAMA, PHAL, BRINGSONT, REPORTWRAWARAWERANDELINESCHEMICA, REPORTARIX SSCOPES 12/12/017 8/03 PM





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Legend

- Active Facility
- Survey Areas
- WPWMA Potential Expansion Areas
- Soil Type

Alamo-Fiddyment complex, 0 to 5 percent slopes
 Cometa-Fiddyment complex, 1 to 5 percent slopes
 Cometa-Ramona sandy loams, 1 to 5 percent slopes
 Fiddyment loam, 1 to 8 percent slopes
 Fiddyment-Kaseberg loams, 2 to 9 percent slopes

USGS QUAD: ROSEVILLE

Map Date:12/12/2017

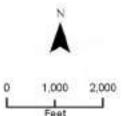
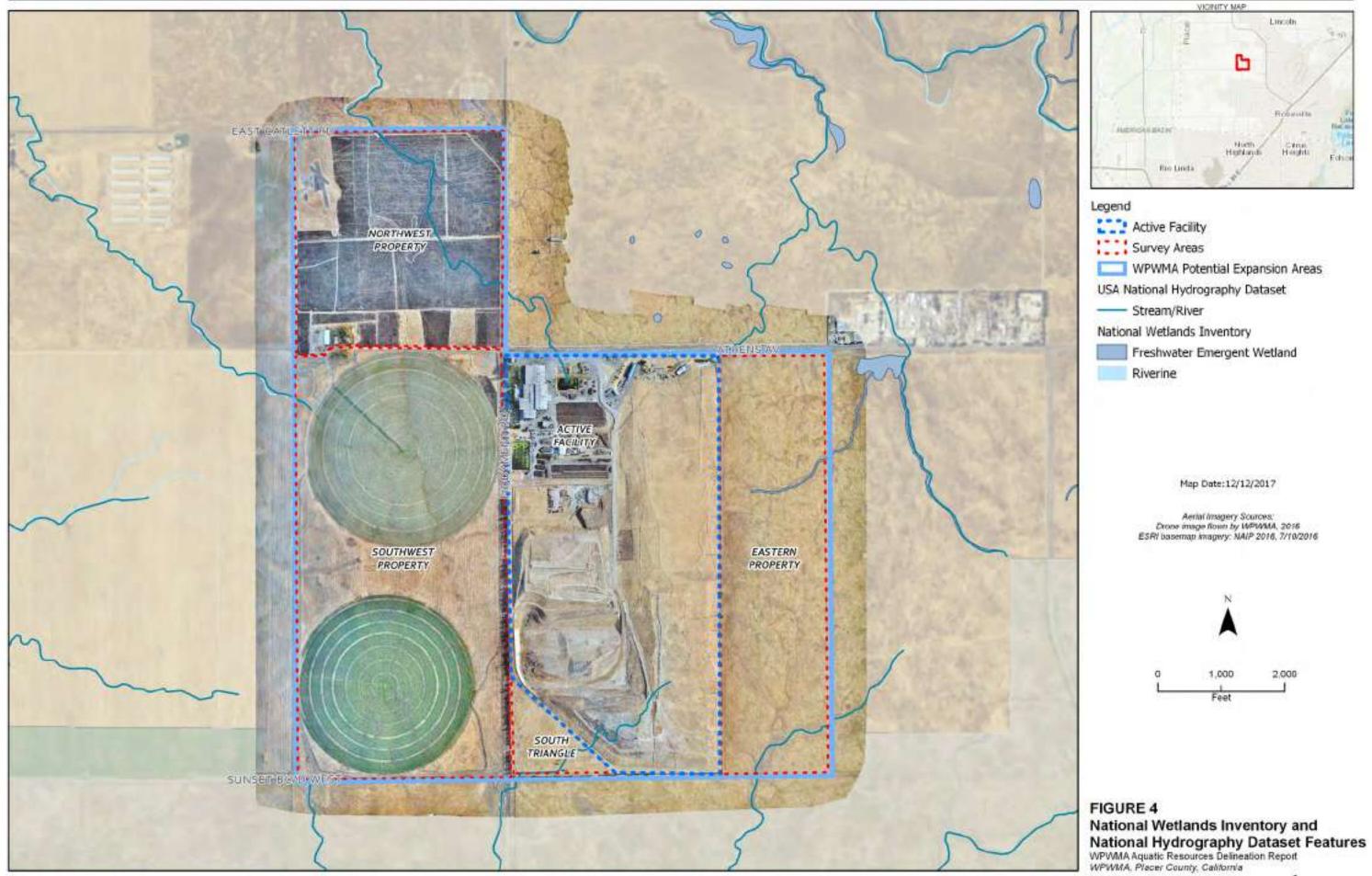


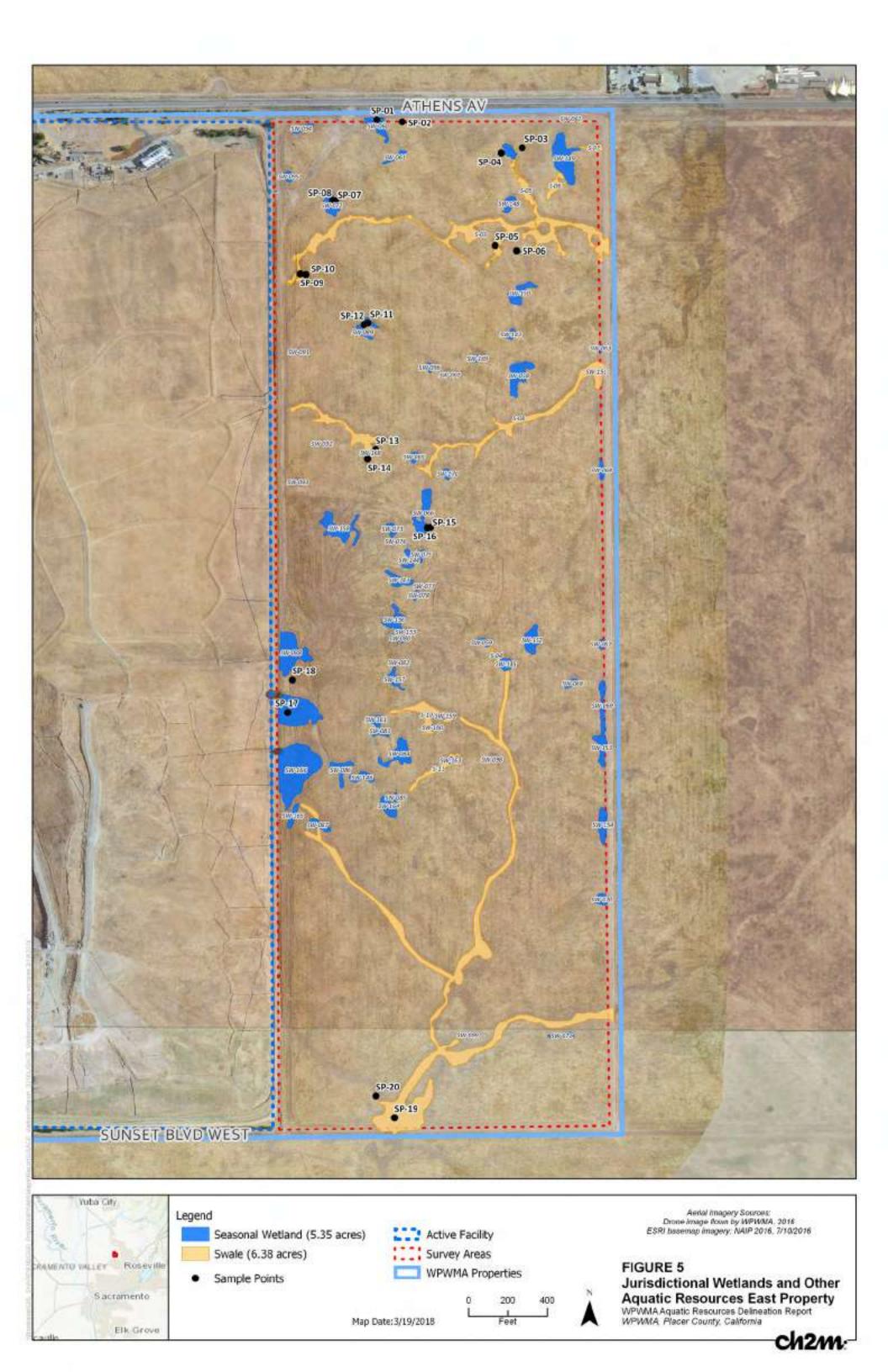
FIGURE 3 Soil Types WPWMA Aquatic Resources Delineation Report WPWMA, Placer County, California





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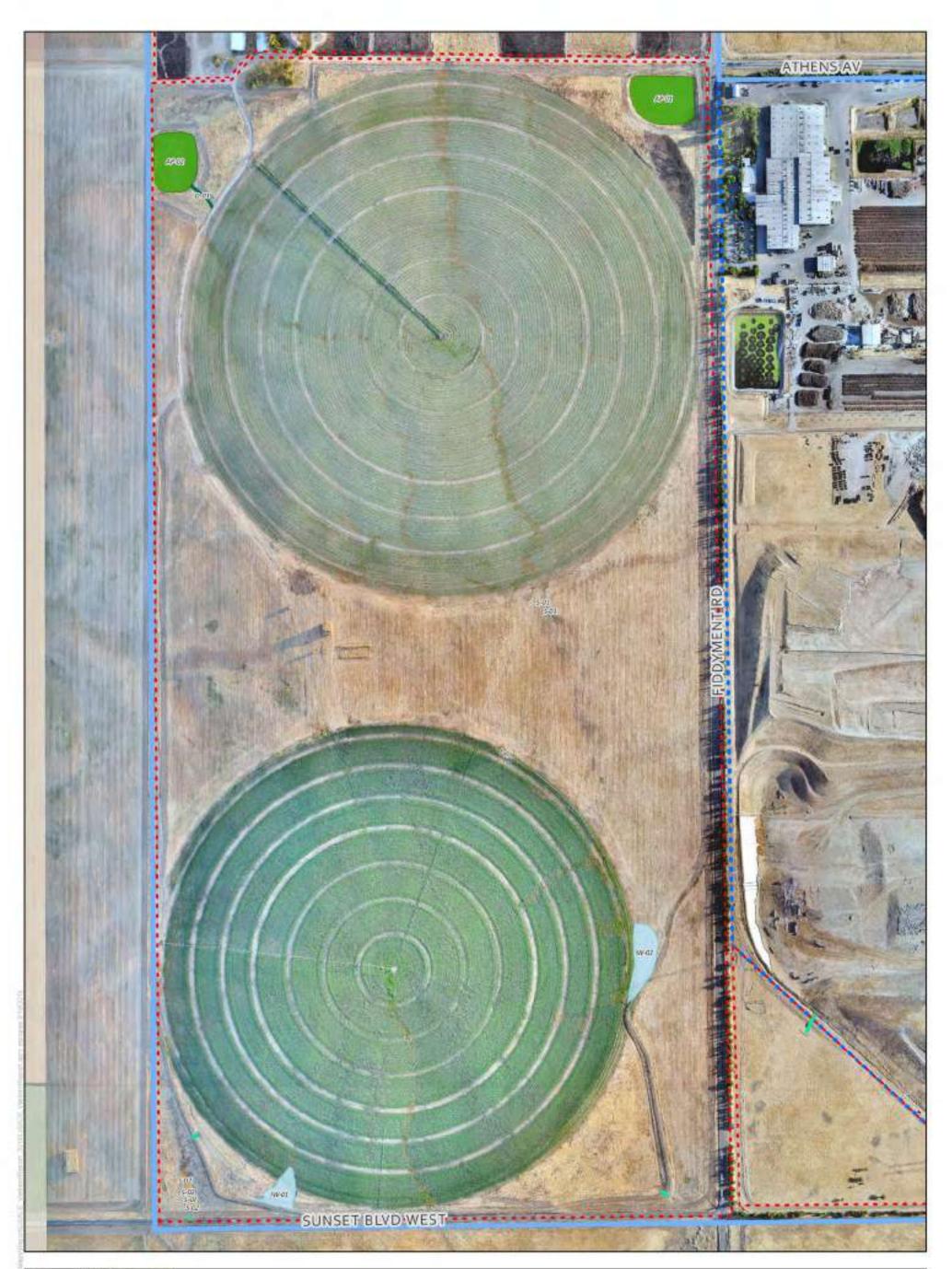
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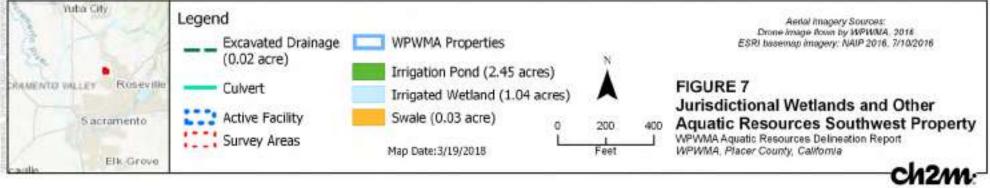




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VICIN	ITY MAP		
Plate	6	Lincoln	9.103
AMERICAN BELW		Roseville	Fc Lak Rec re
Rio Linda	North Highlands	Citrus Heights	Fols

Legend



- Culvert
 - Seasonal Wetland (0.94 acre)
- Active Facility
- Survey Areas
- WPWMA Properties

Map Date:3/19/2018

Aerial Imagery Sources: Drone image flown by WPWMA. 2016 ESRI basemap imagery: NAIP 2016. 7/10/2016



0 500 1,000 Feet

FIGURE 8 Jurisdictional Wetlands and Other Aquatic Resources South Triangle WPVMA Aquatic Resources Delineation Report WPVMA, Placer County, California



Appendix B Representative Site Photographs



Photograph 1: View south of annual grassland on the eastern property; May 1, 2017.



Photograph 2: View southeast of annual grassland on the northwest property; May 2, 2017.



Photograph 3: View southeast of annual grassland, eucalyptus grove, and barn areas on the northwest property; May 2, 2017.



Photograph 4: View west of irrigated alfalfa and adjacent grassland on the southwest property; May 3, 2017.



Photograph 5. View north of annual grassland on the south triangle; May 3, 2017.



Photograph 6. View west of vernal pool seasonal wetland on the eastern property; May 1, 2017.



Photograph 7: Dwarf downingia (Downingia pusilla) in vernal pool seasonal wetland on the eastern property; May 1, 2017.



Photograph 7. View northwest of seasonal wetland and swale on the eastern property; May 1, 2017.



Photograph 8. View north of seasonal wetland in the northwest portion of the eastern property; May 17, 2017.



Photograph 9. View south of irrigation pond in the northwest corner of the southwest property; May 3, 2017.

Appendix C Wetland Determination Data Sheets, Arid West Region

westigator(s): R. HUDDLESTON, U.LEKHTCH Section, Township, Rs	ange: 05 IIN OGE
andform (hillslope, terrace, etc.): TERICICE Local rollef (concave,	convex, none): Slope (%):
ubregion (LRR): Lat:	_ Long: Datum: MOS
Map Unit Name: COMIETA - FIDD7MINT COMPLIEX	NWI classification: NONE
e climatic / hydrologic conditions on the site typical for this time of year? Yes No _	X (If no, explain in Remarks.)
e Vegetation, Scil, or Hydrology significantly disturbed? Are	"Normal Circumstances" present? Yes 🔀 No
e Vegetation, Soil, or Hydrology naturally problematic? (If n	eeded, explain any answers in Remarks)
UMMARY OF FINDINGS - Attach site map showing sampling point	
Hydrophytic Vegetation Branand? Yes 🗸 Ma	
Hydric Soil Present? Yes X No	
Netland Hydrology Present? Yes X No Within a Wetha	
Remarks: ABOUR AUE RAINFALL, SFASONAL WERA	*D
EGETATION Use scientific names of plants.	
Tree Stratum (Plot size: 12/4) Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
Iree Stratum (Plot size: 17724) % Cover Species? Status	THE POST OF CONTINUES OF CASE
l	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
l	Species Across All Strata: (B)
4 = Total Cover = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
1	Prevalence Index worksheet:
2	Total % Cover of: Multiply by:
3	OBL species x1 =
L	FACW species x 2 =
i	FAC species x 3 =
ierb Stratum (Plot size: 577)	FACU species x 4 =
ELYCERIA X OCCIDENTALIS 45% YES OBL	UPL species x5 =
PAN HALLAS ALLAS AS AS	Column Totals: (A) (B)
PLACIOBOTHETS STIPITATES 2% FACW	
RUNEX CRISPUS TR FAC	Prevalence Index = B/A =
	Hydrophytic Vegetation Indicators: Dominance Test is >50%
	Prevalence Index is \$3.0"
	Morphological Adaptations ¹ (Provide supporting
L	data in Remarks or on a separate sheet)
Moody Vine Stratum (Piot size: NIA)	Problematic Hydrophytic Vegetation ¹ (Explain)
1	¹ Indicators of hydric soil and wetland hydrology must
2	be present, unless disturbed or problematic.
= Total Cover	Hydrophytic
Access with a sector operation of the sector	Vegetation Present? Yes X No
% Bare Ground in Herb Stratum % Cover of Biotic Crust	

WETLAND DETERMINATION DATA FORM - Arid West Region

lepth	Matrix		the second se	x Features		1.1	Texture	Remarks
inches)	Color (moist)	_%	Color (meist)	and the second second second	ype'	roc.		Kipilai ka
0-11	107123/2	78%	10784/6	2%	C	M	5:4	
	107R3/6	20%	1				SiL	
11-16	10YR4/1	100%		_	_		Sic	
Histoso Histoso Histic E Black H	pipedon (A2) listic (A3)	letion, RM=1 able to all I.	RRs, unless othe Sandy Red Stripped M Loamy Mu	rwise noted ox (S5)	-) F1)	1 Sand G	Indicators for F 1 cm Muck 2 cm Muck Reduced V	: PL=Pore Lining, M=Matrix, Problematic Hydric Soils ³ : (A9) (LRR C) (A10) (LRR B) ertic (F18) (Material (TF2))
Stratifie 1 cm M Deplete Thick C Sandy	en Suffde (A4) nd Layens (A5) (LRR 4 luck (A9) (LRR D) ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) Gieyed Maltrix (S4)	200	Depleted N Redox Dar Depleted D	latrix (F3) k Surface (Fi Jark Surface pressions (F8	5) (F7)		Other (Expl Indicators of hy wetland hydr	lain in Remarka) ydrophytic vegetation and ology must be present, bed or problematic.
Sandy	Layer (if present):						Mudde Soll Pre	sont? Yes 🗶 No_
Restrictive Type:	nches):	LATE	V2				Hydric doi: Fre	somer res res

Primary Indicators (minimum of one required: cf 	Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solt Thin Muck Surface (C7) Other (Explain In Romarks)	Crayfish Burrows (C8)
Water Table Present? Yes No Saturation Present? Yes No		Wetland Hydrology Present? Yes X No
Remarka:	20042000 / CIS - C/0 30	ions), if available;

EP-SP-02

rojecuste: EAST PARCIEL						
pplicant/Owner: UP WMA			State:	CA Samp	pling Point:	2
vestigator(s): R. HUDPLESTON, V. LE	161+TOP Sec	tion, Township, Ran	nge:	OS IIN	OBE	-
andform (hillslope, terrace, etc.):	Los	cal relief (concave, c	convex, none):	POPE	Slope (%): 🭊	2%
/bregion (LRR):	Lat:		Long		Datum: _NAD	08
Il Map Unit Name:Cert ETA - FIDD	YMENT	COMPLE	× NV	M classification:	NONE	
e climatic / hydrologic conditions on the site typical for	this time of year?	Yes No	× (If no, e)	xplain in Remark	3.)	
e Vegetation, Sall, or Hydrology	_significantly dist	urbed? Are '1	Normal Circum	stances" presen	t? Yes 🗶 No	
e Vegetation, Soil, or Hydrology	naturally problem	matic? (If ne	eded, explain a	ury answers in F	lemarks)	-
UMMARY OF FINDINGS – Attach site ma						80
A second second second second	ip showing as	impining point it	cations, tra	ansects, imp	portant features, et	tc.
	No X	Is the Sampled	Arma			
tydric Soil Present? Yes		within a Wetlan		Yes	No Y	
Vatland Hydrology Present? Yes				···	NO	
temarks: ABOUTE AVE REINEAL	-4-					
EGETATION – Use scientific names of pl	ants.					_
		ominant Indicator	Dominance *	Tast worksheet	1	_
iree Stratum (Plot size:)	<u>% Cover</u> S	pecies? Status	Number of De	minant Species	1.	
			That Are OBL	, FACW, or FAC	2 (A)	8
			Total Number	r of Dominant	3	1
			Species Acro	ss All Strata:	(B)	8
		Total Course	Percent of Do	minant Species	229	
apling/Shrub Stratum (Ptot size:)		I diar Cover	That Are OBL	., FACW, or FAC	= _33% (Ale	8)
. MA	_		Prevalence I	ndex workshee	ł:	-
			Total % (Cover of:	Multiply by:	
			OBL species		x 1 =	
					x2=	
·					x 3 =	
erb Stratum (Plot size: SFT)		Total Cover	COMPACT AND ADDRESS.	s	x 4 =	
ELYMUS CAPUT-MEDUSA	E 45%	YES NL	UPL species		x5 =	
LOLIGH PERENNET	20%	the second secon	Column Total	8:	(A) (B)	0
LEONTODON SAXATILIS		YES FACU	Prevale	nce Index = B/A	-	1
VICIA VILLOSA	TR	NL		Vegetation Ind		-
			1 (C)	ce Test is >50%		
			Prevalen	ce Index is ±3.0	£	
			Morphala	gical Adaptation	a" (Provide supporting	
h			data ir	n Remarka or on	a separate sheel)	
Voody Vine Stratum (Plot size:)	85%=1	Total Cover	- Problema	sud Hydrophytic	Vegetation ¹ (Explain)	
. MIA			Hechanternet	budde and and	will send by a set	
			be present, un	rivatic soil and v niess disturbed (vetland hydrology must or problematic.	
		Total Course		10 0.00 Michigan	1	-
159	=	fotal Cover	Hydrophytic Vegetation		12	
& Bare Ground in Herb Stratum K Co			Present?	Yes	No X	
Remarks:	-	AND THE AVE				-
& LOGIUM PILKENNE						
temarks: & LOLIUM PREARNNE	= FRS	ruct pie,	RENNIS	5		

US Army Corps of Engineera

Arid West - Version 2.0

SOIL

Color (mode) Sector (mode) Sector (mode) Sector (mode) Sector (mode) Sector (mode) Sector (mode) Counce (mode) <thcounce (mode)<="" th=""> <thcounce (mode)<="" th="" th<=""><th></th><th></th><th>- one only</th><th>th needed to docur Reds</th><th>x Features</th><th></th><th></th><th></th><th></th></thcounce></thcounce>			- one only	th needed to docur Reds	x Features				
O-12 IOY IP 1/13 9.9 IOT /P 1/14 IZ C M SiL - control. DMT counter Image: Concentration, D=Despirition, RM=Reduced Mattix, CS=Covered or Costed Sand Graine. M or ST M or ST Type: C=Concentration, D=Despirition, RM=Reduced Mattix, CS=Covered or Costed Sand Graine. Location: PL=Pore Unling, M=Mattix, Unlines otherwise noted.) Indicators for Problematic Hydric Solia*: Hatic Epipedon (A2) Sandy Redox (SS)			56				Loc	Texture	Remarks
Type: C-Concentration, D-Depletion, RM-Reduced Mattix, CS-Covered or Costed Sand Grains. *Location: PL=Pore Linking, M=Matrix, Market Solid*: Type: C-Concentration, D-Depletion, RM-Reduced Mattix, CS-Covered or Costed Sand Grains. *Location: PL=Pore Linking, M=Matrix, Market Solid*: Hattool (A1) Sandy Redux (SS) 1 on Mack (A9) (LRR 6) Hattool (A1) Sandy Redux (SS) 1 on Mack (A9) (LRR 6) Hattool (A3) Loarny Marky Market (F3) Other (Explain in Remarks) Text Cast Sandsee (A12) Redox Dark Surface (F6) Other (Explain in Remarks) Stratistice (A12) Redox Dark Surface (F6) Other (Explain in Remarks) Stratistice (A12) Redox Dark Surface (F7) Other (Explain in Remarks) Stratistice (A12) Redox Dark Surface (F7) Other (Explain in Remarks) Stratistice (A12) Redox Dark Surface (F7) Undicators of hydrophytic vegletation and welfaced (F7) Stratistice (A12) Redox Dark Surface (F7) Undicators of hydrophytic vegletation and welfaced (F1) Stratistice (A12) Redox Dark Surface (F7) Welface Marks (B1) (Moreine) Stratistice (A12) Satistice (F12) Welface Marks (B1) Stratistice (A12) Bat Chatter (F13) Satistice (F12) Stratistice (A12) Satisti			99	10714/6	1%	C	M	SiL	- CONC. DRY COLOR
Type: C-Concentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Costed Sand Grains. *Location: PL=Pore Lining, M=Matrix, M=Matrix, CS=Covered or Costed Sand Grains. Type: C-Concentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Costed Sand Grains. *Location: PL=Pore Lining, M=Matrix, M=Matrix, CS=Covered or Costed Sand Grains. Hitota Epipedon (A2) Sandry Redux (SS) _1 or Muck (A10 (LRR 0) Hitota Epipedon (A2) Loamy Match (SP) Red Dear Match (A10 (LRR 0) Stratited Layers (A2) Dapted Matrix (F2) Red Dear Match (A10 (LRR 0) Type: Stratited Layers (A2) Dapted Matrix (F2) Red Parent Matchia (TF2) Stratited Layers (A2) (LRR 0) Pedox Datk Surface (F0) Depletod Matrix (F2) Depletod Bank Surface (F1) Red Depressions (F8) vertiland hydrology mat be present, unless disturbed or problematic. Sarch Wuby Morel (S1) Vernal Pools (F8) unless disturbed or problematic. Sarch Wuby Morel (S1) Satt Crust (B11) Water Marks (B1) (Reverne) Sattard Vindicators (I/2) Balto Crust (B12) Sattare (A12) Sattare (A13) Aquatic Invertibures (B13) Dariting Matrix (B1) (Reverne) Sattare (A13) Aquatic Invertibures (B13) Dariting Matrix (B1) (Reverne) Sattare (A13) Sattare (A12) Sattare (A13		1911 112	-		a statution				VIENY FAINT WITTEN
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Couvered or Coated Sand Grains. 4Location: PL=Pore Lining, M=Matrix, the set of the									the second se
Proceedings Provide Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils': Histo: Episodo (A2) Sandy Redox (S3) 1 cm Muck (A9) (LRR C) Histo: Episodo (A2) Sandy Redox (S3) 2 cm Muck (A10) (LRR B) Histo: Episodo (A2) Loamy Macky Mineral (F1) Redox Dvris (F13) Hydrogen Sulfide (A4) Loamy Glayed Matrix (F2) Red Parent Material (FF2) Stratitied Layere (A5) (LRR C) Depised Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depised Matrix (F3) Other (Explain in Remarks) Sandy Gloyed Matrix (G4) Redox Denk Surface (F1) "Indicators of hydrophytic vegetation and welland hydrophytic wegetation and by									11000
Pyper Contrainations: Control control in the second and provide the set LERs, unless otherwise noted.) Indicators: for Problematic Hydric Solita': Hitto: Sandy Redox (SS) 1 cm Muck (A9) (LRR C) Hatto: Sindped Matrix (SB) 2 cm Muck (A10) (LRR B) Back Histic (A3) Loamy Macky Mineral (F1) Red Data Matrix (F2) Phydrogen Sulfide (A4) Loamy Glayed Matrix (F2) Red Parent Material (FF2) Stratified Layer (A5) (LRR C) Depieted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depieted Matrix (F3) Other (Explain in Remarks) Sandy Glayed Watrix (C41) Depieted Matrix (F3) Wetand hydrology must be present, unless disturbed or problematic. Sandy Glayed Matrix (C41) Salt Crust (B11) Wetand hydrology must be present, unless disturbed or problematic. Yper: McA Surface Vivter (A1) Salt Crust (B11) Wetar Marks (B1) (Riverine) Surface Vivter (A1) Salt Crust (B11) Wetar Marks (B1) (Riverine) Surface Vivter (A1) Salt Crust (B12) Secondary Indicators (B10) Salta Crust (B11) Wetar Marks (B1) (Riverine) Dirt Reposits (B2) (Riverine) Salta Crust (B11) Salta Crust (B12) Secondary Indicators (C2)				-					
Pyper Contrainations: Control indicators: Problematic Hydric Solila': Hitto: Sindped Matrix (SB) 1 cm Muck (A9) (LRR C) Hitto: Sindped Matrix (SB) 2 cm Muck (A10) (LRR B) Hitto: Back Histic (A3) Loamy Macky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Glayed Matrix (F2) Red Parent Material (FF2) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depided Matrix (F3) Other (Explain in Remarks) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depided Matrix (F3) Other (Explain in Remarks) Sind (A4) Sardy Glayed Matrix (G4) Redox Denk Surface (F7) Indicators of hydrophytic vegletation and welland hydrology must be present, unless disturbed or problematic. Sardy Glayed Matrix (G4) Sait Crust (B11) Welland hydrology must be present; Type:									
Proceedings Provide Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils': Histo: Episodo (A2) Sandy Redox (S3) 1 cm Muck (A9) (LRR C) Histo: Episodo (A2) Sandy Redox (S3) 2 cm Muck (A10) (LRR B) Histo: Episodo (A2) Loamy Macky Mineral (F1) Redox Dvris (F13) Hydrogen Sulfide (A4) Loamy Glayed Matrix (F2) Red Parent Material (FF2) Stratitied Layere (A5) (LRR C) Depised Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depised Matrix (F3) Other (Explain in Remarks) Sandy Gloyed Matrix (G4) Redox Denk Surface (F1) "Indicators of hydrophytic vegetation and welland hydrophytic wegetation and by	_							-	
Processor Control millicators: Control millicators: Indicators for Problematic Hydric Solia*: Histo Epipeson (A2) Sandy Redox (S3) 1 cm Muck (A9) (LRR C) Histo Epipeson (A2) Sandy Redox (S3) 2 cm Muck (A10) (LRR C) Histo Epipeson (A2) Loamy Mucky Mineral (F1) Reduced Vertic (F13) Hydrogen Sulfide (A4) Loamy Glayed Matrix (F2) Red Parent Material (FF2) Stratitide Layers (A5) (LRR C) Depieted Matrix (F7) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depieted Matrix (F7) Other (Explain in Remarks) Sardy Gloyed Matrix (G4) Redox Depressions (F8) welland hydrology must be present, unless disturbed or problematic. Sardy Gloyed Matrix (G4) Salt Crust (B11) Wetand hydrology must be present, unless disturbed or problematic. Ypre: C/C Salt Crust (B11) Water Marks (B1) (Riverine) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Bichic Crust (B12) Secondary indicators (C2) Saltaration (A3) Aquabic Invertebrates (B13) Oth Reposit (B3) (Riverine) Saltaration (A3) Aquabic Invertebrates (B13) Other Reposit (B3) (Riverine) Saltrable Present?			-			-			
Type: Colliderity: Collid				-Dadacad Makin C	C=Course	d or Coste	d Sand G	rains. ¹ Lo	cation: PL=Pore Lining, M=Matrix.
Histosci (A1)	Type: C=Co	encentration, D=Dep	able to al	Reduced Matrix, C	arwise not	ed.)	o oano o	Indicatora	for Problematic Hydric Solls ³ :
Initial Carlos (Vit) Shifped Matrix (S6) 2 cm Wak (A10) (LRR B) Black Histic (A3) Loamy Mudy Mineral (F1) Reduced Vertic (F18) Black Histic (A3) Loamy Mudy Mineral (F1) Red Daris Muterial (F12) Stratitied Layers (A5) (LRR C) Depleted Matrix (F2) Red Parent Muterial (F12) Depleted Method (RR D) Redox Dark Surface (F0) Other (Explain in Remarks) 1 cm Muck (A40) (LRR D) Redox Dark Surface (F0) Indicators of hydrophytic vegetation and wefland hydrology must be present, unless disturbed or problematic. Sardy Mucry (Ker) Vernal Pools (F6) Indicators (F1) Indicators (F1) Sardy Mucry (Ker) Vernal Pools (F6) Indicators (F1) Indicators (F1) Sardy Mucry (Ker) Vernal Pools (F6) Indicators (F1) Indicators (F1) Sardy Mucry (Ker) Vernal Pools (F6) Indicators (F1) Indicators (F1) Sardy Mucry (Ker) Vernal Pools (F8) Indicators (F1) Indicators (F1) Sardy Mucry (Ker) Salt Crust (B11) Vernal Pools (B2) (Riverine) Vernal Pools (B2) (Riverine) Buffac (Mark (A1) Salt Crust (B11) Vernal Pools (B2) (Riverine) Other Deposits (B2) (Riverine) Sathy Mutr Table (A2) Biclicic C	**************************************	Collection of the constraints	dure to as			1000			
Black Histic (A3)					100 A 100 A 100 A				
Hydrogen Sulfide (A4)						I (F1)		Redu	ced Vertic (F18)
Yugada Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 orn Muck (A9) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 orn Muck (A9) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 orn Muck (A9) (LRR C) Depleted Dark Surface (F7) Other (Explain in Remarks) Sardy Glogod Matrix (S4)		A CONTRACTOR OF A CONTRACT						Red P	Parant Material (TF2)
1 om Muck (A9) (LRR 0)			G)					Other	(Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Trick Dark Surface (A12) Redox Depressions (F8) Sardy Mucky Minoral (S1) Vernal Pools (F9) Sardy Mucky Minoral (S1) Vernal Pools (F9) Restrictive Layer (if present): unless disturbed or problematic. Type: M(A) Depth (inches): Hydrol Soll Present? Yes Remarks: No Wetland Hydrology Indicators: Present (Inches): Primary Indicators (indimum of one required: check sil that apply) Secondary indicators (2 or more required) Surface Water (A1) Sait Cruit (B12) Secondary indicators (2 or more required) Surface Water (A1) Sait Cruit (B12) Secondary indicators (20 regressions (52) (Riverine) Hybro Vater Table (A2) Bidic Cruit (B12) Secondary indicators (20 regressions (52) (Riverine) Saturation (A3) Applie (Riverine) Drift Deposits (52) (Riverine) Saturation (B4) (Nonriverine) Hydrogen Suffide Oder (C1) Drainage Patterns (B10) Saturation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Crayfish Burrows (C8) Surface Water (B8) Other (Explain in Remarks) FAC-Neutral Test (D6) Surface Stater Present?									
Trick Dark Surface (A12)			(A11)	Depleted	Dark Surfa	ce (F7)			
Sandy Mucky Mineral (S1)			835 A	Redox De	pressions	(F8)			
Sandy Gioyad Matrix (S4) unless disturbed or problematic. Rectrictive Layer (# present): Type:				Vernal Po	ols (F9)				
Restrictive Layer (if present): Type:	the second se	the second s						unless	disturbed or problematic.
Type: Mth Depth (inches):			2						
Depth (inches): No Remarks: Wattand Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Sufface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) Sufface Water Table (A2) Biotic Crust (B12) Secondary Indicators (B2) (Riverine) Saturation (A3) Aqualic Invertibrates (B13) Drift Deposits (B2) (Riverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizosphares along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Oxidized Rhizosphares along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B8) Recent Iron Reduction in Tibed Solis (C6) Saturation Visible on Aerial Imagery (C2) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shatlow Aquitard (D3) Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No No Water Table Present? Yes No									1-
Remarks: Primary Indicators: Primary Indicators (minimum of one regulard: check all that apply) Surface Water (A1)	1 J Prov	and the second se							
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regured; check all that apply) Secondary Indicators (2 or more regured) Surface Water (A1) Saft Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Surface Water (A3) Aquatic Invertebrates (B13) Drift Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sutface Ord (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Lhring Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soli Cracks (B6) Recent Iron Reduction In Titled Solis (C6) Saturation Visible on Aerial Imagery (C1) Surface Soli Cracks (B6) Recent Iron Reduction In Titled Solis (C6) Saturation Visible on Aerial Imagery (C1) Water-Stained Leaves (B9) Other (Explain In Remarks) FAC-Neutral Test (D5) Field Observations: Saturation Present? Yes No Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Saturation Present? Yes No D	Decili (in	visas/r						Hydric So	Il Present? Yes No
Wetland Hydrology Indicators: Secondary Indicators: Primary Indicators (Ininimum of one required: check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Suffide Oder (C1) Drainage Patterns (B10) Sodiment Deposits (B3) (Nonriverine) Oxidized Rhizospheres along Lhring Roots (C3) Dry-Sesson Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction In Titled Soils (C6) Saturation Visible on Aerial Imagery (C3) Water Stained Leaves (B9) Other (Explain In Remarks) FAC-Neutral Test (D5) Field Observationa: Surface Water Present? Yes No Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Saturation Present? <td< th=""><th></th><th>ches):</th><th></th><th></th><th></th><th></th><th></th><th>Hydric So</th><th>ll Present? Yes No</th></td<>		ches):						Hydric So	ll Present? Yes No
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required)	Remarks:							Hydric So	ll Present? Yes No
	Remarks:	OGY						Hydric So	ll Present? Yes No
High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marka (B1) (Nonriverine) Hydrogen Sutfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Lhing Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction In Titled Soils (C6) Saturation Visible on Aerial Imagery (C3) Innuclation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shatow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain In Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous Inspections), if available:	Remarks:)GY drology Indicators		red; check all that as					
Ingit valer fable (val) Aquatic Invertebrates (B13) Baturation (A3) Water Marka (B1) (Nonriverine) Hydrogen Sutfide Odor (C1) Drainage Patterns (B10) Doddized Rhizospheres along Lhring Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Titled Soils (C6) Saturation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Yes No Depth (inches): Water Table Present? Yes No Yes No Yes No Yes No Yes No Yes No	Remarks: IYDROLO Wetland Hy Primary Ind)GY (drology Indicators (cators (minimum of						Sec	ondary indicators (2 or more required)
Water Marks (B1) (Nonriverine) Hydrogen Suffide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B8) Recent Iron Reduction In Tilled Soils (C6) Saturation Visible on Aerial Imagery (C3) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain In Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Surface Capillary fringe) No Depth (inches): Waterand Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, serial photos, previous Inspections), if available: Watarable: Vestinal Data	Remarks: IYDROLO Wetland Hy Primary Ind	GY drology Indicators icators (minimum of a Water (A1)		Salt Cru	ist (B11)			<u>Sec</u>	ondary Indicators (2 or more required) Water Marks (B1) (Riverine)
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Bolt Map Unit Name:	vestigator(s): <u>R. HUDPUESTON</u> , U. UE167 andform (hillslope, terrace, etc.): <u>TTERRACE</u> ubregion (LRR): <u>C</u>	Loca	e relief (concave, c	convex, none): _ COPONIE Slope (%): Li
re climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.) re Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No (if noeded, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, Hydrophylic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Is the Sampled Area within a Wetland? Yes No Is the Sampled Area within a Wetland? Yes No Is the Sampled Area within a Wetland? Yes No If PR acoct ? FEGETATION - Use scientific names of plants. Tree Stratum (Plot size: Absolute Dominant Indicator 1 Absolute Dominant Indicator 3 Absolute Dominant Indicator 3 Absolute Dominant Indicator 3 Absolute Dominant Indicator 1 Absolute Dominant Indicator 3 Absolute Dominant Indicator 3 Absolute Dominant Indicator 4 Remarks: = Total Cover 1 Absolute Dominant Species Absolute Sampled Area Are ODMINANT 33 (fr Yes No Yes Yes No Yes	Man Unit Name: COMETA - FIDD	YMENT	COMPLI	EX Datum: 201706
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EGETATION – Use scientific names of plants. Inter Stratum (Plot size:	Itypper are	1stice	51	easonae writtend
Absolute Dominant Indicator Dominance Test worksheet: 1. PLA Species? Status 1. PLA Total Number of Dominant Species Total Number of Dominant Species 2. Total Number of Dominant Species Total Number of Dominant Species 3 4. = Total Cover Total Number of Dominant Species 6672 0 1. Provalence Index worksheet: 3 0 0 0 1. PlA Provalence Index worksheet: 0	11 111-00007			
Absolute Dominant Indicator Dominance Test worksheet: 1. PLA Species? Status 1. PLA Total Number of Dominant Species Total Number of Dominant Species 2. Total Number of Dominant Species Total Number of Dominant Species 3 4. = Total Cover Total Number of Dominant Species 6672 0 1. Provalence Index worksheet: 3 0 0 0 1. PlA Provalence Index worksheet: 0				
Ince Stratum (Plot size:) 5: Cover Species? Status I/A				
1. PTA 2. That Are OBL, FACW, or FAC: 2 3. Total Number of Dominant 3 4. Species Across All Strata: 3 5. Total Cover Percent of Dominant Species 1. PIA Prevalence Index worksheet: 2. Total Cover Total % Cover of: Multiply by: 3. Total % Cover of: Multiply by: 0 4. Sections Sections Sections Sections 5. Total Cover FACW species x1 = Sections 4. Sections Sections x1 = Sections Sections Sections 5. Total Cover FACW species x2 = Sections	Tree Stratum (Plot size:)	Absolute Dor Cover Sou	minant Indicator	
2.	PLA	gooder ope	HUNDEL _ SIAVUS_	Number of Dominant Species
3.	2.			10.64
4.	3.			President Automotion All Price
Sapling/Shrub Stratum (Plot size:) = Total Cover Percent of Dominant Species 66% 0 1	6			opedes Adoss As Strata; (B)
Sasing/Shrub Stratum (Plot size:)		10.44	I SALE AND	Percent of Dominant Species (19
2	Sapino/Shrub Stratum (Plot size:)		100000	
3.	- MA			and the second
4.				
5.				
Herb Stratum (Plot size: SFT)				
1. RANUNCULUS BONAMENOS 20% YES OBL UPL species x5 = 2. LCLIUM PERENNE* 25% YES FAC Column Totals: (A) 3. LEONTODON SAXATILIS 20% YES FAC Prevalence Index = BIA = 4. LYTHRUM HYSSOPIFOLIUM S% 3% OBL 5. RUMIEX CRISPUS 3% FAC				
2. LCLIUM PERENNE* 252 7ES FAC Column Totals: (A) 3. LECNTODON SAXATIUS 202 7ES FAC Prevalence Index = B/A = 4. LYTHRUM HYSSOPIFOLIUM 5% 013 L Hydrophytic Vegetation Indicators: 5. RUMIEX CRISPUS 3% FAC X Dominance Test is >60%	Herb Stratum (Plot size: 5 FT)		1 managements	
2. LCLIUM PERENNE* 25% TES FAC Column rotes. (A) 3. LEONTODON SAXATIUS 20% YES FAC Prevalence Index = BIA = 4. LYTHRUM HYSSOPIFOLIUM S% 0BL Hydrophytic Vegetation Indicators: 5. RUMIEX CRISPUS 3% FAC X Dominance Test is >60%	RANUNCULUS BONAMENSS	208 7	ies abl	
A. LEGNTOPON SAXATIUS ZO2 YIES FACU Prevalence Index = B/A = A. LYTHRUM HYSSOPIFOLIUM S% OBL Hydrophytic Vegetation indicators: A. LYTHRUM HYSSOPIFOLIUM S% OBL Hydrophytic Vegetation indicators: S. RUMIEX CRISPUS 3% FAC X Dominance Test is >50%				Column Totals: (A) (B)
5. RUMIEX CRISPUS 3% FAC X Dominance Test is >50%	and the second se	20% 7	155 FACL	Prevalence Index = B/A =
	LYTHRUM HYSSOPIFOLIUM		OBL	the second se
DOWNING A CRAITICOMA 78 ADI			EAC	Z Dominance Test is >50%
	powningit CRNATISSIMA	2%	OBL	Prevalence Index is \$3.0 ¹
7 Morphological Adaptations ¹ (Provide supporting	l+		1000000	Morphological Adaptations ¹ (Provide supporting
B data in Remarks or on a separate sheet)	l,			
Woody Vine Stratum (Plot size:)	Moody Vine Stratum (Pint size)	75%=To	otal Cover	 Problematic Hydrophytic Vegetation¹ (Explain)
				Indicators of budge cell and walker it is the
be present, unless disturbed or problematic.				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
			tal Cause	
= Total Cover Hydrophytic Vegetation	216			Vegetation
% Bare Ground in Herb Stratum ZSE % Cover of Biotic Crust Vegetation Remarks: LCLIUM PERENNE = FESTUCE PERENNIS		Biotic Crust		Present? Yes X No

WETLAND DETERMINATION DATA FORM - Arid West Region

SOIL

epth Matrix	Redox Features	Loc ² Tex	ture:	Remarks
nches) Color (maist)	% Color (moist) % Type'		12102	10 REPORTENDER
2-6 7.57R 1/2	100%	- <u>Si</u>		6 Masher Jourport
ype: C-Concentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Coaled Sand Grains. *Location: PL=Pore Lining, M=Matrix. Histosol (A1) Sandy Redox (S5) 1 cm Muck (A6) (LRR C) Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Gleyed Matrix (S5) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Strattled Layers (A5) (LRR C) Depleted Dark Surface (F6) Cherr (Explain in Remarks) 1 cm Muck (A9) (LRR D) Red Ox Dark Surface (F7) Red Parent Material (TF2) Strattled Layers (A5) (LRR C) Depleted Dark Surface (F7) Theick Dark Surface (A11) Depleted Dark Surface (F7) 1 cm Muck (A9) (LRR D) Red Co Depressions (F8) *Indicators of hydrophytic vegetation and weeland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Vermal Poole (F9) *unless disturbed or problematic. Type:				
ype: C=Concentration, D=Depletic	on, RM=Reduced Matrix, CS=Covered or Coaled	Sand Grains.		
ydric Soil Indicators: (Applicable		lind		
		-		NY 1 2 1 4 1 2 1 2 2 1 2 2 3 5 5
-				and the second
		X	Other (Expla	in in Remarks)
1 cm Muck (A9) (LRR D)				
THE REPORT OF A DESCRIPTION OF A DESCRIP		21.0	dissian of her	heeb die uweetellen and
	Viental Pools (Po)			
12053				
111-00		2.1.		No. No.
PRESENT - SH	ALLOW DIE PRIESSION W	10 con	DI Mer	NS ASSUMED
PRESENT - SH	ALLOW DIE PRIESSION W	10 con	DI Mer	NS ASSUMED
PRESENT - SH. PRESENT - SH. DISTINCT CITAT	ALLOW DIE PRIESSION W	10 con	DI Mer	NS ASSUMED
RESENT - SH. PRESENT - SH. DISTINCT CITAT YDROLOGY Wetland Hydrology Indicators:	ALLOW DEPRESSION W NGE FROM ADJACENT	10 con	UND UND	NS ASSUMED PUNTS
Remarks: NO RIEPOX PRESENT - 5H DISTINCE CITAT VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one	ALLOW DIE PRIESSION W NGE FROM ADDALIENT a required: check all that apply]	10 con	Secondary	NS ASSUMED PUNTS
Remarks: NO RIEPOX PRESENT - 5H DISTINCE CITAT VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one 	ALLOW DIE PRIESSION W NGRE FROM ADDALIENT arequired: check all that sooly) Salt Crust (B11)	10 con	Secondary Water	North States (2 or more required) Marks (B1) (Riverine)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITAT YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	ACLOW DIE PRIESSION W NGE FROM ADDALIENT arequired: check all that apply 	10 con	Secondary Water Sedim	Marks (B1) (Riverine)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITM VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one 	ACLOW DIE PRIESSION W NGE FROM ADDALIENT a required; check all that apply] Salt Crust (B11) Biotic Crust (B12) Aquatic invertebrates (B13)	10 con	Secondary Water Sedim Drift D	North States (2 or more required) Marks (B1) (Riverine)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITAL VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one 	a required; check all that apply] a required; check all that apply] a salt Crust (B11) Biotic Crust (B12) Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1)	UC CON	Secondary Water Sedim Sedim Drift D Drsina	Marks (B1) (Riverine) eposits (B3) (Riverine)
Remarks: NO RIEPOX PRESENT - 5H DISTINCE CITAL VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverim Sodiment Deposits (B2) (Nonriverim	Accow DIE PRIESSION W NGE FROM ADDALIENT 	Jung Roots (C	Secondary Secondary Water Sedim Drift D Drsina Crayfie Crayfie	Marks (B1) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITAL VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one 	Accow DIE PRIESSION W NGE FROM ADDALIENT 	Jung Roats (C	Secondary Secondary Water Sedim Drift D Drift D Crayfie Satura	ASSUMED PUNTS Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) sh Burrows (C8) tion Visible on Aeriai Imagery (C
Remarks: NO RIEPOX PRESENT - 5H DISTINCE CITAL VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverin Sodiment Deposits (B2) (Nonriverin Drift Deposits (B3) (Nonriverin	ALCOW DIE PRIESSION G NGE FROM ADDALENT 	Jung Roats (C	Secondary Secondary Water Sedim Drift D Drift D Crayfie Satura Shallo	ASSUMED PUNTS Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C w Aquitard (D3)
Remarks: NO RIEPOX PRESENT - 5H DISTINCE CITAL VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverin Sodiment Deposits (B2) (Nonriverin Drift Deposits (B3) (Nonriverin Surface Soil Cracks (B6)	ALCOW DIE PRIESSION G NGE FROM ADDALENT 	Jung Roats (C	Secondary Secondary Water Sedim Drift D Drift D Crayfie Satura Shallo	ASSUMED PUNTS Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITAL VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverin Sodiment Deposits (B2) (Nonriverin Drift Deposits (B3) (Nonriverin Surface Soil Cracks (B6) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations:	Accow DIE PRIESSION W NGE FROM ADDALENT arequired: check all that apply) 	Jung Roats (C	Secondary Secondary Water Sedim Drift D Drift D Crayfie Satura Shallo	ASSUMED PUNTS Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C w Aquitard (D3)
Remarks: NO RIEPOX PRESENT - 5H DISTINCE CITAL VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverin Sodiment Deposits (B2) (Nonriverin Surface Soil Cracks (B8) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yet	Accow DIE PRIESSION G NGE FROM ADDALENT 	Uning Roats (C)	Secondary Secondary Water Sedim Drift D Drift D Crayfie Satura Shallo	ASSUMED PUNTS Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) tion Visible on Aetial Imagery (C w Aquitard (D3)
Remarks: NO RIEPOX PRESENT - SHA DISTINCT CITAL VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverin Sodiment Deposits (B2) (Nonriverin Surface Soil Cracks (B6) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes	Accow DIE PRIESSION G NGE FROM ADDACENT arequired: check all that apply! Salt Crust (B11) Biotic Crust (B12) Aquatic invertebrates (B13) e) Hydrogen Sulfide Odor (C1) twerine) Cixidized Rhizospheres along I ne) Presence of Reduced Iron (C4 Recent Iron Reduction in Tilled tagery (B7) Thin Muck Surface (C7) Other (Explain in Remarks) s No Depth (Inches):	Lving Roats (C)	Secondary Water Sedim Drift D Drift D Drift D Drift D Crayfit Satura Stallo	Marks (B1) (Riverine) eposits (B2) (Riverine) eposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) tion Visible on Aestal Imagery (C w Aquitard (D3) leutral Test (D5)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITAL VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of org Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverin Sodiment Deposits (B2) (Nonriverin Drift Deposits (B3) (Nonriverin Surface Soil Cracks (B6) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	Accow DIE PRIESSION G NGE FROM ADDALENT 	Lving Roats (C)	Secondary Water Sedim Drift D Drift D Drift D Drift D Crayfit Satura Stallo	ASSUMED PUNTS Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C w Aquitard (D3)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITM YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverim Sodiment Deposits (B2) (Nonriverim Sodiment Deposits (B2) (Nonriverim Surface Soil Cracks (B6) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	Accow DIE PRIESSION G NGE FROM ADDACENT arequired: check all that apply! Salt Crust (B11) Biotic Crust (B12) Aquatic invertebrates (B13) e) Hydrogen Sulfide Odor (C1) twerine) Cixidized Rhizospheres along I ne) Presence of Reduced Iron (C4 Recent Iron Reduction in Tilled tagery (B7) Thin Muck Surface (C7) Other (Explain in Remarks) s No Depth (Inches):	Lving Roats (C)	Secondary Secondary Sedim Sedim Drift D Drift D Drift D Drift D Crayfit Satura Stalio PFAC-M	Marks (B1) (Riverine) eposits (B2) (Riverine) eposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) tion Visible on Aestal Imagery (C w Aquitard (D3) leutral Test (D5)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITM YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverim Sodiment Deposits (B2) (Nonriverim Sodiment Deposits (B2) (Nonriverim Surface Soil Cracks (B6) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	Accow DIE PRIESSION GANGE FROM ADDALENT arequired: check all that apph/	Lving Roats (C)	Secondary Secondary Sedim Sedim Drift D Drift D Drift D Drift D Crayfit Satura Stalio PFAC-M	Marks (B1) (Riverine) eposits (B2) (Riverine) eposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) Bon Visible on Aestal Imagery (C w Aquitard (D3) leutral Test (D5)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITM YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverim Sodiment Deposits (B2) (Nonriverim Sodiment Deposits (B2) (Nonriverim Surface Soil Cracks (B6) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	Accow DIE PRIESSION GANGE FROM ADDALENT arequired: check all that apply)	Lving Roats (C)	Secondary Secondary Sedim Sedim Drift D Drift D Drift D Drift D Crayfit Satura Stalio PFAC-M	Marks (B1) (Riverine) eposits (B2) (Riverine) eposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) Bon Visible on Aestal Imagery (C w Aquitard (D3) leutral Test (D5)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITM VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverim Sodiment Deposits (B2) (Nonriverim Sodiment Deposits (B2) (Nonriverim Surface Soil Cracks (B6) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes	Accow DIE PRIESSION GANGE FROM ADDALENT arequired: check all that apply)	Lving Roats (C)	Secondary Secondary Sedim Sedim Drift D Drift D Drift D Drift D Crayfit Satura Stalio PFAC-M	Marks (B1) (Riverine) eposits (B2) (Riverine) eposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) Bon Visible on Aestal Imagery (C w Aquitard (D3) leutral Test (D5)
Remarks: NO RIEPOX PRESENT - 5H DISTINCT CITM VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverim Sodiment Deposits (B2) (Nonriverim Sodiment Deposits (B2) (Nonriverim Surface Soil Cracks (B6) Inundation Visible on Aerial Im Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes	Accow DIE PRIESSION GANGE FROM ADDALENT arequired: check all that apply)	Lving Roats (C)	Secondary Secondary Sedim Sedim Drift D Drift D Drift D Drift D Crayfit Satura Stalio PFAC-M	Marks (B1) (Riverine) eposits (B2) (Riverine) eposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) sason Water Table (C2) th Burrows (C8) tion Visible on Aestal Imagery (C w Aquitard (D3) leutral Test (D5)

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: EAST	PARCIEL		City/County:PL	ACKER CO.	Sampling Date: 5/19/201
Applicant/Owner:	ing			State: CA	Sampling Point SP-04
Investigator(s): <u>R. HUNPLIES</u>	TON. U. LIEIGH	ton :	Section, Township, Rai	nae: 05 11	NOGE
Landform (hillslope, terrace, etc.):	TERRACE		i onal milat (noncava		15 11 123
Subregion (LRR):		Lat	coolin rener (our care, i	Looper	Siope (%):
Soll Map Unit Name:	ETA - FIDI	DYME	AT COM		Datum: NATIR
Are climate / besteringie conditions	- Ha alla had all a di		i corre	NW classifica	ations none
Are climatic / hydrologic conditions o	n the ane typical for the	s time of yea			2.9 Color Color and a second s
Are Vegetation, Soll,					resent? Yes 🗶 No
ve Vegetation, Soil,				eded, explain any answer	
SUMMARY OF FINDINGS -	Attach site map	showing	sampling point l	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present?					
Hydric Soil Present?	Yes N Yes N		is the Sampled		
Watland Hydrology Present?	Yes N	x	within a Wetlan	nd? Yes	No
Remarks: ABOUR AVE	SELECTION	0.			COLUMN CONTRACT
MOOR AVE	3/54301042	ICATINA	ALL		
		2010			
/EGETATION – Use scienti	fic names of plan	its.			
Tree Stratum (Plot size:	4	Absolute	Dominant Indicator	Dominance Test works	sheet:
1. MA		36 Cover	Speciesy Status	Number of Dominant Sp	
2				That Are OBL, FACW, o	r FAC: (A)
3				Total Number of Domine	
4				Species Across All Strat	
			= Total Cover	Percent of Dominant Sp	FAC: 0% (AVB)
Saplino/Shrub Stratum (Plot size:)			THE DECENSION OF THE	
1 <u>MA</u>				Prevalence Index work	and the second se
2					Multiply by:
3				in the second	x 1 =
4 5					× 2 =
			= Total Cover		× 3 =
Herb Stratum (Plot size: 57)				x4=
1. EXMUS CAPI	UT MEPUSAE				
2. BACMUS HEM	Acteurs	10%		Column Totals:	(A) (B)
3. LEONTADON SU	and the second se	10%c		Prevalence Index	= B/A =
4				Hydrophytic Vegetation	n Indicators:
5				Dominance Test is :	10/052 52
8,				Prevalence Index is	10140 Jaho
7				Morphological Adap data in Remarks	tations ¹ (Provide supporting or on a separate sheet)
8					hytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:	1		= Total Cover		the collection (cybiget)
1. NA				¹ Indicators of hydric soil	and wetland hydrology must
2.				be present, unless distu	bed or problematic.
		85%	= Total Cover	Hydrophytic	
% Bare Ground in Herb Stratum	15% 4 Com			Vegetation	L L
Remarks:	No COVER	OF BIOLIC CA	LISH	Present? Yes	No <u>X</u>
Protectal Plat.					

SOIL

Sampling Point: SP-04

<u> </u>	CCC Remarks
<u> </u>	
A Description Definition Difference Markin Charles of Contract St	
A Designed of Control of Control State	
B. B. Country D. B. Barbara Dilla Deduced Mattin, C.B. Country of Country St	
R. D	
D. D	
D. D	
B. C	
	and Grains. ² Location: PL=Pore Lining, M=Matrix.
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sa ydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Solis ³ :
	1 cm Muck (A9) (LRR C)
_ Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10) (LRR B)
Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Other (Explain in Remarks)
_ Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7)	
Thick Dark Surface (A12) Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Vernal Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	uniess disturbed or problemaSc.
lestrictive Layer (if present):	
Type:	
Depth (inches):	Hydric Soil Present? Yes No
Remarks:	
YDROLOGY	
NY STATISTICS A CONTRACTOR OF STATISTICS	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Water Marks (B1) (Riverine)
Surface Water (A1) Salt Crust (B11)	Sediment Deposits (B2) (Riverine)
High Water Table (A2) Biotic Crust (B12)	
Saturation (A3) Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine) Hydrogen Sullide Odor (C1)	Drainage Patterns (B10)
Sedment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Liv	
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6) Recent iron Reduction in Tilled S	
inundation Visible on Aerial Imagery (87) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9) Other (Explain in Remarks)	FAC-Neutral Test (D6)
Field Observations:	
Surface Water Present? Yes No X Depth (Inches):	4
Water Table Present? Yes No X Depth (Inches):	
Saturation Present? Yes No 🔀 Depth (Inches):	Wetland Hydrology Present? Yes No
(inclusion continues frigmes)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	sctions), if available:
Remarks	
Remarks:	
Remarks:	
Remarks:	

WETLAND DETERMINATION DATA FORM - Arid West Region

oject/Site: EAST PARCEL	Ci	ty/County:	AGER CO.	Sat	nnlinn Date: 5	119/20
plicant/Owner; WPWMA			Etator	- A		PRAC
vestigator(s): P. Ituppusston, V. USIGH	TONS	ection, Township, J	Ranner 05	TIN	OFF	
ndform (hillslope, terrace, etc.): TERREE		ocal relief /concau	a contrary popula	anica	UE al	
bregion (LRR):	at	out renes (cornar	a, convex, noner<	0,-01	slope	(%):
Map Unit Name: COMETA - FIDDY	MEAL	TECME	Long:		Datum:	MAD 8.
climate butchesterie readilitant on the city scient is the	101-1	CERT!	NWI O	dessification	POPE	
climatic / hydrologic conditions on the site typical for this tir	ne of year	7 Yes No	(if no, expl	sin in Rema	rks.)	
Vegetation, Seil, or Hydrology sign	ificantly di	sturbed? Ar	e "Normel Circumsta	nces" prese	nt? Yes X	_ No
Vegetation, Soll, or Hydrology natu						
IMMARY OF FINDINGS - Attach site map sh	owing s	ampling point	locations, tran	sects, in	portant feat	ures, etc.
lydrophytic Vegetation Present? Yes X No						
lydric Soil Present? Yes X No		is the Sampl				
Vetland Hydrology Present? Yes X		within a Wet	land? Ye	· X	No	
emarks: ABOUTE AUERAGE SEASON		NEAL				
HOOR AUDIONOS SINGER	10111					
GETATION – Use scientific names of plants.						
ae Stratum (Plot size:) A	bsolute	Dominant Indicato		A C C C C C C C C C C C C C C C C C C C		
FIA	- Sover 3	averager _ durine	 Number of Dom That Are OBL, F 	Inant Specie	15	1897
			F		vu:	(A)
			Total Number of Species Across	Dominant		2250
	_				-	(B)
		Total Cover	Percent of Dom That Are OBL, F	nant Specie	15	
apling/Shrub Stratum (Plot size:)						(AVB)
NA			Prevalence Ind		The second se	
			Total % Con			
			OBL species			
			FACW spedes			
A LAND THE REPORT OF THE REPORT OF		Total Cover	FAC species FACU species			
arto Stratum (Plot size:)			LIDI species			
LEONTODON SAXATTLIS	50%	YES FACU	- Column Totals:			
LALTHRUM HYSSOPIFELIUM	20%	YES OBL	- Commit rotats.		- 00	(B)
CRASSULA ADUATICA	5%	CBL		ndex = B	/A=	_
CENTROMADIA FITCHI	5%	FACU		getation in	dicators:	
JUNCUS BUFONIUS	2%	- FACU		53363635	140	
HANDELM MAINUM	27	FA		10000000000000000000000000000000000000		
LOLIUM PEREMUET	17.	FAC	Morphologic	al Adaptati	ons ¹ (Provide su in a separate sh	pporting
	63		Problematic			
oody Vine Stratum (Plot size:)	73/2	Total Cover		- ya oprije	e vegemeen (E	vhoani)
rIA			Indicators of hy	tric soil and	welfand metrolo	tourne unit
121100			be present, unle	ss disturbed	ar problematic.	ay must
		Total Cover	Hydrophytic			
Bare Ground in Herb Stratum SZ % Cover of			Vegetation	1000		
and the first state of the stat			Present?	Yes	No	-
emarks: I OLI LAN PREVERENIALE						
Foundally interested and the	53/660	+ 11092.0	repres			
emarks: Low LAN PIEIERNNIE = FI	53/646	+ prese	mpis			

Arid West - Version 2.0

1

ofile Description: (Describe to the dep	th needed to docum	ent the indicator	or confirm	the absence of	of Indicators.)
epth Matrix		Features			
nches) Calar (moist) %	Color (moist)	% Type	Loc	Texture	Remarks
-4.5 ICTR4/2 100%	7.57R3M	20%		SCL	
1-9.5 1011 112 10010					
1.5-12 107P4/2 80%	7.57834	15/0		SCL	
	10RY 2/2	5%			
2 = 10034			-	CUT	
2-15 10783/2				corr	
		2 m2	34		
	-				
		-	10.10	Dies.	ation: PL=Pore Lining, M=Matrix.
ype: C=Concentration, D=Depletion, RM	(=Reduced Matrix, CS	-Covered or Coa	ted Sand G	Indicators	for Problematic Hydric Soils ³ :
ydric Soll Indicators: (Applicable to al					
Histosol (A1)	Sandy Redo				Auck (AS) (LRR C)
 Histic Epipedon (AZ) 	Stripped Ma				Auck (A10) (LRR B)
Black Histic (A3)		ky Mineral (F1)			ed Vertic (F18) arent Material (TF2)
 Hydrogen Sulfide (A4) 		red Matrix (F2)			(Explain in Remarks)
Stratified Layers (A5) (LRR C)	Depleted Mi			Oner	(Extransition comparison
_ 1 cm Muck (A9) (LRR D)		Surface (F6)			
_ Depleted Below Dark Surface (A11)		ark Surface (F7)		Indicators	of hydrophytic vegetation and
_ Thick Dark Surface (A12)		ressions (FB)			hydrology must be present,
Sandy Mucky Mineral (S1)	- Vernal Pool	is (i-u)			listurbed or problematic.
Sandy Gleyed Matrix (S4)				unious c	interest of presentation.
Restrictive Layer (if present):					
Type: 12/					
1100				1000000000	
Depth (inches):		-		Hydric Soi	l Present? Yes No
Depth (inches): <u>CLAY</u> Remarks:				Hydric Soi	l Present? Yes No
Depth (inches): <u>CLAY</u> Remarks:				Hydric Soi	l Present? Yes No
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators:					
Depth (inches): <u>CLAY</u> Remarks:	red: check all that app	łvi		Sec.	indary Indicators (2 of more required)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators:	red; check all that app Sait Crust			Seo	ndary Indicators (2 or more required) Water Marks (B1) (Riverine)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi) Surface Water (A1)		t (B11)		Sec.	endary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi) Surface Water (A1) High Water Table (A2)	Sait Crust	t (B11))	Sec.	indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi) Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust Biotic Cru Aquatic In	t (811) /st (812)	20	Sec.	endary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inches): Remarks: IVDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi 	Sait Crust Biotic Cru Aquatic Ir Hydrogen	t (B11) ist (B12) rvertebrates (B13)	0	Sex	indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (inches): Remarks: IVDROLOGY Wetland Hydrology Indicators: Primary Indicators (ininimum of one requi 	Sait Crust Siotic Cru Biotic Cru Aquatic Ir Hydrogen Oxidized	t (B11) at (B12) wertebrates (B13) sulfide Odor (C1 Rhizospheres alo	i) ng Living R	Secc 	endary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inches):	 Sait Crust Biotic Cru Aquatic in Hydrogen Oxidized Presence 	t (B11) ist (B12) ist (B12) is Sulfide Odor (C1 Rhizospheres alo is of Reduced Iron	l) ng Living R (C4)	Seo 	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Depth (inches):	 Sait Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In 	t (B11) at (B12) nvertebrates (B13) t Sulfide Odor (C1 Rhizospheres alo t of Reduced Iron ton Reduction in T	l) ng Living R (C4)	Seo 	Indary Indicators (2 of more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi) 	 Sait Crust Biotic Crust Aquatic in Hydrogen Oxidized Presence Recent in (B7) Thin Muc 	t (B11) at (B12) nvertebrates (B13) t Sulfide Odor (C1 Rhizospheres alo t of Reduced Iron ton Reduction in T ik Surface (C7)) ng Living R (C4) Illed Soils (Seo oots (C3) C6)	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriai Imagery (C
Depth (inches): Remarks: Primary Indicators (ininimum of one requi) 	 Sait Crust Biotic Crust Aquatic in Hydrogen Oxidized Presence Recent in (B7) Thin Muc 	t (B11) at (B12) nvertebrates (B13) t Sulfide Odor (C1 Rhizospheres alo t of Reduced Iron ton Reduction in T) ng Living R (C4) Illed Soils (Seo 	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriai Imagery (C Shallow Aquitard (D3)
Depth (inches):	 Sait Crust Biotic Cru Aquatic ir Hydrogen Oxidized Presence Recent in (B7) Thin Muc Other (Extended) 	t (B11) at (B12) wertebrates (B13) sulfide Odor (C1 Rhizospheres alo of Reduced Iron on Reduction in T & Surface (C7) optain in Remarka) ng Living R (C4) Illed Soils (Seo 	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriai Imagery (C Shallow Aquitard (D3)
Depth (inches):	 Sait Crust Biotic Crust Aquatic ir Hydrogen Oxidized Presence Recent in (B7) Thin Muc Other (E) 	t (B11) at (B12) nvertebrates (B13) a Sulfide Odor (C1 Rhizospheres alo to f Reduced Iron on Reduction in T ck Surface (C7) splain in Remarka nches):) ng Living R (C4) Illed Soils (Seo 	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriai Imagery (C Shallow Aquitard (D3)
Depth (inches):	 Sait Crust Biotic Crust Aquatic in Hydrogen Oxidized Presence Recent in (B7) Thin Muc Other (E) No Depth (it) 	t (B11) st (B12) nvertebrates (B13) t Sulfide Odor (C1 Rhizospheres alo t of Reduced from on Reduction in T k Surface (C7) splain in Remarks nches): nches):	i) ng Living R (C4) Illed Soils ()	Seo 	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):	 Sait Crust Biotic Crust Aquatic ir Hydrogen Oxidized Presence Recent in (B7) Thin Muc Other (E) 	t (B11) st (B12) nvertebrates (B13) t Sulfide Odor (C1 Rhizospheres alo t of Reduced from on Reduction in T k Surface (C7) splain in Remarks nches): nches):	i) ng Living R (C4) Illed Soils ()	Seo 	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriai Imagery (C Shallow Aquitard (D3)
Depth (inches):	Sait Crust Biotic Cru Aquatic ir Aquatic ir Hydrogen Oxidized Presence Recent in (B7) No Depth (ii No Depth (ii No Depth (ii No Depth (ii) No	t (B11) at (B12) wertebrates (B13) Sulfide Odor (C1 Rhizospheres alo of Reduced Iron on Reduction in T & Surface (C7) splain in Remarka nches): nches):	i) ng Living R (C4) Illed Soils () 	cots (C3)	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):	Sait Crust Biotic Cru Aquatic ir Aquatic ir Hydrogen Oxidized Presence Recent in (B7) No Depth (ii No Depth (ii No Depth (ii No Depth (ii) No	t (B11) at (B12) wertebrates (B13) Sulfide Odor (C1 Rhizospheres alo of Reduced Iron on Reduction in T & Surface (C7) splain in Remarka nches): nches):	i) ng Living R (C4) Illed Soils () 	cots (C3)	Indary Indicators (2 or more required) Mater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):	Sait Crust Biotic Cru Aquatic ir Aquatic ir Hydrogen Oxidized Presence Recent in (B7) No Depth (ii No Depth (ii No Depth (ii No Depth (ii) No	t (B11) at (B12) wertebrates (B13) Sulfide Odor (C1 Rhizospheres alo of Reduced Iron on Reduction in T & Surface (C7) splain in Remarka nches): nches):	i) ng Living R (C4) Illed Soils () 	cots (C3)	Indary Indicators (2 or more required) Mater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):	Sait Crust Solid Crust Solid Crust Aquatic in Aquatic in Hydrogen Oxidized Presence Recent in (87) Thin Muc Other (E) No No Depth (i) No Depth (i) monitoring weil, serial	t (B11) at (B12) wertebrates (B13) Sulfide Odor (C1 Rhizospheres alo of Reduced Iron on Reduction in T & Surface (C7) splain in Remarka nches): nches):	i) ng Living R (C4) Illed Soils () 	cots (C3)	Indary Indicators (2 or more required) Mater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):	Sait Crust Solid Crust Solid Crust Aquatic in Aquatic in Hydrogen Oxidized Presence Recent in (87) Thin Muc Other (E) No No Depth (i) No Depth (i) monitoring weil, serial	t (B11) at (B12) wertebrates (B13) Sulfide Odor (C1 Rhizospheres alo of Reduced Iron on Reduction in T & Surface (C7) splain in Remarka nches): nches):	i) ng Living R (C4) Illed Soils () 	cots (C3)	Indary Indicators (2 or more required) Mater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):	Sait Crust Solid Crust Solid Crust Aquatic in Aquatic in Hydrogen Oxidized Presence Recent in (87) Thin Muc Other (E) No No Depth (i) No Depth (i) monitoring weil, serial	t (B11) at (B12) wertebrates (B13) Sulfide Odor (C1 Rhizospheres alo of Reduced Iron on Reduction in T & Surface (C7) splain in Remarka nches): nches):	i) ng Living R (C4) Illed Soils () 	cots (C3)	Indary Indicators (2 or more required) Mater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)

WETLAND DETERMINATION DATA FORM - Arid West Regi	on
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released in the second se	City	County: /	LEF CO	Sampling Date: 5/19/20
pplicant/Owner: UPWMA	1		State: CA	Complete Daint: 5P:06
westigator(s): R. HUPPUESTER, V.U.	El GINTER Ser	ion Townshin Ra	nne: 05 11	NOGE
andform (hillslope, terrace, etc.): TERRA	CE Im	al sallef /concerns		10
ubregion (LRR):	Lot	ai rener (concave,	convex, none):	Slope (%): <6/6
Man Link Norman COMETA - ELOO	Lat:	60 Or	Long:	Datum: MAD83
all Map Unit Name: <u>COMPTA-FIDD</u>	111201	com pa	NWI classifica	tion: Nome
e climatic / hydrologic conditions on the site typical for th	is time of year?	Yes No _	🧶 (If no, explain in Re	marka.)
e Vegetation, Soil, or Hydrology	significantly distu	rbed? Are	Normal Circumstances* pr	esent? Yes 💒 No
e Vegetation, Soli, or Hydrology	naturally problem	tatic? (if no	eded, explain any answers	in Remarks.)
UMMARY OF FINDINGS - Attach site map	showing sa	mpling point l	ocations, transects.	important features, etc.
		1		inperiant restarda, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		Is the Sampled	Area	
Hydric Soil Present? Yes Netland Hydrology Present? Yes		within a Wetlan	nd? Yes	No X
		Contraction of the source	190204.0	
Remarks: A BOUE ALLE STEAS ON AL	RAINEAL			
EGETATION – Use scientific names of pla	nts.			
ree Stratum (Plot size:)	Absolute Do	minant Indicator	Dominance Test works	heet:
MA (PRISE)	-% Cover Sp	ecies? Status	Number of Dominant Spe	ecles
MA			That Are OBL, FACW, or	FAC: (A)
			Total Number of Domina	nt / In
			Species Across All Strats	s;(B)
	+ T	otal Cover	Percent of Dominant Spe	ides 5
aplino/Shrub Stratum (Ptot size:)	81		That Are OBL, FACW, or	FAC: (A/B)
MA			Prevalence Index work:	CONTRACTOR CONTRACTOR
				Multiply by:
				x1=
				×2 =
·				×3 =
erb Stratum (Plot size: 5PT)	=T	otal Cover		×4=
ELYMUS CAPUT-MEDUS	E 70%	YIES NL		x5=
VICIA VILLOSA	15%	NL	Column Totals:	(A) (B)
AURTA BARBATA	5%	ML	Prevalence Index	= B/A =
ITTPOCHAERUS RADILATA	574	FAcu	Hydrophytic Vegetation	Indicators:
CARPHUS PYCNOCEPHALU	the second secon	NL	Dominance Test is >	0.500
			- Prevalence Index is	0.0112010
			Morphological Adapt	ations ¹ (Provide supporting or on a separate sheet)
· · · · · · · · · · · · · · · · · · ·	GPE		A set of the set of	rytic Vegetation ¹ (Explain)
Abody Vine Stratum (Plot size:)	=T	otal Cover	Trobininge rijerep	Whe vegerarou (Exbiaiu)
MA			Indicators of hydric soll a	and wetland hydrology must
			be present, unless distur	bed or problematic.
	= T	otal Cover	Hydrophytic	
Bare Ground in Herb Stratum _ 572 % Cow			Vegetation	~
Remarks:	ar or block Crust		Present? Yes	<u> </u>
urrining.				

Arid West - Version 2.0

	-PAI	e
Sampling Point:	3100	2

Profile Desc	ription: (Describe	to the depti			onfirm the a	absence of indicators.)
Depth	Matrix			X Features % Type' L	ort Te	anture Remarks
inchies)	Color (moist)		Color (maist)	% Type' L		CL.
0-7	107129/2	100/0				
7.17	107184/2	100)	-		- 5	2
1-1-0	1011-110	1-10				
	-					
	-					
	-					
Type: C=C	oncentration, D=De	pletion, RM=	Reduced Matrix, C	S=Covered or Coated S	Sand Grains.	³ Location: PL=Pore Lining, M=Matrix.
lydric Soil	Indicators: (Appl)	able to all	LRRs, unless othe	rwise noted.)	In	dicators for Problematic Hydric abils :
Histosol	I (A1)		Sandy Red		-	_ 1 cm Muck (A9) (LRR C)
Histic E	pipedon (A2)		Stripped M	atrix (S6)	-	_ 2 cm Muck (A10) (LRR B)
	listic (A3)			oky Mineral (F1)	-	_ Reduced Vertic (F18)
Hydroca	en Sulfide (A4)		Loamy Gle	yed Matrix (F2)		Red Parent Material (TF2)
	d Layers (A5) (LRR	C)	Depleted N		6	 Other (Explain in Remarks)
	uck (A9) (LRR D)			k Surface (F6)		
	d Below Dark Surfa	ce (A11)		Dark Surface (F7)		
	ark Surface (A12)			pressions (F8)	1	Indicators of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Poo			wetland hydrology must be present,
	Gleyed Matrix (S4)		-			unless disturbed or problematic.
	Layer (if present):					
Type:					635	
Depth 0	nches):				H	ydric Soil Present? Yes No 🔀
YDROL	Contraction and the second second second					
	ydrology Indicator		de alegade pil dans and	his		Secondary Indicators (2 or more required)
	ficators (minimum o	f one require				Water Marks (B1) (Riverine)
Surfac	e Water (A1)		Salt Crut	Contraction of the second s		
High V	Vater Table (A2)		Biotic Cr			Sediment Deposits (B2) (Riverine)
Satura	viion (A3)			invertebrates (B13)		Drift Deposits (B3) (Riverine)
	Marks (B1) (Nonriv	erine)	Hydroge	n Sulfide Odor (C1)		Drainage Patterns (B10)
	ent Deposits (B2) (I		Oxidized	Rhizospheres along Li	Ming Roats (C3) Dry-Season Water Table (C2)
	leposits (B3) (Nonri			e of Reduced Iron (C4)		Crayfish Burrows (C8)
		(de nod)		iron Reduction in Tilled		Saturation Visible on Aerial Imagery (C
	e Soil Cracks (B6)				2010 (01)	Shallow Aquitard (D3)
	ation Visible on Aeri			ck Surface (C7)		FAC-Neutral Test (D5)
	-Stained Leaves (B	n	Other (E	Sopiain in Remarks)		PAG-Metal II Tells (COS)
	ervations:	ware -	×	a transment		
Surface W	later Present?	Yes		(inches):	-	
Water Tab	le Present?	Yes	No Z Depth I	(inches):	-	5
Saturation		Yes	No Cepth	(inches):	Wetland	Hydrology Present? Yes No 🔀
Jinch eine a	fenniñ vastiaen	2500	States and States	and the second second		
Describe F	Recorded Data (stre	am gauge, n	nonitoring well, aerli	al photos, previous insp	ections), if a	vailable:
Demoter						
Remarks:						
0						

State: <u>CA</u> Sampling Point: <u>SP-07</u> Township, Range: <u>OS IIN OBE</u> ef (concave, convex, none): <u>CONCAVE</u> Slope (%): <u>C27</u> Long: <u>Datum: NAP 8</u> COMPLEX NWI classification: <u>NAP 8</u> COMPLEX NWI classification: <u>NAP 8</u> No <u>X</u> (If no, explain in Remarks.) No <u>X</u> (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes <u>X</u> No (If needed, explain any answers in Remarks.) Ing point locations, transects, important features, etc. the Sampled Area thin a Wetland? <u>Yes</u> <u>No</u>
ef (concave, convex, none): <u>concrite</u> Slope (%): <u>CZ</u> Long: <u>Datum: MAP 8</u> <u>COMPLEX</u> NWI classification: <u>MOME</u> No <u>X</u> (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes <u>X</u> No (If needed, explain any answers in Remarks.) Ing point locations, transects, important features, etc. the Sampled Area
ef (concave, convex, none): <u>conchrie</u> Stope (%): <u>22</u> , Long: <u>Datum: MAP B</u> <u>Complies</u> NWI classification: <u>NONE</u> No <u>x</u> (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes <u>X</u> No (If needed, explain any answers in Remarks.) Ing point locations, transects, important features, etc. the Sampled Area
Long: Datum: <u>MAP 8</u>
No No (if no, explain in Remarks.) Are "Normal Circumstances" present? Yes No (if needed, explain any answers in Remarks.) Ing point locations, transects, important features, etc. the Sampled Area
No (if no, explain in Remarks.) Are "Normal Circumstances" present? Yes No (if needed, explain any answers in Remarks.) Ing point locations, transects, important features, etc. the Sampled Area
Are "Normal Circumstances" present? Yes No
(If needed, explain any answers in Remarks.) ng point locations, transects, important features, etc. the Sampled Area
ng point locations, transects, important features, etc. the Sampled Area
the Sampled Area
STREET DIST AND ADD STREET TO COM
thin a Wetland? Yes No
11 Indicator Dominance Test worksheet: 2 Status Number of Dominand Security
Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1 (b)
Percent of Dominant Species
Cover That Are OBL, FACW, or FAC: (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x t =
FAGW species x 2 =
FAC species x 3 =
over FACU species x4 =
FAC Column Totals
Column Totals: (A) (B)
FAcco Prevalence Index = B/A =
FACLE Hydrophytic Vegetation Indicators:
Dominance Test is >50%
0/3 / Prevalence Index is \$3.0"
FAC Morphological Adaptations ¹ (Provide supporting
data in Remarks or on a separate sheet)
over Problematic Hydrophytic Vegetation ¹ (Explain)
 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
and a standard of presentation.
nieto nel actoremento
over Hydrophytic Vegetation
over Hydrophytic Vegetation Present? Yes <u>></u> No
Present? Yes No
Vegetation
Present? Yes _> No

Arid West - Version 2.0

ofile Description: (Describe to the dep		CONTRACTOR READERS	80051111011011018086
epth Matrix	Color (moist) % Type' 1	oc ² Texture	Remarks
ches) Calar (moist) %		MARC Sich	
-4 107R9/2 95%	KK	me sici	
			WHEN SOILS DIET
1-12 107/04/2 90%	757134 10% C	M_Sich	
		and Grains	Location: PL=Pore Lining, M+Matrix,
ype: C=Concentration, D=Depletion, RM rdric Soil Indicators: (Applicable to all	=Reduced Matrix, CB=Covered or Coaled S		ors for Problematic Hydric Soile ³ :
			m Muck (A9) (LRR C)
_ Histosol (A1)	Sandy Redox (S5) Stripped Matrix (S6)		m Muck (A10) (LRR B)
_ Histic Epipedon (A2)	Loamy Mucky Mineral (F1)		duced Vertic (F18)
_ Black Histic (A3) _ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		d Parent Material (TF2)
Stratified Layers (A5) (LRR C)	Copleted Matrix (F3)		her (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		name of Astronomy of Astronomy
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	0000000	
Thick Dark Surface (A12)	Redox Depressions (F8)		tors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)		and hydrology must be present,
Sandy Gleyed Matrix (S4)	525(2-1) (1) (1) (1) (0)	unie	ss disturbed or problamatic.
and state in the second first second so which a			
testrictive Layer (if present):			
Type: CUTY			×
Type: CMY Depth (inches): 12 "		Hydria	Soll Present? Yes X No
Depth (inches):		Hydrio	Soll Present? Yes X No
Type: Depth (inches): Remarks:		Hydrio	Soll Present? Yes X No
Type: Depth (inches): I2 '' Remarks: IYDROLOGY Wetland Hydrology Indicators:	rad: check all that apply)		Soll Present? Yes X No
Type: Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require			
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 	Salt Grust (B11)		econdary indicators (2 or more required)
Type: Depth (inches): I2 '' Remarks: Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	Salt Grust (B11) Biotic Crust (B12)	8	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Type: Depth (inches): Remarks: WDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	8	econdary indicators (2 or more required)
Type: Depth (inches): I2 '' Remarks: Workland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	S	econdary Indicators (2 or more required)
Type: Depth (inches): Remarks: WDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require 	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L 	wing Roots (C3)	econdary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) 	Ming Roots (C3)	econdary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Crayfish Burrows (C8)
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent iron Reduction in Titled 	Ming Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Crayfish Burrows (C3)
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent iron Reduction in Titled (B7) Thin Muck Surface (C7)	Ming Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriai Imagery (C
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent iron Reduction in Titled 	Ming Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drsinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) 	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent iron Reduction in Titled (B7) Thin Muck Surface (C7) Cther (Explain in Remarks) 	Ming Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drsinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 		Ming Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drsinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aeriai Imagery (C Shallow Aquitard (D3)
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (ininimum of one require 	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent iron Reduction in Tifled (B7) Thin Muck Surface (C7) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches): 	Ming Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:		Ming Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent iron Reduction in Tifled (B7) Thin Muck Surface (C7) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches): 	Ming Roots (C3) Solis (C6)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Cl Shallow Aquitard (D3) FAC-Neutral Test (D5) rology Present? Yes X No
Type:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent iron Reduction in Titled Recent iron Reduction in Titled Thin Muck Surface (C7) Cther (Explain in Remarks) No Cher (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	Ming Roots (C3) Solis (C6) Wetland Hydroctions), if availab	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) relogy Present? Yes X No
Type:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent iron Reduction in Tifled (B7) Thin Muck Surface (C7) Cother (Explain in Remarks) No X Depth (inches): No X Depth (inches): Mo X Depth (inches): Mo X Depth (inches): Mo X Depth (inches): Mo X Depth (inches): No X Depth (inches): No X Depth (inches): No X Depth (inches): Mo X Depth (inch	Ming Roots (C3) Solis (C6) Wetland Hydroctions), if availab	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) rology Present? Yes X No
Type:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent iron Reduction in Tifled (B7) Thin Muck Surface (C7) Cother (Explain in Remarks) No X Depth (inches): No X Depth (inches): Mo X Depth (inches): Mo X Depth (inches): Mo X Depth (inches): Mo X Depth (inches): No X Depth (inches): No X Depth (inches): No X Depth (inches): Mo X Depth (inch	Ming Roots (C3) Solis (C6) Wetland Hydroctions), if availab	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) relogy Present? Yes No le:

-

roject/Site: <u>EAST PAPCEL</u> pplicant/Owner: <u>UPWM</u>			and the	0008
westigator(s): R. Hundle stor	Rac	tion Tournahim Da	state: 07	Sampling Point:
andform (hillslope, terrace, etc.):	CE In	non, rownarsp, ra	nge: 03 ///	123
ubregion (LRR):	Lat:	an rener (concave,	coewex, noney:	Slope (%):
Il Map Unit Name: COMETA - FIDI	OVWE-G	-	_ Long:	Datum MADE
an map one name: <u>corrected from</u>	271910001	compl	NWI classific	ation: NONE
e climatic / hydrologic conditions on the site typical for	this time of year?			
re Vegetation, Soil, or Hydrology	algnificantly disb	urbed? Are	"Normal Circumstances" p	present? Yes 🗻 No
e Vegetation, Soil, or Hydrology	_ naturally problem	natic? (If ne	eeded, explain any answe	rs in Remarks.)
UMMARY OF FINDINGS - Attach site ma	ap showing sa	mpling point l	ocations transacts	Important features ate
STATE CONTRACTOR OF THE STATE OF T			oourons, canaecta	, important reatures, etc.
Hydrophytic Vegetation Present? Yes	No 🔀	Is the Sampled	Area	
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No	within a Wetla		No X
Remarks: + =	NO	100 million - 2 million - 2 million	1890 - AN M-	
Remarks: A BOUR ALE SEASON.	AL RATE.	FALL		
	and the second second			
EGETATION - Use scientific names of p	lants.			
	Abrolute De	minant Indicator	Dominance Test work	sheat
ree Sitalum (Plot size:)	% Cover St	ecles? Status	Number of Dominant S	
- MA			That Are OBL, FACW,	or FAC: (A)
			Total Number of Domin	
			Species Across All Stra	ta: (B)
			Percent of Dominant S	
apling/Shrub Stratum (Plot size:)	=]	fotal Cover	That Are OBL, FACW,	or FAC: 50% (A/B)
-N/A			Contraction of the Contraction of the	
			Prevalence Index wor	
				Multiply by:
				x1=
				x2=
	= 1	Total Count		x3= x4=
erb Stratum (Plot size: 5 PT_)	100	and the second second		x5=
ELYNUS CAPUT- MEPUS				0.0120201
LOLIUM PERENNE*		YES FAC		(A) (B)
TRIFOLIUM HIRTUM		NL	Prevalence Index	= B/A =
CROTEN SETTOFR	5%	NL	Hydrophytic Vegetatic	an Indicators:
JUNCUS BUFONIUS		FACE	Dominance Test is	>50%
			Prevalence Index is	i ≤3.0 ⁴
			Morphological Ada	ptations ¹ (Provide supporting
				or on a separate sheet)
Woody Vine Stratum (Plot size:)	_80/c=1	otal Cover	- Problematic Hydroj	phytic Vegetation ¹ (Explain)
ria station (to size.			Instanton of history	
			be present, unless dist.	and wetland hydrology must
-				
0.3		otal Cover	Hydrophytic Vegetation	
6 Bare Ground in Herb Stratum 20/2 % Co	over of Biotic Crust			s No _X
Remarka:	Conned			
* LOLIUM PISRENNE =	FESTUCA	PERENN	5	

US Army Corps of Engineers

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Sampling Point: 5P.08

ofile Description: (Describe to eoth Matrix			Features		200 U C C C	
epth Matrix nches) Color (moist)	% Col	or (moist)	% T	ype' Loc	Tex	ture Remarks
	95% 1	cyp-4/6	5%	CM	Ac SI	CL
<u> </u>						
					_	
					_	
						10 M
					-	
Type: C=Concentration, D=Depk	etion, RM=Reduc	ced Matrix, CS	Covered or	r Coated Sar	ud Grains	² Location: PL=Pore Lining, M=Matrix.
ydric Soll Indicators: (Applica	ble to all LRRs,	unless other	wise noted.)	Inc	licators for Problematic Hydric Soils ¹ :
Histosal (A1)		Sandy Redo	and the second se		-	1 cm Muck (A9) (LRR C)
Histic Epipedan (A2)	-	_ Stripped Ma			-	2 cm Muck (A10) (LRR B)
Black Histic (A3)		_ Loamy Mud			-	Reduced Vertic (F18) Red Parent Material (TF2)
_ Hydrogen Sulfide (A4)	S. 197	Loamy Gley	A CONTRACTOR OF A CONTRACT	2)	-	Other (Explain in Remarks)
Stratified Layers (A5) (LRR C	9 e	Cepleted Mickey Cepleted Micke		11	-	Criter (Colonia III Construction)
_ 1 cm Muck (A9) (LRR D)	00000000		sunace (no sik Surface (
Depleted Below Dark Surface Trick Dark Surface (A42)			ressions (F8)		310	dicators of hydrophytic vegetation and
 Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 		Vernai Pool		·		wetland hydrology must be present,
Sandy Gleyed Malrix (S4)	-		- ()			unless disturbed or problematic.
Restrictive Layer (if present):					10	
Туре:						
Depth (inches):					Hv	dric Soil Present? Yes 🗶 No
Remarks:				-	1.0	
Remarks:				8	1.5	
Remarks:				8		
Remarks: IYDROLOGY Wedand Hydrology Indicators:		erie all that son	M		1.5	Secondary Indicators (2 or more required)
Remarks: IYDROLOGY Wedland Hydrology Indicators: Primary Indicators (minimum of c					1.5	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Remarks: IYDROLOGY Wesland Hydrology Indicators: Primary Indicators (minimum of c 		Sait Crust	(611)			Water Marks (B1) (Riverine)
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of c 		Salt Crust Biotic Cru	t (611) at (612)	(813)		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3)	ne required; che	Sait Crust Biotic Cru Aquatic In	t (811) at (812) wertebrates			Water Marks (B1) (Riverine) Sediment Doposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrtiver	ne required: che rine)	Sait Crust Biotic Cru Aquatic In Hydrogen	t (611) ist (612) ivertebrates i Sulfide Odd	or (C1)		Water Marks (B1) (Riverine) Sediment Doposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Remarks: IYDROLOGY Wedand Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriver Sediment Deposits (B2) (No	rine) anriverine)	Sait Crust Biotic Cru Aquatic In Hydrogen Oxidized	t (611) ist (612) wertebrates i Sulfide Odd Rhizosphere	or (C1) es along Livit		Water Marks (B1) (Riverine) Sediment Doposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriver Sediment Deposits (B2) (Non- Drift Deposits (B3) (Nonriver	rine) anriverine)	Sait Crust Biotic Cru Aquatic In Hydrogen Oxidized Presence	t (B11) at (B12) wertebrates Suffde Odo Rhizosphere of Reduced	or (C1) es along Livir Firon (C4)	ng Roats (C	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Remarks: IYDROLOGY Wesland Hydrology Indicators: Primary Indicators (minimum of c 	ne required: che rine) mriverine) mine)	Sait Crust Biotic Cru Aquatic in Hydrogen Oxidized Presence Recent in	t (B11) ast (B12) wertebrates a Sulfide Odo Rhizosphere of Reduced on Reducto	or (C1) es along Livit Firon (C4) n in Tilled So	ng Roats (C	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriver Sediment Deposits (B2) (No Drift Deposits (B3) (Nonriver Surface Soil Cracks (B6) Inundation Visible on Aerial	ne required: che rine) mriverine) mine)	Sait Crust Biotic Cru Aquatic in Hydrogen Oxidized Presence Recent in Thin Muc	t (B11) ist (B12) wertebrates s Sulfide Odo Rhizosphere of Reduced on Reduction k Surface (C	or (C1) es along Livir I Iron (C4) n in Tilled So (7)	ng Roats (C	Water Marks (B1) (Riverine) Sediment Doposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriver Sediment Deposits (B2) (Non Drift Deposits (B3) (Nonriver Surface Soil Cracks (B6) Inundation Visible on Aerial Water-Stained Leaves (B9)	ne required: che rine) mriverine) mine)	Sait Crust Biotic Cru Aquatic in Hydrogen Oxidized Presence Recent in Thin Muc	t (B11) ast (B12) wertebrates a Sulfide Odo Rhizosphere of Reduced on Reducto	or (C1) es along Livir I Iron (C4) n in Tilled So (7)	ng Roats (C	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water Table (A2) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrtwer Sediment Deposits (B2) (No Drift Deposits (B3) (Nonrtwer Surface Soil Cracks (B6) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations:	nne required: che nniverime) anniverime) Imagery (B7)	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In Thin Mud Other (Ex	t (B11) ist (B12) ivertebrates i Suffide Odo Rhizosphere of Reduced on Reductio k Surface (C optain in Ren	or (C1) es along Livir I Iron (C4) n in Tilled So (7)	ng Roats (C	Water Marks (B1) (Riverine) Sediment Doposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
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Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriver Sediment Deposits (B2) (Non Drift Deposits (B3) (Nonriver Surface Soil Cracks (B6) Inundation Visible on Aerial Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Saturation Present?	nne required: che nniverine) arine) Imagery (B7) Yes No _	Sait Crust Biotic Crust Aquatic in Hydrogen Oxidized Presence Recent in Thin Muc Other (Ex	t (B11) ist (B12) ist (B12) ivertebrates a Suffde Odo Rhizosphere of Reduced on Reduction k Surface (C oplain in Ren inches): inches):	or (C1) es along Livir I Iron (C4) n in Tilled So (7)	ng Roats (C ills (C6)	Water Marks (B1) (Riverine) Sediment Doposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
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Project/Site: FAST PARCEL	City/	County: PLA	CER CO.	Sampling Date:	6/26/201
Applicant/Owner: UPWMA			State: CA	Campling Delet	58.09
Investigator(s): R.HUPPUE STON	Section	on, Township, Ra	nge: 05	IIN OSE	
Landform (hillslope, terrace, etc.): <u>TTERACE</u> Subregion (LRR): <u>C</u>	Loca	I relief (concave,	convex, none): <u> </u>	NCAVE SI	Im NAD 83
Soil Map Unit Name: COMERA - FIDDY	MENT	COMPU	EX NWI clas	sification:	DNE
Are climatic / hydrologic conditions on the site typical for this to Are Vegetation, Soll, or Hydrology sign Are Vegetation, Soll, or Hydrology natu SUMMARY OF FINDINGS - Attach site map sh	me of year? `\ vificantly distu urally problem	/es No _ rbed? Are ' alic? (If ne	(if no, explain Normal Circumstance eded, explain any an	in Remarks.) Is* present? Yes swers in Remarks.)	× No
Hydrophysic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: ABourse Attlife	*	is the Sampled within a Wetlar	nd? Yes_	No <u>,×</u>	
Remarks: ABOWE AULE SIEASCNAL R SWALE FRATURIE		5A	THPLE POI	NT IN C	eω
VEGETATION – Use scientific names of plants					
Tree Stratum Plot size: 1. P/A 2.	6 Cover Spe		Dominance Test w Number of Dominal That Are OBL, FAC Total Number of Do	nt Species W, or FAC;	2 (A)
3			Species Across All	Strata:	3(8)
Sapling/Shrub Stratum (Plot size:)	= To	otal Cover	Percent of Dominar That Are OBL, FAC	t Species W, or FAC:6	66 (A/B)
1. <u>MA</u>			Prevalence Index	worksheet:	
2				ot Multig	
3				x 1 =	
4				×2 =	
	= Tc	tal Cours		x 3 = x 4 =	
Herb Stratum (Plot size:) //)	die 12			x4=	
1. LELIUM PERENNE* 2. HORDEUM MURINUM		IS FAC		(A)	
3. LEONTODON TARK SAXATTUS	and a state	ES FALL	Prevalence in	dex = B/A =	
4 JUNCUS BUFONIUS	10%		Hydrophytic Vege		
5			X Dominance Tes	at is >50%	
6			Prevalence Ind	ex is ≤3.0 ⁴	
7			Morphological / data in Rem	Adaptations ¹ (Provide arks or on a separate	e supporting
8	6% - To	otal Cover		drophylic Vegetation	
1. <u>P/A</u>			¹ Indicators of hydric be present, unless of	soil and wetland hys fisturbed or problem	frology must atic.
% Bare Ground in Herb Stratum % Cover of	= To Biotic Crust	tal Cover	Hydrophytic Vegetation Present?	Yes × No_	
Remarks:					

Arld West - Version 2.0

rofile Desc	All CITATION AND STORE	o the depth	needed to docume		arcator -	or commi	the absence	, or maneural say
epth	Matrix		Color (moist)	Features 56	Tune	Loc	Texture	Remarka
nches)	Color (moist)	609			C		SICL	
0-4	107P4/3	10%_	7-5789/6	610	C	14	400	
4-12	107/13	90%	7.57R 3/4	10%	C	M	GL	
12+	107123/2	100%	-	-	-	-	a	MA CONC_
lydric Soil Histoad		ietion, RM=R able to all U	RRs, unless otherv Sandy Redox	vise note c (S5)	or Coab d.)	ed Sand G	Indicator	s for Problematic Hydric Soils ³ : Muck (A9) (LRR C) Muck (A10) (LRR B)
Black H Hydrog Stratifie 1 cm M	pipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) (LRR I luck (A9) (LRR D) ed Below Dark Surfac		Stripped Mat Loamy Muck Depleted Ma Redox Dark Depleted Da	y Mineral ed Matrix (trix (F3) Surface (i	(F2) F6)		Redu Red Othe	uoed Vertic (F18) Parent Material (TF2) rr (Explain in Remarks)
Thick D	Dark Surface (A12) Mucky Mineral (S1)		Redox Depre	and the second se	3)		wettan	rs of hydrophytic vegetation and d hydrology must be present, disturbed or problematic.
	Gleyed Matrix (S4) Layer (if present):						unidaa	crace out of productions.
restrictive	Layer (It present):							
122/04/								
Type: Depth ()	nches):				-		Hydric So	oil Present? Yes No 🔀
Type: _ Depth () Remarks:	nches):		-		-		Hydric So	oil Present? Yes No 🗡
Type: _ Depth (I Remarks:	nches):				•		Hydric So	oil Present? Yes No <u>></u>
Type: Depth (I Remarks: HYDROL Wetland H Primary In Surfac High V Saturn Saturn Saturn Sedim Surfac Surfac Surfac Inund	nches):	n one required arino) onriverino) arino) i imagety (Bi	: check all that apph Salt Crust Biotic Crus Aquatic im Hydrogen Oxidized F Presence Recent ino	(B11) vertebrate Sulfde Or Thizosphe of Reduction Reduction Surface (dor (C1) res alor ed Iron (on in Til (C7)	ig Living R C4) lied Soils (Set	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D6)
Type: _ Depth (I Remarks: IYDROL Wetland H Primary In Surfac Unit D Surfac Unit D Surfac Unit D Surface W Water Tak Saturation Uncludes	OGY Vydrology Indicators dicators (minimum of be Water (A1) Nater Table (A2) ation (A3) Marks (B1) (Nonrive ment Deposits (B2) (N Neposits (B3) (Nonrive ce Soil Cracks (B6) ation Visible on Aeria -Stained Leaves (B9) ervations:	rine) one required onriverine) erine) erine) Yes Yes	Check all that apph Salt Crust Biotic Crust Aquatic im Hydrogen Oxidized F Presence Recent iro Thin Muck Other (Exp No X Depth (in No X Depth (in	(B11) at (B12) vertebrate Sulfide Or thizosphe of Reduce in Reduce in Reduce is Surface (plain in Re ches): ches): ches):	dor (C1) res alor ed Iron (on in Til (C7) emarks)	ig Living R C4) lied Soils (i	oots (C3)	Condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C5 Shallow Aquitard (D3) FAC-Neutral Test (D5)

roject/Site: <u>FAST PAPCEC</u> City/County: <u>PL4</u>	CIER CO. Sampling Date: 6/26/20
	State: <u>CA</u> Sampling Point: <u>SP-10</u>
westigator(s): R. HUPPUESTON Section, Township, Ran	ge: 05 111 06E
andform (hillslope, terrace, etc.):	onvex, none): Slope (%):
ubregion (LRR): Lat:	Long Datum NADE
Ol Map Unit Name: COMETA FIDDYMENT COMPCA	EX NWI classification: NONE
re climatic / hydrologic conditions on the site typical for this time of year? Yes No	X (If no explain in Remarks)
re Vegetation, Soll, or Hydrology significantly disturbed? Are 7	
re Vegetation, Soll, or Hydrology naturally problematic? (If ner	No
UMMARY OF FINDINGS - Attach site map showing sampling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	
Hydric Soil Present? Yes No X	
Wetland Hydrology Present? Yes No X	d? Yes No X
Discussion and the second s	
REMARKS: ABOUE AUE SEASONAL MANEALL	
EGETATION – Use scientific names of plants.	
Absolute Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size:) <u>% Cover_Species? Status</u>	Number of Dominant Species
/A	That Are OBL, FAGW, or FAC: (A)
	Total Number of Dominant 7
	Species Across All Strata: (B)
·	Percent of Dominant Species
Sapilno/Shrub Stratum (Plot size:)	That Are OBL, FACW, or FAC:(A/B)
	Prevalence Index worksheet:
	Total % Cover of: Multiply by:
	OBL species x 1 =
	FACW species x 2 =
= Total Cover	FAC species x 3 = FACU species x 4 =
ierb Stratum (Plot size:)	UPL species x 5 =
ELYMUS CAPUT - MEDUSAE SUD YES NL	
BROMUS HONDEACKUS ZOZ YES FALL	Column Totals: (A) (B)
CROTON SETTORIC 10% NL	Prevalence Index = B/A =
TRIFOLIUM HIRTUM 5% NL	Hydrophytic Vegetation Indicators:
TUNCUS BUFONIUS So FAW	Dominance Test is >50%
TRICHOSTEMA LANCEOLATION 3% FALL	Prevalence index is ≤3.0 ¹
	Morphological Adaptations ¹ (Provide supporting
	data in Remarks or on a separate sheet)
93% = Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
voor vine Statum (Par size.	
	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	we prevent, a ress assurbed of problemabo,
= Total Cover	Hydrophytic
% Bare Ground In Herb Stratum 7% K Cover of Blotic Cruat	Vegetation Present? Yes No.X
Ternarka:	105
1000 (120-2) -	

1223.1 C	n needed to document the indicator or co	min and appoints of materials of	
repth Matrix nches) Colar (moist) %	Redox Features Color (moist) % Type' Lo	Texture Re	emarks
nches) Color (moist) %	7.578-3/4 2% C 1	1 54	
1	*		
1-12 10711/3 95%	7.5713/4 5% C M	56	
vne: C=Concentration, D+Depletion, RM=	Reduced Matrix, CS=Covered or Coaled Sa	nd Grains. ² Location: PL=Pore	Lining, M=Matrix.
ydric Soll Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic	: Hydric Solls':
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR (
Histic Epipedon (AZ)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR	(B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)	-
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (T	
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Explain in Rema	анкаў
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic v	egetation and
Thick Dark Surface (A12)	Redox Depressions (F8) Vernal Pools (F9)	welland hydrology must	
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Vernas Pools (Pa)	unless disturbed or probl	
Sandy Gieyed Matrix (34)			
Desided affree Laura did accountly			
2.528-32			1225
Type: Depth (inches):		Hydric Soli Present? Ye	10 NqX
Type: Depth (inches): Remarks:		Hydric Soli Present? Ye	10 NqX
Depth (inches): Remarks: IYDROLOGY		Hydric Soll Present? Ye	10 NQX
Type: Depth (inches): Remarks: IYDROLOGY Watland Hydrology Indicators:			
Type: Depth (inches): Remarks:	d; check all that apply)	Secondary Indicators	(2 or more required)
Type: Depth (inches): Remarks: IYDROLOGY Watland Hydrology Indicators:	Salt Crust (B11)	Secondary Indicators Water Marks (B1	(2 or more required)
Type: Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regulate		Secondary Indicators Water Marks (B1 Sediment Deposi	(2 or more required) (Riverine) its (B2) (Riverine)
Type: Depth (inches): Remarks: IYDROLOGY Watland Hydrology Indicators: Primary Indicators (minimum of one regulate Surface Water (A1)	Selt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Secondary Indicators — Water Marks (B1 — Sediment Deposits — Drift Deposits (B3	(2 or more required)) (Riverine) its (B2) (Riverine) 3) (Riverine)
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Type: Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regulate 	Self Crust (B11) Self Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced from (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7)	Secondary Indicators 	(2 or more required) (Riverine) its (B2) (Riverine) 3) (Riverine) is (B10) isr Table (C2) a (C8) e on Aerial Imagery (C9 1 (D3)
Type: Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regulate 	Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	Secondary Indicators Water Marks (B1 Sediment Deposit Drift Deposits (B2 Drift Deposits (B3 Drift Deposits (B3 Drift Deposits (B3 Crayfish Burrown Saturation Visible	(2 or more required) (Riverine) its (B2) (Riverine) 3) (Riverine) is (B10) isr Table (C2) a (C8) e on Aerial Imagery (C9 1 (D3)
Type: Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regulate 	Self Crust (B11) Self Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced from (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7)	Secondary Indicators 	(2 or more required) (Riverine) its (B2) (Riverine) 3) (Riverine) ts (B10) ts (B10) ter Table (C2) a (C8) e on Aerial Imagery (C9 1 (D3)
Type: Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regults 		Secondary Indicators 	(2 or more required) (Riverine) its (B2) (Riverine) 3) (Riverine) ts (B10) ts (B10) ter Table (C2) a (C8) e on Aerial Imagery (C9 1 (D3)
Type: Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regulate 	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Titled S 7) Thin Muck Surface (C7) Other (Explain in Remarks)	Secondary Indicators — Water Marks (B1 — Sediment Deposits (B1 — Drift Deposits (B3 — Drift Deposits (B3 — Drainage Pattern Ing Roots (C3) — Dry-Season Water — Crayfish Burrown alts (C6) — Saturation Visible — Shallow Aquitard — FAC-Neutral Tes	(2 or more required) (Riverine) its (B2) (Riverine) 3) (Riverine) its (B10) its (B10) its (B10) its (B10) its (C2) is (C3) is on Aerial Imagery (CS i (D5) it (D5)
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Type:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Ro Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	Secondary Indicators Water Marks (B1 Sediment Deposits Drift Deposits (B2 Drift Deposits (B3 Drift De	(2 or more required) (Riverine) its (B2) (Riverine) 3) (Riverine) its (B10) its (B10) its (B10) its (B10) its (C2) is (C3) is on Aerial Imagery (CS i (D5) it (D5)
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Project/Site: EAST PARCEL	(City/County: PLA	10/2/201 Sampling Date: 6/29/2017
Applicant/Owner: WPWM4			State: CA Sameling Delete SP-11
nvestigator(s): R.HUPPLESTON		Section, Township, R	ange: OS IN OGIE
andform (hillslope, terrace, etc.): TERRACE		Local relief (concave	CONVEX POPULA NONE Slame (1) 123
Subregion (LRR):	Lat:		Long: Dation: add 0.82
of Map Unit Name: Company - Fropy	MRA	IT COMP	VEY NWI dassification: New/E
re climatic / hydroingic conditions on the alle hydroid for this	-	244	NVW Gassification:
re climatic / hydrologic conditions on the site typical for this	une or yea		
re Vegetation, Soll, or Hydrology sig			"Normal Circumstances" present? Yes X
re Vegetation, Sell, or Hydrology na		15 MILCPIDE 647.00	teeded, explain any answera in Remarks.)
UMMARY OF FINDINGS - Attach site map s	howing	sampling point	locations, transects, important features, etc.
- CA			in portant features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes No		is the Sample	d Area
Wetland Hydrology Present? Yes X No			and? Yes No
Remarka:		- CAMERDON S	Active Ac
Remarks: A BOWE AVERTOE SEASONA	te R	41NFALL	
EGETATION – Use scientific names of plant	s.		
	Aburban	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant Species
NA			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant 7
L			Species Across All Strata: 3 (B)
ks			
Pasting Charle Plant up 1964 - Los	_	= Total Cover	Percent of Dominant Species 66% (A/B)
Sapling/Shrub Stratum (Plot size:)			
1_MA			Prevalence Index worksheet:
2			Total % Cover of:Multiply by:
k			OBL species x 1 =
4			FACW species x 2 =
		= Total Cover	FAC species x 3 =
Herb Stratum (Plot size: 5/7/)	143		FACU species x 4 =
LELIUM PERENNE*	20%	YES FAC	UPL species x 5 =
Marper MARINUM	20%	YES FAC	
LEONTODON SAXITILIS	15%	YES FALL	
RUMEX CRISPUS	3%	FAC	
LTTHROM ITYSSEPIFOLIUM	1 3%	OBL	Cominance Test is >50%
CENTROMANA FITCHIL	3/2	Efen	Prevalence index is \$3.0 ⁴
. CONVOLVULUS ARVISTOSS	1%	NU	Morphological Adaptations ¹ (Provide supporting
			data in Remarks or on a separate sheet)
	65%	= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Alcody Vine Stratum (Plot size:)			and the second
PIA			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2			the present, divises disturbed or problematic.
251		= Total Cover	Hydrophytic
% Bare Ground in Herb Stratum 352 % Cover	of Biotic Cr	ust	Present? Yes X No
Remarke			
* LOLIUM PERENNE	= FA	STUCT P.	ERENNIS

rome Desc	ription: (Describe t	o the depth	meaned to docum	and and m	any second		the absence	
epth	Matrix			Features	Tuna	Loci	Texture	Remarka
nches)	Color (moist)		Color (moist)	63	Type'	14	54	Tost that me
0-3	10784/2	95% -	7.575-34	3/0	-			
3-8	107124/7	90%	7.578314	8%	C	RC	SCL	
10	1011 110	1070 -	7.5704/6	2%	c	RC	SCL	
8+	107112	1098	-	_			a	
ydric Soll	Concentration, D=Dep Indicators: (Applic	letion, RM=i able to all L	RRs, unless other	wise note	l or Coab ad.)	ed Sand G	Indicators	ation: PL=Pore Lining, M=Matrix. for Problematic Hydric Solis [®] : Auck (A9) (LRR C)
_ Histoso	1.4.1.9		Sandy Reduced Ma Stripped Ma	1				Auck (A10) (LRR B)
	Epipedon (A2) Estic (A3)		Supped wa	in the state of the second	(F1)			ed Vertic (F18)
	en Sulfide (A4)		Loamy Gley					arent Material (TF2)
Stratific	ed Layers (A5) (LRR) luck (A9) (LRR D)	0)	Endox Dark	atrix (F3)	16.28		Other	(Explain in Remarks)
	ed Below Dark Surfac	e (A11)	Depleted D				1	All and the constants and
Sandy	Dark Surface (A12) Mucky Mineral (S1)		Redox Dep Vernal Poo		F8)		wetland	of hydrophytic vegetation and hydrology must be present, fisturbed or problematic.
	Gleyed Matrix (S4)						LINDS V	alous debi di produci naves.
	a state when the							
ALC: NO. 1	Layer (If present):							
Type: _		_	-				Hydria Sol	
Type: _	h Layer (If present):						Hydria Soi	Prosent? Yes X No
Type: _ Depth () Remarks:	inches):						Hydria Sol	I Prosent? Yas X No
Type: _ Depth () Remarks:	inches):	4			-			
Type: Depth () Remarks: IYDROL	nches):						Sec	indary Indicators (2 or more required)
Type: Depth () Remarks: iYDROL Wetland H Primary Im Surfac High V Sature Water	OGY lydrology Indicators dicators (minimum of the Water (A1) Avater Table (A2) ation (A3) Marks (B1) (Nonrive	one require	Seit Crus Biotic Cru Aquatic II Hydroger	t (B11) ust (B12) nverløbrati n Sulfide C	idar (C1)	Ê.	Secc	odary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Type: Depth () Remarks: IYDROL Wetland H Primary Inv Surfac High V Satura Vator Sedim	OGY lydrology Indicators dicators (minimum of on Water (A1) Nater Table (A2) ation (A3) Marks (B1) (Nonrive nent Deposits (B2) (N	one require rine) onriverine)	Salt Crus Biotic Cru Aquatic Is Hydroger Oxidized	t (B11) ust (B12) nverløbrati n Sulfide O Rhizosphi	idor (C1) eres alor	ig Living Ri	Seco 	odary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Type: Depth () Remarks: IYDROL Watland H Primary Int Surfac High V Satura Satura Section Section Drift D	OGY lydrology Indicators dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) (Nonrive ment Deposits (B2) (N Deposits (B3) (Nonrive	one require rine) onriverine)	Salt Crus Biotic Cru Aquatic Is Hydroger Oxidized Presence	t (B11) ust (B12) nvertebrati n Sulfide C Rhizosphi e of Reduc	idor (C1) eres alor ed Iron (ig Living Ri C4)	Seco 	ordary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Type: Depth () Remarks: IYDROL Watland H Primary Int Surfac Saturs Saturs Saturs Section Section Section Section Surfac	OGY lydrology Indicators dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) (Nonrive ment Deposits (B2) (N Deposits (B3) (Nonrive ce Soil Cracks (B6)	one require rine) onriverine) arine)	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent in	t (B11) ust (B12) nvertebrati n Sulfide C Rhizosphi e of Reduc	odor (C1) ares alon ed Iron (tion in Til	ig Living Ri	Seco 	rodary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
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Type: Depth () Remarks: IYDROL Wetland H Primary Im Surfac High V Saturs Vatar Sedim Sedim Surfac Surfac Surfac Surfac Surfac	OGY lydrology Indicators dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) (Nonrive ment Deposits (B2) (N Deposits (B3) (Nonrive ce Soil Cracks (B6)	<u>one require</u> rine) onriverine) arine) I Imagery (B	Salt Crus Blotic Cru Aquatic Is Hydroger Oxidized Presence Recent in 7) Thin Mut	t (B11) ust (B12) nverlabrati n Sulfide C Rhizosphi of Reduct on Reduct is Surface	ider (C1) eres alon ed Iron (tion in Til (C7)	ng Living Ri C4) Iled Soils (C	Seco 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sedment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquilard (D3)
Type: Depth () Remarks: IYDROL Wetland H Primary Inv Surfac Surfac Sature Sature Sature Section Surfac Surfac Surfac Surfac Surfac Surfac Surfac Surfac	oches): OGY lydrology Indicators dicators (minimum of se Water (A1) Nater Table (A2) ation (A3) Marks (B1) (Nonrive nent Deposits (B2) (N Deposits (B3) (Nonriv ce Soil Cracks (B6) ation Visible on Aeria r-Stained Leaves (B9)	<u>cne require</u> nine) onriverine) arine) Limagery (B	Salt Crus Blotic Cru Aquatic Is Hydroger Oxidized Presence Recent in 7) Thin Mut	t (B11) ust (B12) nverlabrati n Sulfide C Rhizosphi o of Reduct on Reduct on Reduct & Surface xplain in R	idor (C1) ares alon ed Iron (tion in Ti (C7) emarks)	ng Living Ri C4) Ied Solis (f	Seco 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sedment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquilard (D3)
Type: Depth () Remarks: YDROL Watland H Primary Ini Surface High V Satura Satura Section Surface W Surface W	OGY lydrology Indicators dicators (minimum of se Water (A1) Nater Table (A2) ation (A3) Marks (B1) (Nonrive nent Deposits (B2) (N Deposits (B3) (Nonrive ce Soil Cracks (B6) ation Visible on Aeria r-Stained Leaves (B9) rervations:	rine) onriverine) erine) i Imagery (8 i Yes		t (B11) uet (B12) nverlabrati o Sulfde C Rhizosphi o of Reduct on Reduct on Reduct k Surface splain in R	odor (C1) ares alon ed Iron (tion in Til (C7) emarks)	ng Living Rr C4) led Solis (f	Seco 	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type: Depth () Remarks: YDROL Wetland H Primary Ins 	OGY lydrology Indicators dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) (Nonrive ment Deposits (B2) (N Deposits (B3) (Nonrive ce Soil Cracks (B6) ation Visible on Aeria r-Stained Leaves (B9) servations: Water Present?	<u>crie require</u> onriverine) arine) Limagery (B		t (B11) uet (B12) nverlabrati a Sulfide C Rhizosphi a of Reduct on Reduct on Reduct k Surface xplain in R mches): inches):	odor (C1) ares alon ed Iron (tion in Til (C7) emarks)	ng Living Rr C4) led Solis (f	Seco 	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type: Depth () Remarks: PYDROL Wetland H Primary Im Surfac High V Saturs Water Sedim Drift C Surfac Inund Viater Field Obs Saturation Saturation Saturation	OGY Iydrology Indicators dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) (Nonrive nent Deposits (B2) (N Deposits (B3) (Nonrive ce Soil Cracks (B6) ation Visible on Aeria r-Stained Leaves (B9) reveations: Water Present? the Present?	rine) onriverine) arine) Limagery (B Yes Yes Yes		t (B11) uet (B12) nverlabration sulfide C Rhizosphie of Reduction Reduc	odor (C1) ares alon ed Iron (tion in Ti (C7) temarks)	ng Living Ri C4) led Solis (i	oots (C3)	Indary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type: Depth () Remarks: IYDROL Wetland H Primary Im Surfac High V Satura Vatar Sedim Vatar Sedim Vatar Sedim Vatar Sedim Surfac	OGY lydrology Indicators dicators (minimum of se Water (A1) Nater Table (A2) ation (A3) Marks (B1) (Nonrive nent Deposits (B2) (N Deposits (B3) (Nonrive ce Soil Cracks (B6) ation Visible on Aeria r-Stained Leaves (B9) reveations: Alter Present? the Present? the Present? capillary fringe) Recorded Dats (streaged)	rine) onriverine) arine) I Imagery (B Yes Yes Yes Yes		t (B11) uet (B12) nverlabrati n Sulfide C Rhizosphi of Reduct on Reduct on Reduct is Surface splain in R nches): inches): i photos, p	odor (C1) ares alon ed Iron (tion in Ti (C7) temarks)	ing Living Ro C4) Ited Solis (C	oots (C3) C6) stiand Hydrolo	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sedment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquilard (D3) FAC-Neutral Test (D5) gy Present? Yes No
Type: Depth () Remarks: YDROL Wetland H Primary Im Surfac High V Saturs Viater Sedim Viater Sedim Sedim Sedim Sedim Surfac	OGY lydrology Indicators dicators (minimum of a Water (A1) Nater Table (A2) ation (A3) Marks (B1) (Nonrive nent Deposits (B2) (N Deposits (B3) (Nonrive ce Soil Cracks (B6) ation Visible on Aeria r-Stained Leaves (B9) reveations: Alter Present? the Present? the Present? capillary fringe) Recorded Data (streage)	rine) onriverine) arine) I Imagery (B Yes Yes Yes Yes		t (B11) uet (B12) nverlabrati n Sulfide C Rhizosphi of Reduct on Reduct on Reduct is Surface splain in R nches): inches): i photos, p	odor (C1) ares alon ed Iron (tion in Ti (C7) temarks)	ing Living Ro C4) Ited Solis (C	oots (C3) C6) stiand Hydrolo	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sedment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Statlow Aquitard (D3) FAC-Neutral Test (D5) gy Present? Yes No

Project/Site: EAST PARCIEL City/County: PC	ACIER CO. Sampling Date: 6/29/2017
Applicant/Owner: WPWMA	State: Sampling Point: SP - 12
Investigator(s): 1C. HUD DUE STON Section, Township, R	ange: 05 11N 06E
Landform (hillslope, terraice, etc.):	convex none): NONE Since 144 622
Subregion (LRR):C	Long Datas 44042
Soll Map Unit Name: COMETA-FIDDTMENT COM	PLACE MAL described and CONC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	Vivi classication: // C/12
and a second	
	"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If n	
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sample	d Area
Wetland Hydrology Present? Yes No Ketland	and? Yes No X
Remarka: A Rouse And Scale Mar St	
Remarker ABOUR AVE SEASONAL RAINFALL	
VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot size:) Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
Inee Stratum (Piot size:) % Cover Species? Status	THE INDI OF DUTIFICATING OF BUSIES
1. <u>P/A</u>	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
3	Species Agross All Strata: (B)
	Percent of Dominant Species
Sapling/Shub Stratum (Plot size:) Total Cover	That Are OBL, FACW, or FAC:
1. MA	Prevalence Index worksheet:
2	Total % Cover of: Multiply by:
3	OBL species x 1 =
4	FACW species x 2 =
5	FAC species x 3 =
Herb Stratum (Plot size: SFT)= Total Cover	FACU species x 4 =
1. ECTMUS CAPUT-MEDUSTE SD'S YES NL	UPL species x 6 =
	 Column Totals: (A) (75)
20	A DATA AND A DESCRIPTION OF A DATA AND A DATA
A TUNCUS BUFONIUS 5% FALL	
5. TRIFOLIUM IHRTUM 3% NL	Dominance Test is >50%
B CROTON SETTOFIC 2% NL	Prevalence index is \$3.0 ⁴
7. LACTUCA SERVICIA 270 FACIL	 The second se Second second secon second second sec
B. CONVOLVULUS ARVENUS 196 NL	data in Remarks or on a separate sheet)
Mandu Vine Statum (Field Vine) - 78/2 - Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
woody vine sinkidini (moi size:	We asson to the real of the second se
1. M/A	Indicators of hydric soil and wetland hydrology must
2	be present, unless disturbed or problematic.
* Total Cover	Hydrophytic
% Bare Ground in Herb Stratum % Cover of Biotic Crust	Present? Yes No X
Remarks:	

Sampling Point SP-12

ofile Desci	Matrix			Features			E
ches)	Color (moist)	_%	Color (moist)	% Type	Loc ²	Texture	Remarks
-8	1CYP9/2	95/6	7.57R3/4	5/0 C	M	SCL	-
- and	HERON CONTRACTOR		94 - C. C.	_	_		
	10						
-	-					_	The second se
					_		
					_		
			2				
0.0110			n - durand Materia (CR	-Countrad or C	calad Sand (inaine 1 o	cation: PL-Pore Lining, M-Matrix.
ype: C=C	oncentration, D=Dep	able to all	Reduced Matrix, CS RRs, unless other	wise noted.)	cated Sand C		for Problematic Hydric Soils':
		able to all t					Muck (AS) (LRR C)
_ Histosol	N T.		Sandy Redo				Muck (A10) (LRR B)
	pipedon (A2) Istic (A3)			ky Mineral (F1)			sed Vertic (F18)
	en Sulfide (A4)			ed Matrix (F2)		Red P	harent Material (TF2)
	d Layers (A5) (LRR	C)	Z Depleted Ma	the second se		Other	(Explain in Remarks)
	uck (A9) (LRR D)	and		Surface (F8)			
	d Below Dark Surfac	e (A11)		ark Surface (F7	>	A Contractor	The stands also exceptibles and
	ark Surface (A12)			essions (F8)			s of hydrophytic vegetation and hydrology must be present,
	Mucky Mineral (S1)		Vernal Pool	s (F9)			disturbed or problematic.
	Gleyed Matrix (54)					urzeas .	
cestrictive	Layer (if present):						
						10.000	2003 STATE AND
Туре:	in the second	_				Hydric Soi	Present? Yes X No
Depth (ir	nches):	HIUR	TU AD	JACEN	T PIEI		il Present? Yes <u>X</u> No <u></u>
Depth (ir Remarks:	nchee): 50165 571	HIUR	70 AD	JACRENI	T PIEI		
Depth (ir Remarks: YDROLO	nches): 5 01 L 5 - ST 1 DGY		TU AD	JACRNI	T DIE		
Depth (ir Remarks: YDROLO Wotland H	nches): 5 01 4 5 57 1 DGY ydrology Indicators	й И	5	-	T PIEI	PRESSA	ONAL FEATURIE
Depth (ir Remarks: YDROLO Wetland H Primary Inc	nches): Soll-S Sri OGY ydrology Indicators ficators (minimum of	й И	d; check all that app	W)	T DIE	ejeje 5500	andary Indicators (2 or more required)
Depth (ir Remarks: YDROLO Wetland H Primary Inc Surfac	oches): SolLS STI DGY ydrology Indicators ficators (minimum of e Water (A1)	й И	d: check all that app Salt Crust	W) ((B11)	T DIE	ejeje 550	andary Indicators (2 or more required) Water Marks (61) (Riverine)
Depth (ir Remarks: YDROLO Wetland H Primary Inc Surfac High V	DGY ydrology Indicators ficators (minimum of e Water (A1) Yater Table (A2)	й И	d: check all that app Salt Crust Biotic Crust	W) (B11) st (B12)	0. 1000 030	e je je 550	andary Indicators (2 or more required)
Depth (ir Remarks: YDROL(Wetland H Primary Ind Surfac Surfac High V Satura	DGY ydrology Indicatore dcators (minimum of e Water (A1) Water Table (A2) ition (A3)	i: one require	d: check all that app Salt Crust Biotic Cru Aquatic in	ly) (B11) st (B12) rvertebrates (B	13)	e <i>jeje 55</i> 00	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (ir Remarks: YDROL(Wetland H Primary Inc Surfac High V Satura Water	DGY ydrology Indicators ficators (minimum of e Water (A1) Yater Table (A2) dion (A3) Marks (B1) (Nonrive	i: one require arine)	d: check all that app Salt Crust Biofic Cru Aquatic in Hydrogen	ly) (B11) st (B12) rvertebrates (B sulfide Cdor ()	13) C1)	0/2/2 550	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (ir Remarks: YDROLO Wotland H Primary Ind Surfac Under High V Satura Water Sedim	DGY ydrology Indicatore dicators (minimum of e Water (A1) Vater Table (A2) dion (A3) Marks (B1) (Nonriw ent Deposits (B2) (N	ic one require arine) onriverine)	d: check all that app Salt Crust Biotic Cru Aquatic in Hydrogen Oxidized	ly) (B11) st (B12) rvertebrates (B Sulfide Odor (Rhizospheres a	13) C1) stong Living F	0/2/2 550	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (ir Remarks: YDROLO Wetland H Primary Inc Surfac Unit for Seturna Seturna Drift D	Contentian Service Ser	ic one require arine) onriverine)	d: check all that app Salt Crust Biofic Cru Aquatic in Hydrogen Oxidized Presence	ly) (B11) st (B12) rvertebrates (B Sulfide Odor (Rhizospheres a of Reduced Inc	13) C1) atong Living F on (C4)	e je je je s Sro Beg 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (ir Remarks: YDROLO Wetland H Primary Ind Surfac High V Surfac Sedim Drift D Surfac	SOILS STO SOILS STO OGY ydrology Indicators ficators (minimum of e Water (A1) Yater Table (A2) fion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive es Soil Cracks (B6)	i: <u>one require</u> arine) ionriverine) verine)	d: check all that app Salt Crust Biotic Cru Aquatic in Hydrogen Oxidized Presence Recent in	h) (B11) st (B12) svertebrates (B Sulfide Odor (Rhizospheres a of Reduced Inc on Reduction In	13) C1) atong Living F on (C4)	e je je je s Sro Beg 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Creyfish Burrows (C8)
Depth (ir Remarks: YDROLO Wetland H Primary Inc Surfac Satura Water Satura Drift D Surfac Inunda	Aches): SOILS STA SOILS STA SOILS STA OGY ydrology Indicators ficators (minimum of e Water (A1) Yater Table (A2) dion (A3) Marks (B1) (Nonrive ent Deposits (B2) (N eposits (B3) (Nonrive e Soil Cracks (B6) atton Visible on Aeris	i: <u>one require</u> erine) onriverine) erine) é imagery (E	d: check all that app Salt Crust Biotic Crust Aquatic in Hydrogen Oxidized Presence Recent in 37) Thin Muc	ly) (B11) st (B12) rvertebrates (B Sulfide Odor (Rhizospheres a of Reduced Inc	13) C1) stong Living F on (C4) n Tilled Solis	e je je s S A	andary Indicators (2 or more required) Water Marks (61) (Riverine) Sediment Deposits (82) (Riverine) Drift Deposits (83) (Riverine) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Depth (ir Remarks: YDROLO Wetland H Primary Inc Surfac 	SOILS STA SOILS STA OGY ydrology Indicators ficators (minimum of e Water (A1) Yater Table (A2) don (A3) Marks (B1) (Nonriv ent Deposits (B2) (No eposits (B3) (Nonriv es Soil Cracks (B6) atton Visible on Aeris -Stained Leaves (B9)	i: <u>one require</u> erine) onriverine) erine) é imagery (E	d: check all that app Salt Crust Biotic Crust Aquatic in Hydrogen Oxidized Presence Recent in 37) Thin Muc	hy) (B11) st (B12) nvertebrates (B Stuffde Odor (Rhizospheres a of Reduced Inc on Reduction In k Surface (C7)	13) C1) stong Living F on (C4) n Tilled Solis	e je je s S A	andary Indicators (2 or more required) Water Marks (61) (Riverine) Sediment Deposits (82) (Riverine) Drift Deposits (83) (Riverine) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Depth (ir Remarks: YDROL(Wetland H Primary Ind Surfac Brimary Ind Surfac High V Satura Sedim Drift D Surfac Inunda Water Field Obar	Context States (Context States):	t: one require arine) konriverine) varine) é imagery (E)	d: check all that app Salt Crust Biotic Crust Aquatic in Hydrogen Oxidized Presence Recent in 37) Thin Muc	hy) (B11) st (B12) rvertebrates (B) Sulfide Odor (Rhizospheres a of Reduced Inc on Reduction In k Surface (C7) splain in Remar	13) C1) stong Living F on (C4) n Tilled Solis	e je je s S A	andary Indicators (2 or more required) Water Marks (61) (Riverine) Sediment Deposits (82) (Riverine) Drift Deposits (83) (Riverine) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
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Depth (ir Remarks: YDROLO Wetland H Primary Inc Surfac Unit D Satura Drift D Surfac Unit D Surface W Water Tab	Aches): SOILS STA SOILS STA DGY ydrology Indicators factors (minimum of e Water (A1) Yater Table (A2) dion (A3) Marks (B1) (Nonrive en Deposits (B2) (No ent Deposit	i: <u>one require</u> arine) onriverine) e imagery (E) Yes Yes	d: check all that app 	ly) (B11) st (B12) nvertebrates (B suffide Odor (Rhizospheres a of Reduced Inc on Reduction In k Surface (C7) splain in Remar nches):	13) C1) stong Living F on (C4) n Tilled Solis	e jê jê jê 5570	andary Indicators (2 of more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (ir Remarks: YDROLO Wetland H Primary Ind Surfac High V Satura Satura Drift D Satura Field Obar Saturator Surface W Water Tab	Context States Server S	s: one require onriverine) erine) erine) erine) erine) Yes Yes Yes	d: check all that app 	hy) (B11) st (B12) rvertebrates (B sulfide Odor (Rhizospheres a of Reduced Inc on Reduction in k Surface (C7) oplain in Remar nches): nches):	13) C1) slong Living F on (C4) n Tilled Soils	eritand Hydrold	andary Indicators (2 or more required) Water Marks (61) (Riverine) Sediment Deposits (82) (Riverine) Drift Deposits (83) (Riverine) Drainage Patterns (810) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Depth (ir Remarks: YDROLO Wetland H Primary Ind Surfac High V Satura Satura Drift D Satura Field Obar Saturator Surface W Water Tab	Context States Server S	s: one require onriverine) erine) erine) erine) erine) Yes Yes Yes	d: check all that app 	hy) (B11) st (B12) rvertebrates (B sulfide Odor (Rhizospheres a of Reduced Inc on Reduction in k Surface (C7) oplain in Remar nches): nches):	13) C1) slong Living F on (C4) n Tilled Soils	eritand Hydrold	andary Indicators (2 of more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (ir Remarks: YDROLO Wetland H Primary Ind Surfac High V Satura Satura Drift D Satura Unit D Surfac Water Field Obas Saturation (includes o Describe F	Context States Server S	s: one require onriverine) erine) erine) erine) erine) Yes Yes Yes	d: check all that app 	hy) (B11) st (B12) rvertebrates (B sulfide Odor (Rhizospheres a of Reduced Inc on Reduction in k Surface (C7) oplain in Remar nches): nches):	13) C1) slong Living F on (C4) n Tilled Soils	eritand Hydrold	andary Indicators (2 of more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (ir Remarks: YDROLO Wetland H Primary Ind Surfac High V Satura Satura Drift D Satura Field Obar Saturator Surface W Water Tab	Context States Server S	s: one require onriverine) erine) erine) erine) erine) Yes Yes Yes	d: check all that app 	hy) (B11) st (B12) rvertebrates (B sulfide Odor (Rhizospheres a of Reduced Inc on Reduction in k Surface (C7) oplain in Remar nches): nches):	13) C1) slong Living F on (C4) n Tilled Soils	eritand Hydrold	andary Indicators (2 of more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (ir Remarks: YDROLO Wetland H Primary Ind Surfac High V Satura Satura Drift D Satura Unit D Surfac Water Field Obas Saturation (includes o Describe F	Context States Server S	s: one require onriverine) erine) erine) erine) erine) Yes Yes Yes	d: check all that app 	hy) (B11) st (B12) rvertebrates (B sulfide Odor (Rhizospheres a of Reduced Inc on Reduction in k Surface (C7) oplain in Remar nches): nches):	13) C1) slong Living F on (C4) n Tilled Soils	eritand Hydrold	andary Indicators (2 or more required) Water Marks (51) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (ir Remarks: YDROLO Wetland H Primary Ind Surfac High V Satura Satura Dorit D Satura Unit D Surfac Water Field Obar Surface W Water Tab Saturation (includes o Describe F	Context States Server S	s: one require onriverine) erine) erine) erine) erine) Yes Yes Yes	d: check all that app 	hy) (B11) st (B12) rvertebrates (B sulfide Odor (Rhizospheres a of Reduced Inc on Reduction in k Surface (C7) oplain in Remar nches): nches):	13) C1) slong Living F on (C4) n Tilled Soils	eritand Hydrold	andary Indicators (2 or more required) Water Marks (51) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)

10.51

vestigator(s): P. Ituppo	TESTON	Section, Township, Ra	ange: 051/1	OSE
indform (hillslope, terrace, etc.);	FALTEE	Local relief (concave,	convex, rione): NOVE	Slope (%):
ubregion (LRR):	Lat_		_ Long:	Datum: MAPE.
al Map Unit Name:Com/E	TTAT- MPPTMA	ent compi	NWI classification:	NONE
e climatic / hydrologic conditions on the	site typical for this time of y	ear? Yes No.2	🦄 (If no, explain in Remarks	0
e Vegetation, Soil, or Hy	vdrology significantly	y disturbed? Are	"Normal Circumstances" present?	Yes 🛌 No
e Vegetation, Soli, or Hy	vdrology naturally pr	roblematic? (If n	eeded, explain any answers in Re	marks.)
JMMARY OF FINDINGS - Att	ach site map showing	g sampling point	locations, transects, impo	ortant features, etc.
	100		, second mile	real reactions, etc.
lydrophytic Vegetation Present? lydric Soil Present?	Yes X No Yes X No	Is the Sample		
Vetland Hydrology Present?	Yes X No	within a Wetla	ind? Yes 🗶 N	o
			and the second second	
emarks: ABOUE AWE SE	easonae kann	FALL		
GETATION - Use scientific r	ames of plants.			
ee Stratum (Plot size:	Absolute	Dominant Indicator	Dominance Test worksheet:	
MA		C apporest otalua	manuel of pointinght openes	(A)
			That Are OBL, FACW, or FAC:	(A)
			Total Number of Dominant	3
			Species Across All Strata;	(B)
		= Total Cover	Percent of Dominant Species	100 % (A/B)
ipling/Shrub Stratum (Plot size:)		That Are OBL, FACW, or FAC;	
NIA			Prevalence Index worksheet:	
			Total % Cover of:	
			OBL species	
			FACW species	
	(i)	= Total Cover	FAC species	
arb Stratum (Plot size: 5 FT	3	Sector Participanting and the	FACU species	
PLACIOBOTHAYS 5	TIPITATUS 40%	TES FACE		143
POUTPOEON MONS	PELIENSIS 10%	YES FAUN		A)(B)
DESCHAMPSIA DAT	NTHONIOINES 5%	YES FACL		
LY THRUM 144550			Hydrophytic Vegetation India	atora:
			Cominance Test is >50%	
			Prevalence index is <3.01	
			Morphological Adaptations data in Remarks or on a	(Provide supporting
			Problematic Hydrophytic V	
loody Vine Stratum (Plot size:		- Total Cover	- · · · · · · · · · · · · · · · · · · ·	eAergecu (Exbisiu)
MIA	10		¹ Indicators of hydric soil and we	stland hydrology must
			be present, unless disturbed or	problematic,
		= Total Cover	Hydrophytic	
Bare Ground in Herb Stratum			Vegetation	8 320
emarks:	16 COVER OF BIORE 0	unust	Present? Yes	No

	-	
	\mathbf{n}	
- 23		 _
~	~	 -

US Army Corps of Engineers

Sampling Point: 5P-13

inches) Colar (moist) %	Color (moist) % Type Loc ²	Texture Remarks
and a second sec		FSL
· 6 7.57R4/3 95	7.57P4/8 5% C PC	PSE
	a second and the second se	
		rains. ² Location: PL=Pore Lining, M=Matrix.
ypa: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Costed Sand G	Indicators for Problematic Hydric Solls ³ :
ydric Soil Indicators: (Applicable to a		1 cm Muck (A9) (LRR C)
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10) (LRR B)
Histic Epipedon (A2)	Stripped Matrix (S6)	Reduced Vertic (F18)
Black Histic (A3)	Learny Mucky Mineral (F1) Learny Gleyed Matrix (F2)	Red Parent Material (TF2)
_ Hydrogen Sulfide (A4)	Depleted Matrix (F3)	Other (Explain in Remarks)
_ Stratified Layers (A5) (LRR C)	Redox Dark Surface (F6)	
1 cm Muck (A9) (LRR D) Desisted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
 Depleted Below Dark Surface (A11) Thick Dark Surface (A12) 	Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,
Sandy Mucky Minister (31) Sandy Gleyed Matrix (S4)		unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
No. Contractor and the second		Hydric Soll Present? Yes X No
Depth (inches):		
YDROLOGY		
Wetland Hydrology Indicators:		a de la de de la companya constructo
Primary Indicators (minimum of one redu		Secondary indicators (2 or more required)
Surface Water (A1)	Salt Grust (B11)	Water Marks (B1) (Riverine)
		and the second s
High Water Table (A2)	Biotic Crust (B12)	 Sediment Deposits (B2) (Riverine)
High Water Table (A2) Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Saturation (A3)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Saturation (A3) Water Marks (B1) (Nonriverine)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Waler Table (C2) Crayfish Burrows (C8)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriveri	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B5) Inundation Visible on Aerial Imagen	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
 Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager, Water-Stained Leaves (B9) 	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagen Water-Stained Leaves (B9) Field Observations:	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagen Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (y (87) Thin Muck Surface (C7) Cther (Explain in Remarks) No Depth (inches):	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagen Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87) Thin Muck Surface (C7) Cther (Explain in Remarks) No Depth (inches):	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Caturation Present? Yes	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Caturation Present? Yes	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Caturation Present? Yes	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87) Thin Muck Surface (C7) Cther (Explain in Remarks) No Depth (inches):	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagen Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagen Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagen Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Includes capillary thinge) Describe Recorded Data (stream gauge	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Unit: Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Cincludes capillary thinge) Describe Recorded Data (stream gauge	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Unit: Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Cincludes capillary thinge) Describe Recorded Data (stream gauge	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Unift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagen Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Vater Table Present? Yes Saturation Present? Yes Saturation Present? Yes Cincludes capillary fringe) Describe Recorded Data (stream gauge	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solis (Y (87)	Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Sile: FAST PARCIEC	City/County: PUTCER CO. Sampling Date: 6/29/2017
Applicant/Owner: CV P CV MA	State: CA Sameling Point: SP-114
Investigator(s): R. HUDDUESTE	Section, Township, Range: 05 11 N 06/E
Landform (hillslope, terrace, etc.): TERRAC	Local reliaf (concave, convex, none): Morre Slope (%): 228
Subregion (LRR):	Lat Long: Data MAD 83
Soll Map Unit Name: Com FATA FIL	PYMENT COMPLEX NWI dessification: NONE
Are climatic / hydrologic conditions on the site typical for t	his time of year? Yes No 🔀 (if no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	
Are Vegetation, Soil, or Hydrology	
Sommart of Findings - Attach site ma	showing sampling point locations, transects, important features, etc.
Hydrophytic Vegelation Present? Yes	No × In the Second days
Hydric Soil Present? Yes	No x within a Wetland? Yes No X
Wetland Hydrology Present? Yes	No X No X
Remarks: A BOUSE AND RAINFACC 1	FOR SEASON
VEGETATION - Use scientific names of pla	ots.
	Absolute Dominant Indicator Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover Species? Status Number of Deminant's Passing

1. P/A	in south on the	line and the second	Stepus	Number of Dominant Spec That Are OBL, FACW, or F	ies AC: 0	(4)
3				Total Number of Dominant Species Across All Strata:	2	(B)
Sapling/Shrub Stratum (Plot size:)		= Total Co	wer	Percent of Dominant Spec That Are OBL, FACW, or F	ies AC:	2_ (AVB)
1. MA		-		Prevalence Index works?	neet:	
2				Total % Cover of:	Multiply	by:
3				OBL species		
4				FACW species		
5	_		_	FAC species		
Herb Stratum (Plot size: SFT)		= Total Co	wer	FACU species		
		+ Lune		UPL species		
1. ELYMUS CAPUT-MEDUSALE 2. BROMUS HEILDEACEMS			FACE	Column Totals:	_ (A)	(B)
3 LEONTOPON SAXITILIS	10%		FALL	Prevalence Index =	B/A =	
4. AVENA BARBATA	TR		ML	Hydrophytic Vegetation		
5				Dominance Test is >5		
6				Prevalence Index is ≤	101	
7		-	-	Morphological Adaptat		noorting
8		_		data in Remarks or	on a separate si	heel)
Woody Vine Stratum (Plot size:)		= Total Co	iver	Problematic Hydrophy	tic Vegetation ¹ (I	Explain)
1. <u>F/A</u>				Industry of history of		
				¹ Indicators of hydric soil an be present, unless disturbe	d wetland hydrol of or problematic	logy must
2			wer	Hydrophytic	a ar production pro-	
				Vecetation	No X	-
% Bare Ground in Herb Stratum % Cover of	A DIDAC CU	um		Present 105	NO A	

Sampling Point: 5PM

ofile Descriptio	Matrix		Redo	x Features			Director.
nches) C	Color (moist)	- %	Calor (moist)		pe' Loc ²	Texture	Remarka
2-6 7	.57PT/3	95%	7.5784/6	S/a	c RC	FSL	
1100-00-000		201	- e			100 million (100 million)	
		-					
÷							
			(e)				
	35.W		1		Destand Desert C	and a s	ocation: PL=Pore Lining, M=Matrix.
Type: C=Conce	ntration, D=Dep	letion, RM	-Reduced Matrix, C	S=Covered or	Coated Sand C		s for Problematic Hydric Soils ¹ :
7		able to all	LRRs, unless oth				Muck (AS) (LRR C)
Histosol (A1)			Sandy Re	dox (S5) Aatrix (S6)			Muck (A10) (LRR B)
 Histic Epiped 				ucky Mineral (F1	D		iced Vertic (F18)
Black Histic (Hydrogen St.)				eyed Matrix (F2			Parent Material (TF2)
	yers (A5) (LRR (C3		Matrix (F3)	5	Other	r (Explain in Remarks)
1 cm Muck (rk Surface (F8)			
	low Dark Surfac	a (A11)		Dark Surface (F	7)	1235242155	
Thick Dark S	Surface (A12)			pressions (F8)			s of hydrophytic vegetation and
	y Mineral (S1)		Vernal Po	ols (F9)			d hydrology must be present, disturbed or problematic.
	ed Matrix (S4)			- 197		uniess	disables of production.
Restrictive Lays	er (if present):						
Тура:	10	_					all Present? Yes No 🔀
Depth (Inches Remarks: 5/ Not /	MILA	SOIL.	F TO AN	074-6-1 550-0-	T PA	A COLOR	Mar Bactores - United
Not 1	in cio	SOIL.	F TO AN	0740E1	T PH	A COLOR	Mar Bactores - United
Nor 1	MILHA IN CLO	SED	E TO AL	074c&1	T PA	A COLOR	Mar Bactores - United
Nor /	in clo	5 10-10	PEPPR	55000	T PA	EPLESS	ron - pur
Nor /	logy Indicators	5 10-10	PIEPME	201V)	T PA	EPLESS	row - pur condary Indicators (2 or more required)
Not /	logy Indicators	5 10-10	PIE PME ed; check all that an Salt Cru	001V) ust (B11)	T PH	EPLESS	cond - pur condary Indicators (2 or more required) Water Marks (B1) (Riverine)
Nor World Hydro Primary Indicato Surface Wa High Water	MILLAR IN CLO logy Indicators as (minimum of ther (A1) Table (A2)	5 10-10	PIE PME ed; check all that an Salt Cn Biotic C	001V) ist (B11) irust (B12)		EPLESS	condary Indicators (2 or more required) Water Marks (B1) (Riverino) Sediment Deposits (B2) (Riverine)
Nor / Nor / IYDROLOGY Wetland Hydro Primary Indicato Surface Wa High Water Saturation (MILLAR IN CLO logy Indicators are (minimum of ther (A1) Table (A2) (A3)	s Ref) a cne regula	ed: check all that an Sait Cru Biotic C Aquatic	opivi ust (B11) irust (B12) invertebrates (813)	500	water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Nor / Nor / IYDROLOGY Wetland Hydro Primary Indicato Surface Wa High Water Saturation (Water Mark	MILLAR Mogy Indicators are (minimum of ther (A1) Table (A2) (A3) cs (B1) (Nonrive	s & D cne requir erine)	ed; check all that an Salt Cru Biotic C Aquatic Hydrog	aphyl ist (B11) irust (B12) iruset (B12) iruset (B12)	B13) (C1)	500	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Nor / Nor / NOROLOGY Wetland Hydrol Primary Indicato Surface Wa High Water Saturation (Sediment D	In CLO In	s Ref) a cne requir erine) onriverine	ed; check all that an Salt Cru Biolic C Aquatic Hydrog	oply) ust (B11) inust (B12) Invertebrates (en Suitide Odor d Rhizospheres	B13) (C1) = along Living F	5005 (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Remarka: 5/ MOT IYDROLOGY Wetland Hydrol Primary Indicato Surface Wa Surface Wa High Water Saturation (Water Mark Sediment D Drift Depose	MILLAR IN CL O logy Indicators as (minimum of ter (A1) Table (A2) (A3) cs (B1) (Nonrive Deposits (B2) (Nonrive its (B3) (Nonrive	s Ref) a cne requir erine) onriverine	ed; check all that an Salt Cru Biolic C Aquatic Hydrog Oxidize Presen	aphy) ust (B11) invartebrates (en Suttde Odor d Rhizospheres ce of Reduced I	B13) (C1) ron (C4)	E. PLESS	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Remarks: 5/ Mor / IYDROLOGY Wetland Hydrol Primary Indicato Surface Wa Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Surface So	MILLAR IN CL O logy Indicators as (minimum of ter (A1) Table (A2) (A3) (Ca (B1) (Nonrive Deposits (B2) (Nonrive its (B3) (Nonrive (I Cracks (B6))	s Kryp a cne requir erine) onriverine orine)	ed; check all that as Sall Cru Biofic C Hydrog Presen Recent	aphy) ast (B11) invertebrates (invertebrates (inver	B13) (C1) ron (C4) in Tilled Solts	E. PLESS	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C3) Saturation Visible on Aerial Imagery (C8
Remarka: 5/ Mor / Wetland Hydrol Primary Indicato — Surface Wa — High Water — Saturation (— Water Mark — Sediment D — Drift Deposi — Surface So — Inundation	MILLAR Mogy Indicators as (minimum of ter (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (Sa (B1) (Nonrive)eposits (B2) (No its (B3) (Nonrive (I Cracks (B6)) Visible on Aerial	s & D c cne requir onriverine erine) (imagery (ed; check all that as Sall Cru Biofic C Hydrog Notize Recent Recent B7)Thin Mil	aphy) ast (B11) rust (B12) Invertebrates (en Suffde Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7	B13) (C1) in along Living F iron (C4) in Tilled Solis)	E. PLESS	condany Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C3) Saturation Visible on Aerial Imagery (C8 Shallow Aquitard (D3)
Remarka: 5/ MOT / Wetland Hydro Primary indicato Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos Surface So inundation Water-Stair	MILLAR Mogy Indicators as (minimum of ther (A1) Table (A2) (A3) (A) (A) (A) (A) (A) (A) (A) (A	s & D c cne requir onriverine erine) (imagery (ed; check all that as Sall Cru Biofic C Hydrog Notize Recent Recent B7)Thin Mil	aphy) ast (B11) invertebrates (invertebrates (inver	B13) (C1) in along Living F iron (C4) in Tilled Solis)	E. PLESS	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C3) Saturation Visible on Aerial Imagery (C8
Remarka: 5/ NOT / Wetland Hydrol Primary Indicate Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos Surface So Inundation Water-Stair Field Observat	MILLAR Mogy Indicators as (minimum of ter (A1) Table (A2) (A3) cs (B1) (Nonrive)eposits (B2) (No its (B3) (Nonrive its (B3) (Nonrive it	s Arro c cne requir onriverine orine) Limagery (ed; check all that an Salt Cru Biofic C Aquatic Hydrog () Oxidize Presen Recent (87) Thin Mi Other (aply) ust (B11) invertebrates () en Suttide Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7 Explain in Remu	B13) (C1) in along Living F iron (C4) in Tilled Solis)	E. PLESS	condany Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C3) Saturation Visible on Aerial Imagery (C8 Shallow Aquitard (D3)
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Remarka: 5/ MOT / Wetland Hydro Primary Indicate Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposition (Water Stair Field Observat Surface Water 1 Water Table President of the service Surface Content of the service Surface Water 1 Surface 1 Surf	MILLAR Mogy Indicators as (minimum of ter (A1) Table (A2) (A3) cs (B1) (Nonrive Deposits (B2) (Nonrive (A3) (S) (Nonrive (A3) (A3) (S) (Nonrive (B2) (Nonrive (B3) (Nonrive	s & prime) crime) constiverime orrine) t imagery () Yes Yes	ed; check all that as 	aphy) ist (B11) invertebrates () invertebrates () invertebrates () invertebrates () invertebrates () invertebrates () an Suffice Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7 Explain in Remu (inches): (inches):	B13) (C1) along Living F ron (C4) in Tilled Solia () arks) W	E PLESS	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C3) Saturation Visible on Aerial Imagery (C4 Shallow Aquitard (D3) FAC-Neutral Test (D5)
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104

Applicant/Owner: UPW M	ARCEC	City/County: PLACER CO. Sampling Date: 6/29/201 State: CA Sampling Point: 5P · 15
with restance of the local	DEESTON TEPRACIE	_ Section, Township, Range:O5_// NO6/E Local relief (concave, convex, none):NONESlope (%):2
Soil Map Unit Name:		
Are climatic / hydrologic conditions o	in the site typical for this time of	f year? Yes No (if no, explain in Remarks.)
Are Vegetation, Soil	or Hydrology significan	ntly disturbed? Are "Normal Circumstances" present? Yes 🗡 No
Ve Vegetation, Soil,	or Hydrology naturally	problematic? (If needed, explain any enswers in Remarks.)
SUMMARY OF FINDINGS -	Attach site map showing	ing sampling point locations, transects, important features, etc.
	Yes X No	Is the Sampled Area

VEGETATION - Use scientific names of plants.

Tree Stratum (Ptot size:)	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
2				Total Number of Dominant	2	
3				Species Across All Strata:		_ (B)
 Sapling/Shrub Stratum (Plot size:) 	_	= Total C	over	Percent of Dominant Species That Are OBL, FACW, or FAC:	100%	(A/B)
1. M/A				Prevalence Index worksheet:		
			1	Total % Cover of:	Multiply by:	
2				OBL species x		
3		-		FACW species x		
4		-		FAC species x	A 3 1 1 1	
5				FACU species x		
Herb Stratum (Plot size: 5FT)		= Total Ca	over	0.380.023552	, Mad 11	
1. PLAGIOBOTHEYS STIPITATUS	10%	VES	FAcul	UPL species x	1200	
2. LEONTADON SAXITILIS	10%	YES	FACU	Column Totals: (/	N	(B)
3. DESCHAMPSIA DANTHCHIOIDES	5%		FACE	Prevalence Index = B/A =		
4. POUTROGON MONSPELIENSIS	5%	-	FACW	Hydrophytic Vegetation Indica	ators:	_
5. HERDEUM MARINERM	5%	-	FAC	X Dominance Test is >50%	182.00	
			- Ine	Prevalence Index is <3.0		
6		-		Morphological Adaptations	Provide support	writines.
7				data in Remarks or on a		
8	35%	= Total Co	over	- Problematic Hydrophytic Ve	egetation ¹ (Expl	ain)
Noody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and we	tland hydrology	must
2.				be present, unless disturbed or	problematic.	
% Bare Ground in Herb Stratum 65% % Cover	of Biotic C	= Total Co	1942 -	Hydrophytic Vegetation Present? Yes	No	
Remarks		12.				
even lanks.						

Sampling Point: 59-15

Implement Cooker (model) Sk Cooker (model) Yuge Loc ² Taxtura Remarks POP IC Y/P Y//3 90% 7.5 Y/P Y//k IO/k SL SL Implement Interview SL SL SL SL Type: C-Concentration, D=Depletion, RM=Reduced Matrix, CS=-Coverad or Coated Sand Grains *Location: PL=Pore Lining, M=Matrix, URL (SL) Interview Network Histopi (A1) Sany Redux (SS) 1 cm Mack (A9) (LRR D) Sany Redux (SS) 1 cm Mack (A9) (LRR D) Sany Redux (SS) 1 cm Mack (A9) (LRR D) Redux CM (F3) Other (Explain in Remarks) Tack Dark Statice (A12) Loamy Glayeed Matrix (F2) Red Parent Material (TF2) Redux CM (A1) Redux Dark Statice (F7) Depleted Dark Statice (A12) Redux Dark Statice (F7) Proces Dark Statice (A12) Redux Dark Statice (F7) Proces Dark Statice (A12) Redux Dark Statice (F7) Startified Layers (F6) (LRR C) Redux Dark Statice (F7) Proces Dark Statice (F7) Proces Dark Statice (F7) Proces Dark Statice (F7) Startified Layers (F1) West Marks (S1) Redux Dark Statice (F7) Proces Dark Statice (F7) Proces Dark Statice (F7) Statice Water Table (A2) <td< th=""><th></th><th>cription: (Describe to</th><th>o the dept</th><th></th><th></th><th>ator or config</th><th>rm the abse</th><th>ence of Indicators.)</th></td<>		cription: (Describe to	o the dept			ator or config	rm the abse	ence of Indicators.)
POC 1C 7/P 4//3 90% 7.5 7/P 4/k 10% 24/M 54 Pyte: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coverad or Coated Sand Grains. ^A accation: PL=Pore Lining, M=Matrix, 10% Mideators: (Apple Sail Midicators: (Apple Sail Midicators) Indicators for Problematic Hydris Sails': Histic Explexion (A2) Stroped Matrix (S6) 2 or MAck (A10) (LRR B) Biask Histic (A3) Loamy Madry Mineral (F1) Reduced Vertic (F18) Hydrogo Sainface (A12) Depixted Matrix (F2) Red Parent Material (T2) Startifice Layers (A5) (LRR C) Depixted Matrix (F3) Other (Explein in Remarks) 1 cm Mack (A9) (LRR D) Depixted Matrix (F3) Other (Explein in Remarks) 2 startice Layers (A5) (Marcal (S1) Depixted Matrix (F3) Other (Explein in Remarks) 3 stard Valcators (A11) Depixted Matrix (F3) Other (Explein in Remarks) Startice Layers (A5) (Marcal (S1) Mercel (F7) Prodox Depresenting (F3) Startice Layers (F present): Type: Type: Type: Type:	Depth (inches)	Matrix Coint (moist)	2/			ne' I cr?	Textus	Ramarka
2-8 IC YIP Y/3 99% 7.5 T/F Y/K IO.K PL-M SL Type: C=Concentration, D=Depletor, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ⁹ Locaton: PL=Pore Lining, M=Matrix, Vigric Soll Type: C=Concentration, D=Depletor, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ⁹ Locaton: PL=Pore Lining, M=Matrix, Vigric Soll Histoel (A1) — Sandy Rodox (S5) — In Mack (A9) (LRR R) Histoel (A1) — Sandy Rodox (S5) — In Mack (A9) (LRR R) Histoel (A2) — Stripped Matrix (S6) _ 2 cm Mack (A9) (LRR R) Hyperbook Galdos (A4) — Lowny Macky Mineral (F1) — Redox Operasions: (F3) Depleted Dark Surface (F2) — Redox Dark Surface (F3) — Other (Explain in Remarks) Trick Dark Surface (A12) — Redox Dark Surface (F3) — Other (Explain in Remarks) Sandy Mucky Mineral (S1) — Depleted Dark Surface (F3) — Other (Explain in Remarks) YPROLOGY — Madca Hydrology Indicators: — Present; — Present; Type: — Depleted Dark Surface (R12) — Secondary Indicators (2 or more required), water Marks (B1) (Riverine) Surface Water (A1) — Saturation (A2) — Surface (R12) — Secondary Indicators (C3) (Riverine) Surface Water (A1) — Sec		Color (includ)		CONT TICKES		100	- David	WISBUISECS
type/cite Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histos (A1) Sandy Rodox (S5) 1 cm Mack (A9) (LRR C) Black Histo (A3) Loamy Macky Minrari (F1) Reduced Vertic (F16) Biask Histo (A3) Loamy Macky Minrari (F2) Red Parent Material (F2) Stratified Layers (A5) (LRR C) Depleted Markx (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR D) Rodox Dark Surface (F7) Prindeators of hydrophytic vejetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Geyed Matrix (S4) Vernal Pools (F9) Vernal Pools (F9) Sandy Geyed Matrix (S4) Vernal Pools (F9) No Bestrictive Layer (if present): Trype: Present? Type: Depleted Marks (S1) Sandy Cores (S1) Sturber (A1) Sandy Cores (S1) Secondary Indicators: Trype: Depth (inches): No Depth (Inches): Sandy Cores (S1) Sandy Cores (S1) Sturber (A1) Sandy Cores (S1) Secondary Indicators: (2 or more resulted) Sturber (Noterics) Sandy Cores (S12) Secondary Indicators: (2 or more resulted) Sturbace Note (A1) Sandy Cores (S1)	0-6	10719/3	90%	7.571=4/6	10% 0	PC/M	52	
typeric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Histo Epipedon (A2) Sintpod Matrix (S6) 1 cm Mack (A9) (LRR C) Black Histo (A3) Loamy Macky Mineral (F1) Red Decore Material (F2) Bradie Matrix (S6) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR D) Red Parent Material (F2) Red Parent Material (F2) Depleted Below Dark Surface (A12) Redox Dark Surface (F7) Pindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) Vernal Pools (F9) Vernal Pools (F9) No Deptited Matrix (S4) Batrix (B1) Wetland Hydrology Indicators: No Trinax / Indicators (Iminimum of one required: check all that apply) Sacondary Indicators (2 or more required) Satrix (B1) Surface Value (B1) Satt Crust (B11) Water Marks (B1) (Riverine) No High Water Table (A2) Biotic Crust (B12) Seciment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertifierates (B15) Drift Deposits (B2) (Riverine) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators:							-	
tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histos [Cipedon (A2) Sindped Matrix (S6)								
Histosol (A1) Sandy Rodox (S5) 1 cm Muck (A9) (LRR C) Histo Epipedon (A2) Binpped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Hields (A3) Loamy Mucky Mineral (F1) Reduced Yetti (F16) Hydrogen Suffice (A4) Loamy Mucky Mineral (F1) Reduced Yetti (F16) 1 cm Muck (A9) (LRR C) Depideted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depideted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depideted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR C) Depideted Matrix (F3) Other (Explain in Remarks) Sardy Mucky Mineral (S1) Presents F8) Pindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sater (Brite Layer (If present): Type: Present? Yes No No Type: Sato Chast (B11) Water Marks (B1) (Riverine) No Suffice VNater (A1) Sat Crust (B12) Secondary Indicators: No Primary Indicators: Saturation (A3) Aquatic Invertebrates (B13) Onth Deposits (B3) (Riverine) Sufface VNater (A1) Sat Crust (B12) Secondary Indicators: (B10) Doil Deposits (B3) (Riverine) <td< td=""><td></td><td></td><td></td><td></td><td></td><td>Coated Sand (</td><td>Grains.</td><td></td></td<>						Coated Sand (Grains.	
Hislic Epipedon (A2) Stripped Matrix (\$6) 2 cm Kuck (A10) (LRR B) Black Histic (A3) Loamy Mauxly Mineral (F1) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depikted Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depikted Matrix (F2) Red Parent Material (TF2) Ten Muck (A10) (LRR D) Peoketed Matrix (F2) Red Parent Material (TF2) Depikted Matrix (S4) Depikted Matrix (F2) Other (Explain in Remarks) Sardy Mucky Mineral (S1) Peoketed Matrix (F3) Indicators of hydrophylic vegetation and wetland hydrology must be present, untess disturbed or problematic. Sardy Mucky Mineral (S1) Vernal Pools (F9) Indicators (Carter (B1)) Indicators (Carter (B1)) Sardy Mucky Mineral (S1) Vernal Pools (F9) Indicators (Carter (B1)) Indicators (Carter (B1)) Sardy Mucky Mineral (S1) Sat Crust (B11) Water Marks (S1) (Reverine) No Surface Water (A1) Sat Crust (B1) Secondary Indicators: No Surface Water (A1) Sat Crust (B1) Water Marks (S1) (Nonriverine) Presence of Roduced from (C4) Secondary Indicators (C1) Drin Deposits (B2) (Riverine) Saturation (A3) Aquatric Invertherates (B13) Drin Daposits	lydric Soil	Indicators: (Applica	ble to all L	RRs, unless other	wise noted.)		Indica	ators for Problematic Hydric Solls ¹ :
Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F16) Hydrogen Suffice (A4) Loamy Mucky Mineral (F2) Red Parant Material (TF2) Strattifed Lysers (A5) (LRR C) Depleted Matrix (F2) Red Parant Material (TF2) Depleted Balow Dark Surface (A11) Depleted Dark Surface (F6) Depleted Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Vernel Pools (F9) wetland hydrology must be present, unriess disturbed or problematic. Sandy Gibeyed Matrix (S4) Urreal Pools (F9) wetland hydrology must be present, unriess disturbed or problematic. Wetland Hydrology Indicators: Type:		A 1 20 YO CO 10 CO WI		2010 ALC: 1010 A				
Hydrogen Sudice (A4) Loamy Gleyed Matrix (F2) Rad Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR D) Redox Depressions (F6) Depleted Bark Surface (A12) Sardy Mucky Mineral (S1) Depleted Dark Surface (F7) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sardy Mucky Mineral (S1) Vernel Pools (F9) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Startictive Layer (if present): Type: Indicators (F7) Depth (inches): Hydric Soil Present? Yes No No Betrictive Layer (if present): Satconst (B11) Satconst (B12) Secondary Indicators (2 or more required): Stratee Water (A11) Satconst (B11) Water Table (A2) Botic Cours (B12) Secondary Indicators (B2) (Riverine) Subrace Water (A1) Saturation (A3) Aquetic Invertebrates (B13) Drift Deposits (B3) (Riverine) Starder Water (A1) Saturation (A3) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Starder (A3) Aquetic Invertebrates (B13) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine)<					the second se	8		
Strattled Layers (A5) (LRR C) Deploted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Deploted Below Dark Surface (F7) Sandy Mucky Minaral (S1) Vernal Pools (F8) Vernal Pools (F8) Sandy Mucky Minaral (S1) Vernal Pools (F9) vetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Minaral (S1) Vernal Pools (F9) vetland hydrology must be present, unless disturbed or problematic. Settrictive Layer (if present): Type: Hydric Soil Present? Yes No No Depth (inches): Bestrictive Layer (if inches): No Secondary Indicators. (2 or more required) Sufface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) Secondary Indicators. (2 or more required) Sufface Water (A1) Salt Crust (B12) Secondary Indicators. (2 or more required) Sufface Water (A1) Salt Crust (B12) Secondary Indicators. (2 or more required) Sufface Water (A2) Biotic Crust (B12) Secondary Indicators. (2 or more required) Saluration (A3) Aqueria Invertenties (B13) Drift Deposit (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Suffde Odor (C1) Drift Deposit (B3) (Nonriverine) Drift Deposit (B3) (Nonriv								DEVELOPMENT PROPERTY STOCKED
1 om Muck (A9) (LRR 0)			2					
Depleted Below Dark Surface (A12) Depleted Dark Surface (F7) Not Dark Surface (A12) Vernel Pools (F9) Vernel Pools (F1) Vernel Po			1	the second s			_ 0	oner (Explain in Remarks)
Trick Dark Surface (A12) Image: Redox Depressions (F8) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Revel Matrix (S4) unless disturbed or problematic. Restrictive Layer (if present): marks: Type:	and the second second		76.15)			20		
Sandy Mucky Minaral (S1)			Parid			9	³ Indica	stors of hydrophytic vegetation and
Sandy Geyed Matrix (54) unless disturbed or problematic. Secticitive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No Remarks: Hydric Soil Present? Yes No YDROLOGY Secondary Indicators: Primary Indicators (inimium of one required; check all that apply) Secondary Indicators (2 or more required).								
Restrictive Layer (if present): Type:					1. 41			
Depth (inches): Hydric Soil Present? Yes No Remarks: YDROLOGY Wotland Hydrology Indicators: Primary Indicators (innimum of one required; check all that apply) Secondary Indicators (2 or more required);	and the second se	and the state of the second					1	
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Remarks: YDROLOGY Metland Hydrology Indicators: Primary Indicators (innimum of one required; check all that apply) Secondary Indicators (2 or more required)	Depth (in	ches):	_				Hydric	Soil Present? Yes 🔀 No
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Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required)						_		
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High Water Table (AZ) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Seturation Visible on Aerial Imagery (C Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water Table Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): No Saturation Present? Yes No Depth (inches): No No Saturation Present? Yes No Depth (inches): No No No No Saturation Present? Yes No Depth (in	and the second second		o todnicen		0.0.000		2	
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Inundation Visible on Aerial Imagery (B7)Thin Muck Surface (C7) Water-Stained Leaves (B9)Other (Explain in Remarks) Field Observations: Surface Water Present? YesNo Depth (inches): Water Table Present? YesNo Depth (inches): Saturation Present? YesNo Depth (inches): Saturation Present? YesNo Depth (inches): Saturation Present? YesNo Depth (inches): Depth (inches): Saturation Present? YesNo Depth (inches): Saturation Present? YesNo Depth (inches): Saturation Present? YesNo Depth (inches): No Depth (inches): No Depth (inches): Dept		NEW YORK OF A DAMAGE OF THE	ine)			COST Statements	-	
						11160 2018 (1		
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Burface Water Present? Yes No No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Saturation Present? Yes No No Depth (inches): Wetland Hydrology Present? Yes Yes No Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes Yes No Undudes capillary fringe) Depth (acrial photos, previous inspections), if available: No			_	Caner (Exp	ian in Hieman	(s)	6	_ FAC-Neural (est(00)
Water Table Present? Yes No No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes Yes Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes Yes Includes capillary fringe) Depth (inches): Wetland Hydrology Present? Yes Yes Yes Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			2 2	×	22.00			
Saturation Present? Yes No 🔀 Depth (inches): Wetland Hydrology Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					0.1.100			
includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				10	S125352			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			······································	io A Depth (inc	hes):	We	etiand Hydr	ology Present? Yes No
Remarks: LARGE BASIN W/ HOOF-PUNCH , SFASONAL WISTUMD It DROLDOY			gauge, mo	nitoring well, aerial p	hotos, previo	s inspections	s), if avsilabl	e:
141 DROLDOY	Remarks:	LARGE BA	3112	w/ HOOF	-purc	14 .5	FASer	AZ WISTAND
	140	Pacados						
	14 1 10							

Project/Site: EAST PARCIEL		City/County:	PLAC	ER CO.	Sampling Date:	129/201
Applicant/Owner: INPWMA				State CA	Sampling Point:	
Investigator(s): P. HUDDCHESTON		Section, Town	ship, Rang	05 111	J 06 15	
.andform (hillsiope, terrace, etc.):						(%): L22
				.ong:		
Soil Map Unit Name COM F.FA - FIPDYA						
Are climatic / hydrologic conditions on the site typical for thi	COLUMN ALCO	and the second se			States and the second states of the second states o	
ve Vegetation, Soll, or Hydrologyt						No
Vie Vegetation, Soll, or Hydrology i	17 C				Store and the second	
SUMMARY OF FINDINGS - Attach site map						tures, etc.
		T				
Hydrophytic Vegetation Present? Yes N Hydric Soil Present? Yes N		Is the	Sampled A			
Wetland Hydrology Present? Yes N		within	a Wetland	7 Yes	No X	
Remarks: A BOUE AVE SIEASONAE R		2.55				
/EGETATION – Use scientific names of plan						
Tree Stratum (Plot size:)		Dominant Ir Species?	Zhadara	Dominance Test wor		
· P/A			ACCOUNT OF A	Number of Dominant That Are OBL, FACW		(A)
2				- moon ma moanco	Sent - D	
3				Total Number of Domi Species Across All Str		(8)
4				Demond of Demonstrat		
Sapling/Shrub Stratum (Plot size:)		= Total Cove		Percent of Dominant S That Are OBL, FACW	or FAC: 50	2 (A/B)
1. N/A				Prevalence Index wo	Cherry Co.	
2				Total % Cover of:		
3				OBL species		
e				FACW species FAC species		
5		= Total Cove		FACU species		
Herb Stratum (Plot size: 5 FT)	Sec. 1	Sector Contractor		UPL species		
1. FLY MUS CAPUT-ME PUSTE	50%			Column Totals:		
2. LOLIUM PIERENNE	20%		AC		2.0	
	10%		Acu	Prevalence Inde	x = B/A =	
BROMUS HERDEACEUS			Acu	Hydrophytic Vegetat		
5				Dominance Test is		
6				Prevalence Index	175 TA 189 D	
7				Morphological Ad data in Remark	aplations ¹ (Provide si is or on a separate si	heet)
8,	<u> 10 2</u>	Contraction of the second second	-		phytic Vegetation ¹ (I	1000
Woody Vine Stratum (Plot size:) 1. N/A	-	_= Total Cove		Indicators of hydric so		
2.				be present, unless dis		
	_	= Total Cove	1	Hydrophylic		
% Bare Ground in Herb Stratum % Cove	r of Biolic C	rust		Vegetation Present? Yo	esNo	0
Remarks: LOLINA PISKENNE = FR	0.1519650.028	95912		FEDERAL DE		

Sampling Point: 58-16

Depth	Matrix		Redox	Features				
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc	Texture	Remarks
0-6	10789/3	95%	7.5704/6	5%	C	RC	SL	NOT IN A
								DIE PRESSION
		_			_	=		
	oncentration, D=Deple Indicators: (Applicat					d Sand Gr		ation: PL=Pore Lining, M=Matrix. for Problematic Hydric Solls ⁵ :
Histosol			Sandy Redo		50 - E		1 cm M	uck (A9) (LRR C)
	pipedon (A2)		Stripped Mat				and the second sec	uck (A10) (LRR B)
Black H	istic (A3)		Loamy Muck	y Mineral (F1)			d Vertic (F18)
	en Sulfide (A4)		Loamy Gleye	d Matrix (F	2)		a second s	rent Material (TF2)
	d Layers (A5) (LRR C)		Depleted Ma	AND DRAW SHOW			Other (E	Explain in Remarks)
	uck (A9) (LRR D)	r Maria	Redax Dark					
and the second second second	d Below Dark Surface	(A11)	Depleted Da				1	
	ark Surface (A12)		Redox Depre	1972 P. 1972 P. 1976)			of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Pools	{FB}				ydrology must be present,
	Bleyed Matrix (S4) Layer (if present):						uniess de	sturbed or problematic.
	ruter (a bossont):							
Тура:	201	_	-				12232012-021	
Depth (in	ches):	_					Hydric Soll i	Present? Yes No Z
Remarks:	SIMILAR S	soil s	TO AD	JACIE	T	DIE	PRESS	signite AREA
YDROLO								
1. 1. 1. 1. 1. 1. 1. 1. 1. P. 1.	drology Indicators:							
Primary Indi	cators (minimum of one	e required;	check all that apply)	_		Second	dary Indicators (2 or more required)
Surface	Water (A1)		Salt Crust (B11)			W	ater Marks (B1) (Riverine)
High Wa	ater Table (A2)		Biotic Crust	(B12)			Se	climent Deposits (B2) (Riverine)
Saturati	ion (A3)		Aquatic Inv	entebrates	(813)		Dr	rift Deposits (B3) (Riverine)
		(9)	Hydrogen 5		A Date of the local of the loca			rainage Patterns (B10)

Oxidized Rhizospheres along Living Roots (C3)

Recent Iron Reduction in Tilled Sols (C6)

_			ACCOUNTS.	
10	Inv-Season	Water	Tabla	(C2

- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)

Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (89) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: No Z Surface Water Present? × Depth (inches): Yes Water Table Present? Yes No / Depth (inches): Wetland Hydrology Present? Yes Saturation Present? Yes No / C Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Presence of Reduced Iron (C4)

Sediment Deposits (82) (Nonriverine)

Drift Deposits (B3) (Nonriverine)

Surface Soil Cracks (B6)

No X

Project/Ste: FAST PARCEL	_ City/County: PUTCHER CO. Sampling Date: 6/29/2017
Applicant/Owner: UPWMA	State: CA Sempling Point: 5P-17
Investigator(s): P. Ifuppuesron	Section, Township, Range: 05 11 N 06/6
Landform (hillslope, terrace, etc.): 778 R /24 C/5 Subregion (LRR):Lat:	Local relief (concave, convex, none): <u>concrete</u> Stope (%): <u>C27</u> Long: Detum: <u>MMp83</u>
Soil Map Unit Name FIDDYMENT-KA	
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes No 🥕 (If no, explain in Remarks.)
Are Vegetation, Soli, or Hydrology signification	antly disturbed? Are "Normal Circumstances" present? Yes 🏒 No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show	ing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No

Remarks: ABOUR AVE SEASONITE RAINETEL - LARGE DEEP POOL

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size;) 1M/4-			Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant Species Across All Strata: (B)
4Sapling/Shrub Stratum (Pict size:)		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
1. N/A			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
a			OBL species x 1 =
4			FACW species x 2 =
5.			FAC species x 3 =
		= Total Cover	FACU species x 4 =
Harb Stratum (Plot size: 5FT)			1IPI eneries y 5 =
1. ELEOCHARIS MACROSTACITYA	500	YES OBL	Column Totals: (A) (B)
2			······································
3			Prevalence Index = B/A =
4			Hydrophytic Vegetation Indicators:
S			Dominance Test is >50%
6			Prevalence Index is ≤3.0 ¹
7.			Morphological Adaptations' (Provide supporting
8			data in Remarks or on a separate sheet)
×1		= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)		- Tala Gave	
1. M/A		_	¹ Indicators of hydric soil and wetland hydrology must
2.	S		be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum _ 50% % Cover		= Total Cover	Hydrophytic Vegetation Present? Yes X No
	or Biolic Ci	rust	Present? Yes Ko
Remarks:			

Sampling Point _ 5P-17

or-6	Color (moist)	90%	Color (moist) 7-57/24/6	10%	Type'	Loc MIRC	Texture	Remarks
- 0			1011 110					
			_		-			
		_	_	_				
	oncentration, D=Deple Indicators: (Applica					Sand Gra		ation: PL=Pore Lining, M=Matrix. for Problematic Hydric Solls ¹ :
Histosol	사람이 이상 집을 가지 않는 것이 같아요.		Sandy Rede					luck (A9) (LRR C)
and the second se	pipedon (A2)		Stripped Ma	Contraction of the second				luck (A10) (LRR B)
	stic (A3)		Loamy Muc		(F1)			ed Vertic (F18)
Hydroge	in Sulfide (A4)		Loamy Gley	101 St. 101 St			Red Pa	rent Material (TF2)
1 cm Mu	d Leyers (A5) (LRR C ick (A9) (LRR D)	2	Depleted M	Surface (F			Other (Explain in Remarks)
	d Below Dark Surface	(A11)	Depleted Da				Indenter	of hudenshulls upgeheter and
- ACC 1960004	ark Surface (A12) Aucky Miceral (S1)		Redox Depr Vernal Pool		9)		100000000000000000000000000000000000000	of hydrophytic vegetation and hydrology must be present,
	fucky Mineral (S1) Reyed Matrix (S4)		- vernar 1-008	* h. 41			1. 1. 2. 2. C.	sturbed or problematic.
	Layer (if present):							and and an productions.
Туре:	cafet fi biesenti							
Depth (in	-hant's						Hydric Soil	Present? Yes 🔀 No
Debtu fu	u iea).						1110116-000	FID008111 100 100
emarks:								
	GY							
DROLO	drology Indicators:	777.0		e'				
DROLO		te required	; check all that appl	v)				dary Indicators (2 or more required)
/DROLO	drology Indicators:	ne required	; check all that appl Sait Crust	Notes w			Secon	
/DROLO /etland Hy Surface	drology Indicators: calors (minimum of or	te required		(B11)			Secon	dary Indicators (2 or more required)
/DROLO /etland Hy Surface	drology Indicators: cators (minimum of or Water (A1) ster Table (A2)	ne required	Sait Crust Biotic Crus	(B11)	(813)		Secon W S	dary indicators (2 or more required) ater Marks (B1) (Riverine)
/DROLO /etland Hy fimary India Surface High Wa Saturation	drology Indicators: cators (minimum of or Water (A1) ster Table (A2)	-20	Salt Crust Biotic Crus Aquatic Inv	(B11) ± (B12)			Secon W Si D	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine)
/DROLO /etland Hy firmary India Surface High Wa Saturati Water N Sedime	drology Indicators: cators (minimum of or Water (A1) tter Table (A2) on (A3) tarks (B1) (Nonriverii nt Deposits (B2) (Non	ne) riverine)	Salt Crust Biotic Crus Aquatic Im Hydrogen Oxidized P	(B11) ± (B12) vertebrates Sulfide Odo thizosphere	or (C1) is along l		<u>Secon</u> W S D D D D	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2)
/DROLO /etland Hy Surface High Wa Saturati Water N Sedimei Drift Dej	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) larks (B1) (Nonriveri nt Deposits (B2) (Non posits (B3) (Nonriver	ne) riverine)	Salt Crust Biotic Crus Aquatic Im Hydrogen Oxidized P Presence	(B11) ± (B12) vertebrates Suffide Odo hizosphere of Reduced	or (C1) es along l l Iron (C4	1	<u>Secon</u> W S D s (C3) D C	dary Indicators (2 or more required) ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
/DROLO /etland Hy fimary Indi Surface High Wa Saturati Water N Sedima Drift Day Surface	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) larks (B1) (Nonriveri nt Deposits (B2) (Non posits (B3) (Nonriveri Soil Cracks (B6)	ne) riverins) inc)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized P Presence of Recent Iro	(B11) ertobrates Sulfide Odo hizosphere of Reduced in Reductor	or (C1) es along l l Iron (C4 n in Tilleo	1	Secon W S D D s (C3) D C S	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3
DROLO fetland Hy Surface High Wa Saturati Water N Sedimar Drift Day Surface Inundati	drology Indicators: cators (minimum of or Water (A1) ster Table (A2) on (A3) farks (B1) (Nonriveri nt Deposits (B2) (Non posits (B3) (Nonriveri Soit Cracks (B6) on Visible on Aerial In	ne) riverins) inc)	Salt Crust Biotic Crus Aquatic Im Hydrogen Oxidized P Presence Recent Iro Thin Muck	(811) # (812) vertobrates Suffide Odio hizosphere of Reduced in Reduction Surface (C	or (C1) es along L l Iron (C4 n in Tilleo 7)	1	<u>Secon</u> W S D s (C3)D C S S	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3 hallow Aquitard (D3)
DROLO fetland Hy fimary Indi Surface High Wa Saturati Saturati Water N Sedime Drift Dej Surface Inundati Water-S	drology Indicators: cators (minimum of or Water (A1) tter Table (A2) on (A3) farks (B1) (Nonriveri nt Deposits (B2) (Non posits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In fained Leaves (B9)	ne) riverins) inc)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized P Presence of Recent Iro	(811) # (812) vertobrates Suffide Odio hizosphere of Reduced in Reduction Surface (C	or (C1) es along L l Iron (C4 n in Tilleo 7)	1	<u>Secon</u> W S D s (C3)D C S S	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3
/DROLO /etland Hy fimary Indi Surface High Wa Saturati Saturati Water N Sedime Drift Dej Surface Inundati Water-S	drology Indicators: cators (minimum of or Water (A1) tter Table (A2) on (A3) farks (B1) (Nonriveri nt Deposits (B2) (Non posits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In fained Leaves (B9)	ne) riverins) inc)	Salt Crust Biotic Crus Aquatic Im Hydrogen Oxidized P Presence Recent Iro Thin Muck	(811) # (812) vertobrates Suffide Odio hizosphere of Reduced in Reduction Surface (C	or (C1) es along L l Iron (C4 n in Tilleo 7)	1	<u>Secon</u> W S D s (C3)D C S S	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3 hallow Aquitard (D3)
/DROLO /etland Hy mary lode Surface 	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) larks (B1) (Nonriverii nt Deposits (B2) (Non posits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: or Present? Ve	ne) riverins) ine) nagery (B7 :s N	Satt Crust Biotic Crus Aquatic Im Hydrogen Oxidized P Presence Recent Iro Recent Iro Thin Muck Other (Exp	(B11) t (B12) vertebrates Suffde Odo thizosphere of Reduced in Reduction Surface (C dain in Rem ches):	or (C1) es along L l Iron (C4 n in Tilleo 7)	1	<u>Secon</u> W S D s (C3)D C S S	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3 hallow Aquitard (D3)
/DROLO /etland Hy fimary Indi 	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) larks (B1) (Nonriverii nt Deposits (B2) (Non posits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: or Present? Ve	ne) iriverine) nagery (B7 :s N	Salt Crust Biotic Crus Aquatic Im Hydrogen Oxidized P Presence Recent Iro) Thin Muck Other (Exp Io Depth (im Io Depth (im)	(B11) # (B12) vertebrates Suffide Odo Inizosphere of Reduced n Reduction Surface (C (ain in Rem ches): ches):	or (C1) es along L l Iron (C4 n in Tilleo 7)) Soils (C6)	Secon W S D D D D D D D D D D D S S S	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) nt Deposits (B3) (Riverine) rainage Patterns (B10) ny-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aeriel Imagery (C3 hallow Aquitard (D3) AC-Neutral Test (D5)
DROLO (etland Hy imary Indi Surface High Wa Saturati Water N Sedimer Drift Dej Surface Inundati Water-S ietd Obser urface Wat (ater Table aturation P toludes ca	drology Indicators: cators (minimum of or Water (A1) ther Table (A2) on (A3) larks (B1) (Nonriverin nt Deposits (B2) (Non posits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: or Present? Ve Present? Ve	ne) riverins) ine) nagery (B7 ss N ss N	Satt Crust Biotic Crus Aquatic Im Hydrogen Oxidized P Presence Recent Iro Thin Muck Other (Exp Depth (in Depth (in	(B11) # (B12) vertebrates Suffide Odo thizosphere of Reduced in Reduction Surface (C (ain in Rem ches): ches): ches):	or (C1) es along I liron (C4 n in Tilled 7) narks)) Boils (C6) 	Secon W S D D D D D D S S S S S	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3 hallow Aquitard (D3)
/DROLO /etland Hy fimary Indi 	drology Indicators: cators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri nt Deposits (B2) (Non posits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: ar Present? Ye resent? Ye resent? Ye pillary fringe} corded Data (stream)	ne) ine) nagery (B7 :s N :s N ss N gauge, mor	Sat Crust Biotic Crus Aquatic Im Aquatic Im Aquatic Im Aquatic Im Aquatic Im Aquatic Im Presence F Recent Iro Recent Iro Thin Muck Cother (Exp Recent Iro Depth (im Depth (im Nitoring well, aerial ((B11) at (B12) vertebrates Suffide Odo Inizosphere of Reduced in Reduction Surface (C (ain in Rem ches): ches): ches): ches):	vious insp) Soils (C6) Wetla	Secon W S D S D D S D D S D S D D S D S D S D S D S D S D S D S D S D S S D S S S S S S S S S S S S S S S	dary Indicators (2 or more required) ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) raylish Burrows (C8) aturation Visible on Aerial Imagery (C3 hallow Aquitard (D3) AC-Neutral Test (D5) Present? Yes No
DROLO fetland Hy fimary India Surface High Wa Saturation Water N Sedimal Drift Deg Surface Inundation Water-S feld Obser water-S feld Obser urface Wat Autor Table aturation P includies ca escribe Re omarks:	drology Indicators: cators (minimum of or Water (A1) ther Table (A2) on (A3) larks (B1) (Nonriverii nt Deposits (B2) (Non posits (B3) (Nonriverii Soll Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Ve resent? Ve resent? Ve pitary fringe) corded Data (stream)	ne) riverins) ine) nagery (B7 :s N :s N gauge, mor	Sat Crust Biotic Crus Aquatic Im Hydrogen Oxidized P Presence Recent Iro Thin Muck Cother (Exp Depth (im Depth (im	(B11) t (B12) vertobrates Suffide Odo thizosphere of Reduced n Reduction Surface (C dain in Rem ches): ches): ches): ches): ches):	vious insp) Soils (C6) Wetla	Secon W S D S D D S D D S D S D D S D S D S D S D S D S D S D S D S D S S D S S S S S S S S S S S S S S S	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) nt Deposits (B3) (Riverine) rainage Patterns (B10) ny-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aeriel Imagery (C9 hallow Aquitard (D3) AC-Neutral Test (D5)
DROLO etland Hy imary India Surface High Wa Saturati Water N Sedimar Drift Day Surface Inundati Water-S eld Obser rface Wat ater Table sturation P cludes ca escribe Re	drology Indicators: cators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri nt Deposits (B2) (Non posits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: ar Present? Ye resent? Ye resent? Ye pillary fringe} corded Data (stream)	ne) riverins) ine) nagery (B7 :s N :s N gauge, mor	Sat Crust Biotic Crus Aquatic Im Hydrogen Oxidized P Presence Recent Iro Thin Muck Cother (Exp Depth (im Depth (im	(B11) t (B12) vertobrates Suffide Odo thizosphere of Reduced n Reduction Surface (C dain in Rem ches): ches): ches): ches): ches):	vious insp) Soils (C6) Wetla	Secon W S D S D D S D D S D S D D S D S D S D S D S D S D S D S D S D S S D S S S S S S S S S S S S S S S	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) raylish Burrows (C8) aturation Visible on Aerial Imagery (C4 hallow Aquitard (D3) AC-Neutral Test (D5)

Project/Site:	ASTER	> PARCIEI	6	City/County: PLA	CER CO.	Sampling I	Date: 6/2	9/201:
Applicant/Owner:								
Investigator(s):	R.INDDG	Ester		Section, Township, R	ange: C	SIIN C	OSE	
Landform (hillslope, te								
Subregion (LRR):				and the former of				
Soll Map Unit Name: _					and the second se			the second s
			Contraction of the second	230 00 1 00 - 100 W	A STATE OF STATES			-
Are climatic / hydrolog								
Are Vegetation								40
Are Vegetation	, Soil, or i	Hydrology n	aturally pro	blematic? (If n	eeded, explain any a	answers in Remark	ks.)	
SUMMARY OF FI	INDINGS - A	ttach site map	showing	sampling point	locations, trans	ects, importa	nt feature	es, etc.
Hydrophytic Vegetati	ion Present?	Yes N	~ ~	Second Second	ana an			
Hydric Soil Present?		YesN		Is the Sample		44.0	~	
Wetland Hydrology P	resent?	YesN		within a Wetla	ind7 Yes	No	~	
Planning and and		NEALL ABO	WE	AUE				
14/10	- ne feli	111-5 11.5		1-54				
VEGETATION - L	Jse scientific	names of plan	ts.	_				
Landar A. Carrier	10.00	2	Absolute	Dominant Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot s				Species? Status	Number of Domin		0	
1. <u>P/A</u>					That Are OBL, FA	ACW, or FAC:	0	(A)
2					Total Number of I	Dominant	2	
3					Species Across A	di Strata:	C	(B)
4,				1200320	Percent of Domin	ant Species	28	
Sapling/Shrub Stratu	m (Plotsize:	i i		= Total Cover	That Are OBL, FA	ACW, of FAC: _	40	(A/B)
1. N/A	In the second second				Prevalence Inde	x worksheet:		
					Total % Cove	arof. M	Auttioly by:	
3.						x 1 -		_
4						×2=		
5.						ж3 =		
49.77	100			= Total Cover		x4+		
Herb Stratum (Plot s	size: SPT	J	100	C REVER GAR		x 5 =		
1. ELTMUS	CAPUT	-MEPUSAE	60%	YES NL		(A)		(B)
2. BROMUS	SHERDER	REUS	20%	THE FACE				20.001
3 TRIFOLI	iuns IAA	irin	3/0	NL		Index = B/A =		_
4. CENTA	and the second se			PL		petation Indicator	181	
5					Dominance T			
6,					Prevalence In			
1						a Adaptations ¹ (Pr Imarks or on a set		
			000		************************************	Hydrophytic Vegel	Contraction of the state of the	
Woody Vine Stratum	(Plot size:	1	-90/0	= Total Cover		्र प्राप्त प्राप्त ते त्या है है।	- State Land	
	1/ 00/ 3120.				Indicators of hydr	ric soil and wetlan	d hydrology	must
2.			1			s disturbed or prof		
			_	= Total Cover	Hydrophytic			
% Bare Ground in He	-	2	-		Vegetation		1	
	no stratum	% Cover	OI BIORC CI	usttsu	Present?	Yes	No	
Remarks:								
								1

Sampling Point: 5P-18

Depth	Matrix		Redox	Features	6 - 0'A-			
(inches)	Calar (moist)	%	Color (moist)	%	Type	Loc	Texture	Remarks
0-6	10784/2	98%	7.57,23/4	2%	C	M	SL	100 m
			,					
							-	-14.1
							-	
							-	
							-	
_								
	oncentration, D=Depl					d Sand Gra		Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	Indicators: (Applica	ible to all LE	RRs, unless otherw	vise note	id.)			ors for Problematic Hydric Soils ³ :
Histosol			Sandy Redox	100 C				m Muck (A9) (LRR C)
	sipedon (A2)		Stripped Mat		15/112			m Muck (A10) (LRR B)
Black Hi			Loamy Muck	the second second	10 M 10 M			duced Vertic (F18)
	n Sulfide (A4)	20 C	Loamy Gleye		(F2)			d Parent Material (TF2)
	i Layers (A5) (LRR C ick (A9) (LRR D)	<i>x</i> .	Depleted Mal Redox Dark 8	100 A 100 A 10	EE)		_ 00	ter (Explain in Remarks)
	ick (AB) (LKR D) 5 Below Dark Surface	(A11)	Depleted Dar	22. Sec. 10				
	ark Surface (A12)	went .	Redox Depre				Indicet	ors of hydrophytic vegetation and
	fucky Mineral (S1)		Vernal Pools		25			and hydrology must be present,
	ileyed Matrix (S4)							ss disturbed or problemetic.
Restrictive I	Layer (if present):						1	
Type:	Contraction and the second		_					
1900.								
Depth (in: Remarks:	dhee):		-				Hydric 1	Soll Present? Yes No 🔀
Depth (inc	ches):		-				Hydric S	Soll Present? Yes No _X_
Depth (inc	ches):						Hydric 8	Soll Present? Yes No <u>X</u>
Depth (inc							Hydric S	Soll Present? Yes No <u>_X</u>
Depth (in: Remarks: YDROLO							Hydric 5	Soll Present? Yes No _X
Depth (ins Remarks: YDROLO Wetland Hys	GY	ne required;	check all that apply					Soli Present? Yes No _X
Depth (in: Remarks: YDROLO Wetland Hys Primary India	GY drology Indicators:	ne required;	check all that apply	0000.A				
Depth (ins Remarks: YDROLO Wetland Hyp Primary India Surface	GY drology Indicators: ators (minimum of or	ne required;		B11)				econdary Indicators (2 or more required)
Depth (ins Ramarks: YDROLO Wetland Hyp Primary Indic Surface High Wa	GY drology Indicators: ators (minimum of or Water (A1) ter Table (A2)	ne required;	Salt Crust (i	B11) (B12)	s (B13)			condary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (ins Remarks: YDROLO Wetland Hyp Primary India Surface High Wa Saturate	GY drology Indicators: ators (minimum of or Water (A1) ter Table (A2)	510	Salt Crust (I Biotic Crust	B11) (B12) artebrates	1.000			condary Indicators (2 or more required) _ Water Marks (B1) (Riverine)
Depth (ins Remarks: YDROLO Wetland Hyp Primary India Surface High Wa Saturatic Water M	GY drology Indicators: ators (minimum of or Water (A1) der Table (A2) on (A3)	ne)	Salt Crust (I Biotic Crust Aquatic Invo	B11) (B12) artebrates alfide Od	lor (C1)	Living Roo	54	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (ins Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer	GY drology Indicators: ators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri	ne) iriverine)	Salt Crust (I Biotic Crust Aquatic Invo Hydrogen S	B11) (B12) artebrates aufide Od izospher	tor (C1) iss along		54	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (ins Remarks: YDROLO Wetland Hy Primary Indis Surface High Wa Saturatis Water M Sedimer Drift Dep	GY drology Indicators: ators (minimum of or Water (A1) der Table (A2) an (A3) larks (B1) (Nonriveri nt Deposits (B2) (Nor	ne) iriverine)	Salt Crust (I Biolic Crust Aquatic Invo Hydrogen S Oxidized RI	811) (812) artebrates ulfide Od izospher f Reduces	for (C1) es along d Iron (C-	4)		condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (ins Remarks: YDROLO Wetland Hys Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep Surface	GY drology Indicators: sators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri nosits (B3) (Nonriver	ne) iriverine) ine)	Salt Crust (I Biotic Crust Aquatic Invo Hydrogen S Oxidized Rh Presence of	811) (812) artebrates alfide Od izospher Reductio	tor (C1) es along d Iron (C- on in Title	4)		condary Indicators (2 or more required) _ Water Marks (B1) (Riverine) _ Sediment Deposits (B2) (Riverine) _ Drift Deposits (B3) (Riverine) _ Drainage Patterns (B10) _ Dry-Season Water Table (C2) _ Crayfish Burrows (C8)
Depth (ins Remarks: YDROLO Wetland Hyp Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundali	GY drology Indicators: sators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri nt Deposits (B2) (Nor sosits (B3) (Nonriver Soil Cracks (B6)	ne) iriverine) ine)	Salt Crust (I Biotic Crust Aquatic Invo Hydrogen S Oxidized RI Presence of Recent Iron	811) (812) artebrates ulfide Od izospher Reductio Surface (tor (C1) es along d Iron (C- on in Title C7)	4)		econdary Indicators (2 or more required) _ Water Marks (B1) (Riverine) _ Sediment Deposits (B2) (Riverine) _ Drift Deposits (B3) (Riverine) _ Drainage Patterns (B10) _ Dry-Season Water Table (C2) _ Crayfish Burrows (C8) _ Saturation Visible on Aerial Imagery (C9)
Depth (ins Remarks: YDROLO Wetland Hyp Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundali	GY drology Indicators: ators (minimum of or Water (A1) er Table (A2) an (A3) larks (B1) (Nonriveri to Deposits (B2) (Non cosits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9)	ne) iriverine) ine)	Salt Crust (I Biotic Crust Aquatic Invo Hydrogen S Oxidized RI Presence of Recent Iron Thin Muck S	811) (812) artebrates ulfide Od izospher Reductio Surface (tor (C1) es along d Iron (C- on in Title C7)	4)		econdary Indicators (2 or more required) _ Water Marks (B1) (Riverine) _ Sediment Deposits (B2) (Riverine) _ Drift Deposits (B3) (Riverine) _ Drainage Patterns (B10) _ Dry-Season Water Table (C2) _ Crayfish Burrows (C8) _ Saturation Visible on Aerial Imagery (C9 _ Shallow Aquitard (D3)
Depth (ins Remarks: YDROLO Wetland Hys Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundatio Water-S	GY drology Indicators: sators (minimum of or Water (A1) der Table (A2) an (A3) larks (B1) (Nonriveri to Deposits (B2) (Nor sosits (B3) (Nonriveri soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations:	ne) iriverine) ine) nagery (87)	Salt Crust (I Biotic Crust Aquatic Invo Hydrogen S Oxidized RI Presence of Recent Iron Thin Muck S	811) (812) sitebrates ulfide Od izospher Reduces Reductio Surface (C ain in Rei	tor (C1) es along d Iron (C- on in Title C7)	4)		econdary Indicators (2 or more required) _ Water Marks (B1) (Riverine) _ Sediment Deposits (B2) (Riverine) _ Drift Deposits (B3) (Riverine) _ Drainage Patterns (B10) _ Dry-Season Water Table (C2) _ Crayfish Burrows (C8) _ Saturation Visible on Aerial Imagery (C9 _ Shallow Aquitard (D3)
Depth (ins Remarks: YDROLO Wetland Hys Primary India Surface High Wa Saturatio Vater M Sedimer Drift Dep Surface Inundatio Water-S Field Obser	GY drology Indicators: sators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri nt Deposits (B2) (Nor cosits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Ye	no) iriverine) ine) negery (87) :e No	Salt Crust (I Biotic Crust Aquatic Invo Hydrogen S Oxidized RH Presence of Recent Iron Thin Muck S Other (Expl	B11) (B12) artebrates fulfide Od izospher Reductio Surface (f ain in Rer nes):	tor (C1) es along d Iron (C- on in Title C7)	4)		econdary Indicators (2 or more required) _ Water Marks (B1) (Riverine) _ Sediment Deposits (B2) (Riverine) _ Drift Deposits (B3) (Riverine) _ Drainage Patterns (B10) _ Dry-Season Water Table (C2) _ Crayfish Burrows (C8) _ Saturation Visible on Aerial Imagery (C9 _ Shallow Aquitard (D3)
Depth (ins Remarks: YDROLO Wetland Hys Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundatio Water-S Fleid Obser Surface Wate	GY drology Indicators: sators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri to Deposits (B2) (Nor sosits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Ye Present? Ye	ne) iniverine) inie) magery (87) is No is No	Salt Crust (I Biolic Crust Aquatic Invo Hydrogen S Oxidized RI Presence of Recent Iron Thin Muck S Other (Expl Depth (Ind	B11) (B12) artebrates utifide Od nizospher Reductio Surface (f ain in Ren nes): nes):	tor (C1) es along d Iron (C- on in Title C7)	4) d Sols (C6		econdary Indicators (2 or more required) _ Water Marks (B1) (Riverine) _ Sediment Deposits (B2) (Riverine) _ Drift Deposits (B3) (Riverine) _ Drainage Patterns (B10) _ Dry-Season Water Table (C2) _ Crayfish Burrows (C8) _ Saturation Visible on Aerial Imagery (C9 _ Shallow Aquitard (D3) _ FAC-Neutral Test (D5)
Depth (in: Remarks: YDROLO Wetland Hys Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundatio Water-S Field Obser Surface Water Surface Surface S	GY drology Indicators: sators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri to Deposits (B2) (Nor cosits (B3) (Nonriveri soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Yo Present? Yo sillary fringe)	ne) iriverine) magery (87) ss No ss No ss No	Salt Crust (I Biolic Crust Aquatic Invo Hydrogen S Oxidized RH Presence of Recent Iron Thin Muck S Other (Expl Depth (Incl Depth (Incl	811) (B12) artebrates ulfide Od izospher Reducek Reducek Reduce (ain in Rer nes): nes):	tor (C1) es along d Iron (C on in Title C7) marks)	i) d Sols (C6	(C3)	Condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (in: Remarks: YDROLO Wetland Hys Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundatio Water-S Field Obser Surface Water Surface Surface S	GY drology Indicators: sators (minimum of or Water (A1) ter Table (A2) on (A3) larks (B1) (Nonriveri to Deposits (B2) (Nor sosits (B3) (Nonriveri Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: or Present? Ye present? Ye	ne) iriverine) magery (87) ss No ss No ss No	Salt Crust (I Biolic Crust Aquatic Invo Hydrogen S Oxidized RH Presence of Recent Iron Thin Muck S Other (Expl Depth (Incl Depth (Incl	811) (B12) artebrates ulfide Od izospher Reducek Reducek Reduce (ain in Rer nes): nes):	tor (C1) es along d Iron (C on in Title C7) marks)	i) d Sols (C6	(C3)	Condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Depth (in: Remarks: YDROLO Wetland Hys Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundatio Water-S Field Obser Surface Water Surface Surface S	GY drology Indicators: sators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri to Deposits (B2) (Nor cosits (B3) (Nonriveri soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Yo Present? Yo sillary fringe)	ne) iriverine) magery (87) ss No ss No ss No	Salt Crust (I Biolic Crust Aquatic Invo Hydrogen S Oxidized RH Presence of Recent Iron Thin Muck S Other (Expl Depth (Incl Depth (Incl	811) (B12) artebrates ulfide Od izospher Reducek Reducek Reduce (ain in Rer nes): nes):	tor (C1) es along d Iron (C on in Title C7) marks)	i) d Sols (C6	(C3)	Condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (ins Remarks: YDROLO Wetland Hyp Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundation Water -S Field Obsert Surface Water Surface Water Surface Reference Seturation Pri (includes cap Describe Reference Seturation Pri (includes cap	GY drology Indicators: sators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri to Deposits (B2) (Nor cosits (B3) (Nonriveri soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Yo Present? Yo sillary fringe)	ne) iriverine) magery (87) ss No ss No ss No	Salt Crust (I Biolic Crust Aquatic Invo Hydrogen S Oxidized RH Presence of Recent Iron Thin Muck S Other (Expl Depth (Incl Depth (Incl	811) (B12) artebrates ulfide Od izospher Reducek Reducek Reduce (ain in Rer nes): nes):	tor (C1) es along d Iron (C on in Title C7) marks)	i) d Sols (C6	(C3)	Condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (ins Remarks: YDROLO Wetland Hyp Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundation Water -S Field Obsert Surface Water Surface Water Surface Reference Seturation Pri (includes cap Describe Reference Seturation Pri (includes cap	GY drology Indicators: sators (minimum of or Water (A1) der Table (A2) on (A3) larks (B1) (Nonriveri to Deposits (B2) (Nor cosits (B3) (Nonriveri soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Yo Present? Yo sillary fringe)	ne) iriverine) magery (87) ss No ss No ss No	Salt Crust (I Biolic Crust Aquatic Invo Hydrogen S Oxidized RH Presence of Recent Iron Thin Muck S Other (Expl Depth (Incl Depth (Incl	811) (B12) artebrates ulfide Od izospher Reducek Reducek Reduce (ain in Rer nes): nes):	tor (C1) es along d Iron (C on in Title C7) marks)	i) d Sols (C6	(C3)	Condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)

Tree Stratum (Plot size:) Absolute Scover Dominant Indicator Species? Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: I 2.	408
Investigator(s): R. HDDDLESTON Section, Township, Range: 0511 N 06/E Landform (hilisiope, terrace, etc.): TRAMACE Local relief (concave, convex, none): None Stops (%): Sold Map Unit Name: ALC MMO 'FIDDT MEMOT Non X Ital: Long: Datum: A Sold Map Unit Name: ALC MMO 'FIDDT MEMOT Non X (if no, explain in Remarks.) Are Vigetation: Non X (if no, explain in Remarks.) Are Vegetation Soll or Hydrology relaturation of year? Yes No X (if no, explain in Remarks.) Are Vegetation Soll or Hydrology naturally problematic? (if needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features Hydrology Present? Yes No Hydrology Present? Yes No X It the Sampled Area within a Wetland? Yes No X Vedestation Present? Yes No X It the Sampled Area X X X Hydrology Present? Yes No X It the of the control precise No X Remarks: ABovie<	408
Landtom (hilislope, terrace, etc.): <u>TPAMACE</u> Local relief (concave, convex, none): <u>NONE</u> Slope (%): Subregion (LRR): <u>Lat</u> Leng: Datum: <u>A</u> Soli Map Unit Name: <u>ACAMO 'FIDPTMENT</u> NV/I classification: <u>NONE</u> Are Unit Name: <u>ACAMO 'FIDPTMENT</u> NV/I classification: <u>NONE</u> Are Vegetation	408
Boil Map Unit Name: ALAMO 'GRDDYMIENT No X (if no, explain in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes	lo
Soil Map Unit Name: ALAMO 'FIDDYMIENT No X (if no, explain in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes	lo
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	lo
Are Vegetation	3077
Are Vegetation	3077
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydrophytic Soil Present? Yes No Is the Sampled Area Wetland Hydrology Present? Yes No X Remarks: ABoux Ave SEASONALL PARAFALL - Cow TOPOCM PHILE Southes VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: 1. M/A Species? Status Trate Number of Dominant Species 1 2.	s, etc.
Hydric Soil Present? Yes No within a Wetland? Yes No X Remarks: ABowle Ave SEASONAL PhrnPALC - Cow 70P0CRAPHTC SwArce VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Number of Dominant Species 1 1. N/A	
Remarks: A Bowle Are SEASONAL PARKED - LOW TOPOCRAPHIC SWALE VEGETATION - Use scientific names of plants. Tree Stratum (Plot size:) Absolute Dominant Indicator Socies? Status Dominance Test worksheet: 1. MIA	
VEGETATION – Use scientific names of plants. Tree Stratum (Plot size:) Absolute Socies? Status Dominant Indicator Species? Status 1. <u>MIA</u>	
Tree Stratum (Plot size:) Absolute Scover Dominant Indicator Species? Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: I 2.	- 1
Tree Stratum (Plot size:) % Cover Species? Status Number of Dominant Species I 1. M/A	
1. M/A Image: Species and the species of Dominant Species Arrows All Stratum Image: Species Arrows All Strat	
2.	(A)
3.	14
4. $=$ Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: $50%$ 1. P/A $Prevalence Index worksheet:$ $70%$ 2. $Total % Cover of:$ Multiply by: 3. $OBL species$ $Z = 6$ 4. $PAC species$ $Z = 6$ 5. $=$ Total Cover $FACW species$ $Z = 6$ Herb Stratum (Plot size: SFT_{-}) $=$ Total Cover $FACU species$ $Z = 6$ 1. $LEonTADoch SAXITILLIS$ $SOR YES ML$ $Obtume Totals$; $SS = 6$	(B)
Sapling/Shrub Stratum (Plot size:) = Total Cover That Are OBL, FACW, or FAC: 1. <u>P/A</u> Prevalence index worksheet: 23.	(D)
2. Total % Cover of: Multiply by: 3. OBL species \mathcal{L} $x1 = \mathcal{Z}$ 4. FACW species \mathcal{J} $x2 = \mathcal{G}$ 5. FAC species \mathcal{J} $x3 = \mathcal{G}$ Herb Stratum (Plot size: SFT) = Total Cover FACU species \mathcal{J} $x4 = \mathcal{I} \mathcal{Z}$ 1. LEONTHDON SAXITILIS $\mathcal{B}O_{\mathcal{B}}^{\mathcal{B}}$ $\mathcal{M}L$ Column Totals: $\mathcal{S}S$ (A) \mathcal{IBB}	(A/B)
3. OBL species 2 $x1 = 2$ 4. FACW species 3 $x2 = 6$ 5. FAC species 20 $x3 = 60$ Herb Stratum (Plot size; $5FT$) = Total Cover FACU species 30 $x4 = 120$ 1. LEONTADON SAXITILIS 30 % YES NL Column Totals; 55	
4. FACW species 3 $x2 = 6$ 5. FAC species 20 $x3 = 60$ Herb Stratum (Plot size: SFT) = Total Cover FACU species 30 $x4 = 120$ 1. LEONTADON SAXITILIS 302 yES NL Column Totals: 55	
5. FAC species 20 x3 = 60 Harb Stratum (Plot size: 5.FT) = Total Cover FAC species 30 x4 = 120 1. LEWITHDON SAXITILIS 30% YES NL Column Totals: 55 (A) 188	
Herb Stratum (Plot size: SFT = Total Cover FACU species 30 x4 = 120 1. LEONTADON SAXITICIS 30% YES VES VES VES VES VES	_
Herb Stratum (Plot size: SFT) 1. LEONTADON SAXITICIS 30% YES NL Column Totals: SS (A) 188	
1. LEONTADON SAXITILIS 30% YES ML Column Totals: 55 (A) 188	_
Column Totals: 53 (A) /22	_
2 LOLIUM PRREMME ISTO YES FAL	(8)
3. HORDEON MURINIUM 5% FAC Prevalence Index = B/A = 34	
4. Thrus Bufarias 3% FACW Hydrophytic Vegetation Indicators:	
5. LY MALLY AYSSOPIFOLILY The OBL _ Dominance Test is >50%	
6 Prevalence Index is ≤3.0 ¹	
7 Morphological Adaptations [*] (Provide support	ting
8. data in Remarks or on a separate sheet)))@
= Total Cover Problematic Hydrophytic Vegetation ¹ (Explain	in)
Woody Vine Stratum (Plot size:) 1. M/A Indicators of hydric soll and welland hydrology n	nust
2. be present, unless disturbed or problematic.	
% Bare Ground in Herb Stratum 45% % Cover of Biotic Crust Hydrophytic % Cover of Biotic Crust Present? Yes Ne X	
Remarks:	

Sampling Point: SP-19

Depth	Matrix	-		Features		100		
(inches)	Color (moist)	%	Color (moist)	- %	Type"	Loc2	Texture	Remarks
0-8	10719/2	95%	10783/4	5%	c	M	562	
		_		<u> </u>	_			
Hydric Soll	oncentration, D=Depk Indicators: (Applica		.RRs, unless other	wise note		d Send G	Indicators for P	; PL=Pore Lining, M=Matrix Problematic Hydric Soils ³ : (A9) (LRR C)
— Histosol Histic E	pipedon (A2)		Sandy Redo Stripped Ma	Sec. 25. 1977				(A10) (LRR B)
Black H	istic (A3)		Loamy Muci	T. F. F. F. C. V. C. F.			Reduced Ve	
	en Sulfide (A4)		Loamy Gley		(F2)			Material (TF2)
and the second se	d Layers (A5) (LRR C sck (A9) (LRR D)	1	Cepleted Ma Redox Dark		F6)		Other (Extra	ain in Remarks)
Deplete Thick D Sendy 1	d Below Dark Surface ark Surface (A12) Aucky Mineral (S1) Sleyed Matrix (S4)	(A11)	Depleted Da Redox Depr Vernal Pool	irk Surface essions (F	€ (F7)		wetland hydro	drophytic vegetation and slogy must be present, red or problematic.
	Layer (if present):							
Type:	2. 2							
Death (in	ches):						Hydric Soll Pres	sent? Yes 🗶 No_

HYDROLOGY

Wetland Hydrology Indicators:	100.010.0	2854 OCTOBER VIEW
Primary Indicators (minimum of one required; cl	heck all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soll Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)	Crayfish Burrows (CB)
Water Table Present? Yes No	Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Wetland Hydrology Present? Yes No 🔀
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspect	ions), if available:
Pomarket		PROLONGED INUNDATION

ProjectiSite: EAST PAPELEL	City/County: PLACEJE CO. Sampling Date: 6/29/2017
Applicant/Owner: UPUMA	State: CA Sampling Point: SP-20
Investigator(s): R. HUPPLESTER	Section, Township, Range: 0511N05E
Landform (hillslope, terrace, etc.): TERACE	Local relief (concave, convex, none): NONE Slope (%): 22%
Subregion (LRR): Lat:	Long: Datum: MHD 83
Soll Map Unit Name: ALAMO FIDDYME	NVI dasaffication:
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soll, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soll, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No X
Wetland Hydrology Present? Yes No A	
Remarks: ABOUR AVERTOE STASONAE	RAINGALL

VEGETATION – Use scientific names of plants.

2		= Total Co		Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: OBL species x	
Saping/Shrub Stratum (Plot size:)			_	That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: OBL species x	Multiply by:
2. 3. 4. 5.		_		Total % Cover of:X OBL speciesX	1 =
3. 4. 5				OBL species x	1 =
4	_		_		
5		_		The dealer in the second	
EL TARS	_			FACW species x	
Harb Stratum (Plot size: 5/77)				FAC species x	3 =
Horb Stratum (Plot size: 5//)		= Total Co	ver .	FACU species x	
		400		UPL species x	5 =
and the second s	and the second se	YES	PL	Column Totals: (A	00
2 UE GOTADON TARTYTEORDES	-			20 00 120 220	
	5%			Prevalence Index = B/A =	and the second s
and a second	15%		FACU	Hydrophytic Vegetation Indica	itors:
5. VIGA VILLOSA 1	10%		1	Dominance Test is >50%	
E. FRESTUCE PREFEMPE 10	0%		FAC	Prevalence Index is \$3.0 [*]	
7		_		Morphological Adaptations ¹ data in Remarks or on a	
B		= Total Co	rer	Problematic Hydrophytic Ve	getation [®] (Explain)
Noody Vine Stratum (Plot size:)	_			¹ indicators of hydric soil and wet be present, unless disturbed or p	
2	a consecutiv	= Total Co		Hydrophytic Vegetation	-pac
% Bare Ground in Herb Stratum % Cover of F	Biotic Cr	ust	-	Present? Yes	No
Remarks:					

Sampling Point ______

(inches)	Matrix		Redox	Features	or confirm t		
	Color (moist)	%	Color (moist)	% Type'	Loc	Texture	Remarks
0-6	107/2/2	Concernence of the second second	1077314	5% C	<u>M</u>	SCL	
Hydric Soll I Histosol Black Hi Hydroge Strattfice Communication Depleted Thick De Sandy W Sandy G	Indicators: (Applic	able to all 5)	Reduced Matrix, CS# LRRs, unless otherw Sandy Redox Stripped Matri Loarny Mucky Loarny Gleyer Depleted Matri Redox Dark S Depleted Dark Redox Depres Vernal Pools (ise noted.) (S5) (x (S6) Mineral (F1) d Matrix (F2) rix (F3) furface (F6) k Surface (F6) k Surface (F7) ssions (F8)	ad Sand Grai	Indicators for 1 cm Muc 2 cm Muc Reduced Red Pare Other (Ex Indicators of wetland hys	on: PL=Pore Lining, M=Matrix, Problematic Hydric Solits ⁸ : k (A9) (LRR C) k (A10) (LRR B) Vertic (F18) nt Material (TF2) plain in Remerks) hydrophytic vegetation and trology must be present, ribed or problematic.
Type: Depth (in: Remarks:	ches):		2			Hydric Soll Pr	esent? Yes 🔀 No
runnanda.							
IYDROLO							
IYDROLO Wetland Hyv Primary Indix Surface High Wa Seturatio Water M Sedimer Drift Dep Jurface Inundatio Water-S	drology Indicators: ators (minimum of o Water (A1) der Table (A2) on (A3) larks (B1) (Nonriver nt Deposits (B2) (Non sosits (B3) (Nonriver Soll Cracks (B6) on Visible on Aerial I tained Leaves (B9)	ne required ine) nriverine) rine)	Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S	(812) rtobrates (813) utfide Odor (C1) izospheres along Reduced iron (C- Reduction in Tille	4)		ry Indicators (2 or more required) ar Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) low Aquitant (D3) -Neutral Test (D5)
YDROLO Wetland Hy Primary India Surface High Wa Seturatic Water M Sedimer Drift Dep Surface Inundatik Water-S Field Obsor Surface Wat Water Table Saturation P (includes cap	drology Indicators: cators (minimum of o Water (A1) der Table (A2) on (A3) larks (B1) (Nonriver ri Deposits (B2) (Non- cosits (B3) (Nonriver Soll Cracks (B6) on Visible on Aerial I tained Leaves (B9) vations: or Present? Y Present? Y resent? Y mesent? Y	ine) inriverine) rine) magery (B) ies f ies f	Salt Crust (B Biotic Crust (Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Thin Muck S	(812) rtobrates (813) ulfide Odor (C1) izospheres along Reduced iron (C- Reduction in Tille surface (C7) in in Remarks) es): es): es):	4) d Solls (C8)	Wat Sed Drift (C3) Dry- Cray Satu Shal FAC	ar Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ristion Visible on Aerial Imagery (C9) low Aquitard (D3) -Neutral Test (D5)

ect/Site: NW PARCEL licant/Owner: WPWMA sellgator(s): R. HuppurEster				Stater 0	4 Samplin	g Point: SP.	21
seligator(s): 12. Hupputester	_ Sect	ion, Tow	nship, Ran	Ğe:	1.		17
dform (hillslope, terrace, etc.): TEMOTOC	Loca	al rollef (concave, o	onvex, none):	DONE	Slope (%)	
region (LRR):		_		Lang:		_ Datum: _	AP8.
Map Unit Name: COMFETA - FIDYMIEr	UT.	com	PLE	NWI d	assification:	VONE	
climatic / hydrologic conditions on the site typical for this time of	t vear?	Yes	No	< (If no, expla	n in Remarks.)		
Vegetation, Soll, or Hydrology significan	the diale	rhad7	Are 7	Vormal Circi matar	ces" present?	Yes ×	40
				eded, explain any			
Vegetation, Scil, or Hydrology naturally			1000	a - Maria and a second			
MMARY OF FINDINGS - Attach site map show	ing sa	mpling	point lo	ocations, trans	sects, impo	rtant featur	es, etc.
ydrophytic Vegetation Present? Yes 🗡 No 🔜	-	in the	Sampled	Aren			
ydric Soil Present? Yes X No		1000000	a Wetlan		X No		
etland Hydrology Present? Yes 🗶 No		wann	i a vienan	ur 199			_
emarks: ABOUR AVE SEASONAL R	140	FAL	£				
ABOUR AUE SEASONAL A							
	_						
GETATION Use scientific names of plants.		Closed.	hadlanter	Dominance Tes	i wadahaat		
A A A A A A A A A A A A A A A A A A A			Indicator Status				
F(A				Number of Domi That Are OBL, F		Z	(A)
				A CARD GRADINE AND			
			-	Total Number of Species Across		Z	(B)
							- 1997
	+ 1	otal Con	uer -	Percent of Domi That Are OBL, F		100%	(6/81
apling/Shrub Stratum (Plot size:)		Cial Con	1423	That Are OBL, P	AGVI, OF PAGE	10000	- (40)
NIA			-	Prevalence Inde	ex worksheet:		
				Total % Cov	er of:	Multiply by:	_
				OBL species		1=	
				FACW species)	2 =	_
				FAC species		3 =	1.2
	= 1	Total Cov	/IEF	FACU species		.4=	-
erb Stratum (Plot size: SFI_)		027222200	e	UPL species	1	6 =	
I ACTIVA PROVED	2.	TIES	FAC	Column Totals:		A)	(B)
HONDENM MARINUM SS	2	785	FAC	14 Mar 14 Mar 14			
RANUNCULUS BONAMENSIS 5	2	52	OBL		e Index = B/A +		_
				Hydrophytic Ve	579,800 (Q.N.C.197, 1	ators:	
				Z Dominance			
				Prevalence			
					cal Adaptations temarks or on a		
		_		10000000000	: Hydrephytic V		C.C
		Total Co	ver	- PTCD0ema00	a nyurupnyuc v	egenation (Exp	any
/acdy Vine Stratum (Plot size:)				1000000000	and and and the	diand budgits -	u morek
PLA				⁵ Indicators of hy be present, unio	and sos and we	problematic.	k must
	=	Total Co	VEF	Hydrophytic			
Bare Ground in Herb Stratum % Cover of Sic	tic Crus			Vegetation Present?	Yes	No	3
amarks: LOUIUM PIERENNIE = FE				- 110/10		1	
		-					
				Concerns the CO		10 1	
THATCH = 30% Course		704	E I	fourt	SEATH	4	

US Army Corps of Engineers

Arid West - Version 2.0

13

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Sampling Point: 5P 21

Depth	Matrix		h needed to docu Red	ox Features		New York Com		
(inches)	Color (moist)	- 1/2	Color (maist)	10-	Type'	Loc	Textur	
0-10	7.5784/2	90%	57123/4	10%	<u>c</u>	PC/M	FSL	
10-16	7.57124/1	90%	57R3/4	10%	C	M	SCL	
		_				_		
Type: C=C	Concentration, D=Depi	otion, RM=	Reduced Matrix, (S=Coveres	for Coa	ed Sand G	nains.	3Location: PL=Pore Lining, M=Matrix,
lydric Soil	Indicators: (Applica	able to all	LRRs, unless oth	erwise not	ed.)	and the first	Indica	tors for Problematic Hydric Soils ⁵ :
Histoso			Sandy Re	Provide Automation and				m Muck (A9) (LRR C)
	Epipedon (A2)			Aatrix (S6)				em Muck (A10) (LRR B)
	fistic (A3)			ucky Minera				duced Vertic (F18)
	en Sulfide (A4)		Z Depleted	eyed Matrix Matrix (E3)	(1-2)			ed Parent Material (TF2) her (Explain in Remarks)
and the second s	ed Layers (A5) (LRR C Nuck (A9) (LRR D)	9 C		rk Surface	(FG)		_ 0	the freedom at a reason way
	ed Below Dark Surface	(A11)		Dark Surfac	the second s			
	bark Surface (A12)			pressions (Indica	tors of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Po	2011 U.U.B.Y.Y. *			wet	and hydrology must be present,
	Gleyed Matrix (S4)			(1993) (1993)	_	_	unk	ess disturbed or problematic.
Restrictive	Layer (if present):							
Туря:								10
10.000								
	nches):				_		Hydric	Soil Present? Yes X No
Depth (i Remarks:	ncnes):						Hydric	Soil Present? Yes No
Remarks:							Hydric	Soll Present? Yes No
Remarks:	OGY						Hydric	Soil Present? Yes No
Remarks: IYDROL(Wetland H	OGY ydrology Indicators:							
Remarks: IYDROL(Wetland H Primary Ind	OGY Iydreilogy Indicators: licators (minimum of o							econdary Indicators (2 or more required)
Remarks: IYDROL(Wetland H Primary Ind	OGY Iydreilogy Indicators: ticators (minimum of o e Water (A1)		Salt Cru	st (B11)				econdary Indicators (2 or more required) Water Marks (B1) (Riverine)
Remarks: IYDROL(Wetland H Primary Ind Surfac High W	OGY Indicators: Indicators (minimum of o e Water (A1) Vater Table (A2)		Salt Cru Biotic C	st (811) ruat (812)				iecondary Indicators (2 or more required) Water Marks (81) (Riverine) Sediment Deposits (82) (Riverine)
Remarks: YDROL(Wetland H Primary Ind Surfac High W Setura	OGY lydrology Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3)	<u>ne require</u>	Salt Cru & Biotic C Aquatic	st (B11) ruat (B12) Invertebrate				econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Remarks: YDROL(Wetland H Primary Ind Surfac High V Satura Water	OGY ydrology Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) rtion (A3) Marks (B1) (Nonriver	<u>ne require</u> ine)	Salt Cru > Biote C Aquatic Hydroge	st (B11) rualt (B12) Invertebrate en Sulfide O	dor (C1)			econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Remarks: IYDROL(Wetland H Primary Ind Surfac High V Setura Setura Setura	OGY ydrology Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	<u>ne require</u> ine) nriverino)	Salt Cru X Biotic C Aquatic Hydroge Oxidizee	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe	dor (C1) mes alon	g Living Ro		econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Remarks: IYDROL(Wetland H Primary Ind Surfac High V Setura Setura Sedimv Drift D	OGY ydreiogy Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	<u>ne require</u> ine) nriverino)	Salt Cru Biolic C Aquatic Hydroge Oxidized Present	st (B11) ruat (B12) Invortebrate en Sulfide O d Rhizosphe e of Reduc	dor (C1) ares alon ed fron (g Living Ro C4)	cts (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Remarks: IYDROL(Wetland H Primary Ind 	OGY ydreiogy Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver se Soil Cracks (B6)	<u>ne require</u> ine) nriverine) rine)	Salt Cru Biolie C Aquatic Hydrogo Oxidized Presenc Recent	st (B11) ruat (B12) Invertebrate In Sulfide O d Rhizosphe re of Reduct Iron Reduct	dor (C1) ires alon ed Iron (ion in Til	g Living Ro C4)	cts (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Remarks: IYDROL(Wetland H Primary Ind Surfac High V Satura Water Sedim Drift D Surfac Inunda	OGY iydrology Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive eposits (B3) (Nonrive eposits (B3) ation Visible on Aerial i	<u>ne require</u> ine) nriverine) rine)	Saft Cru Sa	st (B11) nust (B12) Invertebrate en Sulfide O d Rhizospho e of Reduct iron Reduct ick Surface	dor (C1) ares alon ed fron (ion in Til (C7)	g Living Ro C4)	cts (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shatlow Aquitard (D3)
Remarks: IYDROL(Wetland H Primary Ind Surfac High V Satura Water Sedim Drift D Surfac Inunda Water	OGY ydrology Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) rtion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver eposits (B3) (Nonriver) eposits (B3) (Norriver) eposits (B3)	<u>ne require</u> ine) nriverine) rine)	Saft Cru Sa	st (B11) ruat (B12) Invertebrate In Sulfide O d Rhizosphe re of Reduct Iron Reduct	dor (C1) ares alon ed fron (ion in Til (C7)	g Living Ro C4)	cts (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Remarks: PYDROL(Wetland H Primary Ind Surfac High V Satura Water Sedim Drift D Surfac Inunda Water- Field Obse	OGY ydrology Indicators: ficators (minimum of o e Water (A1) Vater Table (A2) flon (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver eposits (B3) (Nonriver esoil Cracks (B6) ation Visible on Asrial I -Stained Leaves (B9) ervetions:	<u>ne require</u> ine) nriverine) rine) Imagery (B	Saft Cru Saft Cru Sietie C Aquatic Aquatic Hydroge Oxidized Presend Recent Thin Mu Other (6	st (B11) Invertebrate en Sulfide O d Rhizesphe er of Reduct iron Reduct ck Surface Explain in Ri	dor (C1) ares alon ed fron (ion in Til (C7)	g Living Ro C4)	cts (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shatlow Aquitard (D3)
Remarks: IYDROL(Wetland H Primary Ind 	OGY ydreilogy Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver es Soil Cracks (B6) ation Visible on Aerial I -Stained Leaves (B9) ervetions: ator Present? Y	<u>ne require</u> ine) nriverine) rine) /es	Saft Cru Saft Cru Sioic C Aquatic Aquatic Hydroge Oxidized Presend Recent i7) Thin Mu Other (I No	st (B11) nuat (B12) Invertebrate en Sulfide O d Rhizesphe e of Reduct ck Sulface Explain in Re (inches):	dor (C1) ares alon ed fron (ion in Til (C7)	g Living Ro C4)	cts (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shatlow Aquitard (D3)
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Remarks: YDROL(Wetland H Primary Ind Surfac High V Satura Water Surfac Unit D Surface W Water Field Obse Surface W Water Tabl Saturation (includes c	OGY ydreilogy Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive es Soil Cracks (B6) ation Visible on Aerial I -Stained Leaves (B9) ervetions: ater Present? Y	ne require ine) nriverine) imagery (B 'es 'es	Saft Cru Saft Cru Side C Aquatic Aquatic Hydroge Oxidizee Presend Recent Thin Mu Other (B No No Depth No Depth No Depth	st (B11) nuat (B12) Invertebrate en Sulfide O d Rhizesphe e of Reduct ck Sulface Explain in Ri (inches): (inches):	dor (C1) rres alor ed Iren (ion in Til (C7) emarks)	g Living Ro C4) led Solh (C	cts (C3)	
Remarks: YDROL(Wetland H Primary Ind Surfac High V Satura Water Surfac Unit D Surface W Water Field Obse Surface W Water Tabl Saturation (includes c	OGY ydrology Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver estimation (B9) etable (B9)	ne require ine) nriverine) imagery (B 'es 'es	Saft Cru Saft Cru Side C Aquatic Aquatic Hydroge Oxidizee Presend Recent Thin Mu Other (B No No Depth No Depth No Depth	st (B11) nuat (B12) Invertebrate en Sulfide O d Rhizesphe e of Reduct ck Sulface Explain in Ri (inches): (inches):	dor (C1) rres alor ed Iren (ion in Til (C7) emarks)	g Living Ro C4) led Solh (C	cts (C3)	
Remarks: YDROL(Wetland H Primary Ind Surfac High V Satura Water Surfac Unit D Surface W Water Field Obse Surface W Water Tabl Saturation (includes c	OGY ydreilogy Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive c Soil Cracks (B6) ation Visible on Aerial I -Stained Leaves (B9) ervetions: ator Present? Y le Present? Y Present? Y apillary fringe) Recorded Data (stream	ine) inriverine) imagery (B 'es 'es 'as i gauge, m	Saft Cru Biolic C Aquatic Aquatic Hydroge Oxidizee Presend Recent Thin Mu Other (I No No Depth No Depth No Depth contaring wall, aen	st (B11) nuat (B12) Invertebrate en Sulfide O d Rhizesphe e of Reduct ck Surface (an Reduct ck Surface (inches):	dor (C1) irres sion ed Iron (ion in Til (C7) emarks) revious i	g Living Ro C4) led Solls (C 	ots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Staturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) No
Remarks: YDROL(Wetland H Primary Ind Surface High V Satura Water Sedimy Drift D Surface Water Field Obse Surface W Water Tabl Saturation (includes c Describe R	OGY ydreilogy Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive c Soil Cracks (B6) ation Visible on Aerial I -Stained Leaves (B9) ervetions: ator Present? Y le Present? Y Present? Y apillary fringe) Recorded Data (stream	ine) inriverine) imagery (B 'es 'es 'as i gauge, m	Saft Cru Saft Cru Side C Aquatic Aquatic Hydroge Oxidizee Presend Recent Thin Mu Other (B No No Depth No Depth No Depth	st (B11) nuat (B12) Invertebrate en Sulfide O d Rhizesphe e of Reduct ck Surface (an Reduct ck Surface (inches):	dor (C1) irres sion ed Iron (ion in Til (C7) emarks) revious i	g Living Ro C4) led Solls (C 	ots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Staturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) No
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Remarks: IYDROL(Wetland H Primary Ind Surface High V Satura Water Sedim Drift D Surface Water Field Obse Surface W Water Tabl Saturation (includes c Describe R	OGY ydreilogy Indicators: ticators (minimum of o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive c Soil Cracks (B6) ation Visible on Aerial I -Stained Leaves (B9) ervetions: ator Present? Y le Present? Y Present? Y apillary fringe) Recorded Data (stream	ine) inriverine) imagery (B 'es 'es 'as i gauge, m	Saft Cru Biolic C Aquatic Aquatic Hydroge Oxidizee Presend Recent Thin Mu Other (I No No Depth No Depth No Depth contaring wall, aen	st (B11) nuat (B12) Invertebrate en Sulfide O d Rhizesphe e of Reduct ck Surface (an Reduct ck Surface (inches):	dor (C1) irres sion ed Iron (ion in Til (C7) emarks) revious i	g Living Ro C4) led Solls (C 	ots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Staturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) No

Project/Site:	NW	PARCEL	-	City/County:	PLACER	co.	Sampling D	lata: 5/17/2017
Applicant/Owner:	WP	wma		-8870 655 5455 5655 5655	St	ate: CA	Sampling P	oint: SP-22
Investigator(s):	2.14	ODUE STON		Section, Tow	nship, Range:	31		OGE
Landform (hillslope,	terrace, etc	: TEPI	ACE	Local relief (concave, convex, n	one):	2FE	_ Slope (%): _ 222
Subregion (LRR):	C	-	Vice:	_		_		Datum: MAD83
Soll Map Unit Name	C	antert -	FOYME	ent ca	NPIEX	NWI classi	fication:	PONE
Are climatic / hydrole						no, explain in	Remarks.)	
바람 저 제 아이지 않아?	아프 영화 영문 요소	or Hydrology		y disturbed?				98 <u>×</u> No
Are Vegetation	Soil	, or Hydrology	naturally p	roblematic?	(If needed, ex	plain any ansy	vers in Remark	ks.)
SUMMARY OF	FINDING	S – Attach site	map showin	g sampling	point location	is, transec	ts, importa	nt features, etc.
Hydrophytic Veget Hydric Soll Presen Wetland Hydrology	t7	Yes		E	Sampled Area	Yes	No	<u>×_</u>
Damader	Bare	the sets	and the second se	PRACE				
VECETATION		- NE	f alerte					

and discourse and the second	Absolute		Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:) 1	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:I	_ (A)
2				Total Number of Dominant	
3			_	Species Across All Strata: Z	(B)
4		= Total Co	wer	Percent of Dominant Species 52/2	(A/B
Sapling/Shrub Stratum (Plot size:)				Contraction of the state of the	
- MA				Prevalence Index worksheet:	
2				Total % Cover of Multiply by	_
1				OBL species x 1 =	
4				FACW species ×2 =	
5				FAC species x3=5	7
1.15		= Total Co	iver	FACU species 7 x4 = 28	
Herb Stratum (Phot size: SFT)	1000			UPL species 30 x5= 150	
1. LATITTRUS HIRSUTUS	and the second division of the second divisio	705	FAC	Column Totals: 90 (A)	(B)
2 ECYMUS CAPUT-MEPUSA	E ZO/	YES	NL	2.70	1
3. BROMMS DIAMPRUS	5%	1.11	ML	Prevalence Index = B/A =	-
A. BROMUS HORDEACEUS	5%		FALL	Hydrophytic Vegetation Indicators:	
5. CERTNINA DISSECTUA	5%	6	NL	Dominance Test is >50%	
B. FESTUCE PREMIE	3%		FAC	Prevalence Index is ≤3.0 ¹	
EROPIUM BETRYS	2%		FACU	Morphological Adaptations ¹ (Provide sup data in Remarks or on a separate she	
B	90%	= Total Co	wer	Problematic Hydrophytic Vegetation ¹ (Ex	plain)
Woody Vine Stratum (Plot size:) 1A		_		¹ Indicators of hydric soil and wetland hydrolo be present, unless disturbed or problematic.	gy must
2	-			Service Services Inc.	
% Bare Ground in Herb Stratum 10 2 % Cover	r of Biatic C	_= Total Co		Hydrophytic Vegetation Present? Yes No X	
Remarks:	100000000000	2,429-13			
0.510.262					

. . .

0-2 ICTR3/2 IOD ICTR3/2 IOD ICTR3/4 ION	
Q-Z ICTR3/Z ICO ICTR3/Z ICO Q-Z ICTR3/Z ICO ICO ICO ICTR3/Z ICO Q-Z ICTR3/Z ICO	Commentation of the second se
2-6 7.57/51/2 70% 57/23/4 10% C M 2-16 7.57/741/3 70% 57/23/4 10% C M 2-16 7.57/741/3 70% 57/23/4 10% C M S 2-16 7.57/741/3 70% 57/23/4 10% S <t< td=""><td>²Localion: PL=Pore Lining, M=Matrix, cators for Problematic Hydric Solls³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)</td></t<>	² Localion: PL=Pore Lining, M=Matrix, cators for Problematic Hydric Solls ³ : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
S-16 7-577F9/13 902 577E3/4 108	² Location: PL=Pore Lining, M=Matrix, icators for Problematic Hydric Solls ¹ : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Send Grains. lydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Im Histosol (A1)	² Location: PL=Pore Lining, M=Matrix, cators for Problematic Hydric Solls ¹ : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
typic Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Im Histosoi (A1)	cators for Problematic Hydric Soils ¹ : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
Histic Epipedan (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Suffice (A4) Loamy Mucky Mineral (F1) Thick Dark Surface (A5) (LRR C) Depleted Matrix (F2) Depleted Dark Surface (F6) Depleted Matrix (F3) Tom Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Redox Depresions (F6) Thick Dark Surface (A12) Redox Depresions (F6) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Glayed Matrix (S4) Vernal Pools (F9) Restrictive Layer (if present): Type: Type: Depth (inches): Depth (inches): Hy Remarks: Biotic Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (S1) (Nenriverine) Oxidized Rhizospheres along Living Roots (C Staturation (A3) Aquatic Invertebrates (B13) Water Marks (B3) (Nonriverine) Oxidized Rhizospheres along Living Roots (C Drint Deposits (B3) (Nonriverine) Oxidized Rhizospheres along Living Roots (C6) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) <t< td=""><td>2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)</td></t<>	2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
Black Histic (A3) Loamy Mucky Mineral (F1)	Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
Hydrogen Suffide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 om Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (If present): Type: Depth (inches): Depth (inches): Hy Remarks: Presents: YDROLOGY Salt Crust (B11) High Water Table (A2) Biotic Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Crucks (B6) Recent Iron Reduction in Tilled Soils (C5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	Red Parent Material (TF2) Other (Explain in Remarks)
Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Glayed Matrix (S4) Restrictive Layer (if present): Type: Depleted Indicators: Type: Hy Depth (inches): Hy Remarks: Satration (A1) Strate Water (A1) Sati Gruet (B11) High Water Table (A2) Biotic Cruat (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Bandy Glayed Matrix (S4) Bestrictive Layer (if present): Typa: Depth (inches): Depth (inches): Hy Bemarks: Present): Primary Indicators: Hy Primary Indicators (minimum of one required; check all that apply] Saturation (A1) Starface Water (A1) Sati Gruet (B11) High Water Table (A2) Biotic Cruat (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres atong Living Roots (C Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	
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Thick Dark Surface (A12) Redox Depressions (F8) 31 Sandy Mucky Mineral (S1) Vernal Pools (F9) Bandy Glayed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Hy Remarks: Permarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Sait Grust (B11) Surface Water (A1) Sait Grust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	icators of hydrophytic vecetation and
Sandy Mucky Mineral (S1) Vernal Pools (F9) 	
Sandy Glayed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Permarks:	retiand hydrology must be present,
Restrictive Layer (if present): Type: Hy Depth (inches): Hy Remarks: Hy Wortland Hydrology Indicators: Hy Primary Indicators (minimum of one required; check all that apply) Sait Gruet (B11) Surface Water (A1) Sait Cruet (B11) High Water Table (A2) Biotic Cruet (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Rocts (C Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Crucks (B6) Recent Iron Reduction in Tilled Soils (C5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	nless disturbed or problematic.
Type:	and an and a set of the sector sector
Depth (inches): Hy Remarks: IVDROLOGY Wetland Hydrology Indicators: Image: Second	
Remarks: Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	ric Soil Present? Yes X No
AYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply]	
Surface Water (A1) Salt Grust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Rocent Iron Reduction in Tilled Soils (C5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	Secondary Indicators (2 or more required)
High Water Table (A2) Biotic Cruat (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C Drift Deposits (B3) (Nonriverine) Oxidized Rhizospheres along Living Roots (C Surface Soil Cracks (B6) Presence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	Water Marks (B1) (Riverine)
Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Rocks (C Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	Sediment Deposits (B2) (Riverine)
Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	Drift Deposits (B3) (Riverine)
Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Rocks (C Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	Drainage Patterns (B10)
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	그는 방법에 다 아이들에 가지 않는 것이 아이들이 가지 않는 것이 없다.
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (87) Thin Muck Surface (C7)	
	Crayfish Burrows (C8)
	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Elaid Observationst	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Field Observations: Surface Water Present? Yes No X Depth (inches):	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Water Table Present? Yes No X Depth (inches):	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
(includes capillary fringe)	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Describe Recorded Data (stream gauge, monitoring well, aertal photos, previous inspections), if av-	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks:	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)

rojectistie: NW PARCEL		City/County:	PLACI	E12	00.	Samplin	g Date: 5/1	17/201
colicant/Owner WPWM				S	tate: CA	Samplin	p Paint: S	-23
vestigator(s): P2. Ifuppure-sran	3	Section To	washin Ran	icer	31	12N	NE	
ndform (hillslope, terrace, etc.):TERMUE		Local relief	Innerave o	onvex r	(ann)	NONE	Slope (%	1: 122
brogion (LRR):	Lat	Coodi rever	feetings, a	I const	ionioj.		Datury /	NAD 8:
I Map Unit Name: COMRTA FrDDYMI	Cart	-	+ Per	Lung.	MIAN de	and frontient	NONE	C. C. C.
i Map Unit Name: Control of Propress		Cor	- pores	y		assilication	1	
a climatic / hydrologic conditions on the site typical for this fi								100
Vegetation, Soil, or Hydrology sig								N0
Vegetation, Soli, or Hydrology nat	turally pro	blematic?	(If nee	eded, ex	plain any a	unswers in Ren	iariks.)	
JMMARY OF FINDINGS – Attach site map sh	howing	samplin	g point la	ocation	ns, trans	ects, impor	tant featu	res, etc.
Hydrophytic Vegetation Present? Yes X No. Hydric Soil Present? Yes X No. Netland Hydrology Present? Yes No.			e Sampled in a Wetlan		Yes	× No		
Remarks: A BOUE ANE SEASOMAL ,	DANNA	esce						
A DOUB AND STRASSING	ista -	4						
- APPEARS TO BE ANOUD	1 20	AD FR	ATURI	3				
			1020				_	
EGETATION – Use scientific names of plants	and the second s	Desident	Indiantes (Dente	and Test	worksheet:		_
	No. or Contraction of	Species?	Status	Numb	er of Domin	ant Species	1	(A)
			-	Table	i mine of	Dominant	12	
					Number of Is Across /		1	(8)
				Datas	at of Domin	and Searcher		101201
States States and States		= Total Co	wer	Percent of Dominant Species That Ara OBL, FACW, or FAC: 1006 (A				(A/B)
Sacling/Shrub Stratum (Plot size:)				Dentin	longa Inda	x worksheet:	-	
_rla					100 C C C C C C C C C C C C C C C C C C	er of:	Multiply by	
						X		
·								
L						X		
·		= Total Cover		FACU species x 4 =				
Herb Stratum (Plot size: SFF)	-1	CONS.	. 71	UPLS	pecies _	×	5 =	
intrupiculus Banaritetsis	150	715		Colum	n Totalst	(/	w	(B)
LOLIUM PREASANNE	3%	_	FAC	6	Demolence	index = B/A =		
GRATICLA EMBRACTEATA	2%		OBL	in the second se	Section Company	getation Indic	and the second se	
DOWNINGLA ORNATISSIMA	1%		FACW	10.000	10 A	Test is >50%	avena.	
PLAGIOBOTHEYS STIPITATUS			FACW			Index is ≤3.0 ¹		
VERONICA PEREGRINA	1%		FAC			al Adaptations	(Provide sup	porting
and the second	100		. <u></u>		data in R	emarks or on a	separate she	et)
B:	25	= Total Cr	wer	P	roblematic	Hydrophytic Ve	egetation [®] (Ex	plain)
Woody Vine Stratum (Plot size:)		- Former and		120			à	I
1. MA			i			fric soil and we ss disturbed or		là whet
2				1.010	AND RED TH	a distanced of	procession (all of the	
		- Total Co	over		ophytic tation			
% Bare Ground in Herb Stratum 75% % Cover	of Biotic C	Crust		Prese		Yos X	No	-
		500 C * 24		-		-	14/01/2 1	
Remarks: LOLIUM PISALAMUE = FR	ester	or p	CAR	and a	2			
							NUMBER OF STREET	N. 2011 . 11 . 11
							ACCINENT OF MOL	MARKS MO

1

Sampling Point ______SP-23

Depth	Matrix		Red	ox Features				
(inches)	Color (moist)	- %	Color (moist)	_%	Type	Loc	Texture	Remarks
2-2	57R 9/3	98%	57124/8	2%	6	pc	56	
2-16	7-57/04/3	100%	-	-	-	-	54	
		_				_	_	
	Concentration, D=Dep					led Sand G	rains. ² Lo	cation: PL=Pore Lining, M=Matrix, s for Problematic Hydric Soils ³ :
12 C	Indicators: (Applic	able to all t			ear)			Muck (A9) (LRR C)
Histoso	x (A1) Spipedon (A2)		Sandy Rev Stripped M					Mutk (A10) (LRR B)
	fistic (A3)			icky Minera	(/F1)		the second se	cod Vertic (F18)
	en Sullide (A4)			eyed Metro			Red P	Parent Material (TF2)
	d Layers (A5) (LRR	C)		Matrix (F3)	anio -		X Other	(Explain in Remarks)
	luck (A9) (LRR D)	577		rk Surface			A.C. S. A. W.	
	od Below Dark Surfac	(A11)	the second se	Dark Surfac			10 (14 (14 (14 (14 (14 (14 (14 (14 (14 (14	
	ark Surface (A12)			pressions (F8)			s of hydrophytic vegetation and
	Mucky Mineral (S1)		Vemal Po	ols (F9)				l hydrology must be present, disturbed or problematic.
	Gleyed Matrix (S4) Layer (if present):			_			110000	anamenta di productiones.
*** <u>*</u> ******	rager in presenti.							
Type:							CONTRACT DATE:	HERE AND A CONTRACT AND A DOCUMENT
							Undrie Sol	Drasant? Vas X No
Remarks:		1 VER	NAL POOL	Arp	011	HER I	WATCH	I Present? Yes X No 204D ND PUTNTS
Remarks: - Lo A	SORFACE WAREA UND RUIDE	1 VER	CILLELY NAL POCE OF WETC	Arp	011	HER I	WATCH	2040
Remarks: - Co A IYDROLO	SORFACE WAREA W WD RUDE DGY	"I UTER	NAL POOL	Arp	011	HER I	WATCH	2040
Contractors Contra	SORFACE WAREA WD EUDE OGY ydrology Indicators	"/ vet rece	NAC POOL OF WETU	ArD ,	011	HER I	writer	204D N PUTNTS
Remarks: Co A IYDROLO Wetland H Primary Ins	SORFACE WAREA W WD EWDE DGY ydrology Indicators ticators (minimum of	"/ vet rece	NATE POOL OF WETU	Arr D ,	011	HER I	ocn j written 7 Seco	204 D N PUNTS andary Indicators (2 or more required)
Remarks: Co A IYDROLO Wetland H Primary Int Surfac	SORFACE WAREA W WD RUDE DGY ydrology Indicators ticators (minimum of e Water (A1)	"/ vet rece	CF WETU	4+0 4+0	011	HER I	CON J WRTCH T Sec	204 D POMTS andary Indicators (2 or more required) Water Marks (B1) (Riverine)
Remarks: Co A IYDROLO Wettland H Primary Ins Surfac High V	SORFACE WAREA W WD EUDE OGY ydrology Indicators ticators (minimum of e Water (A1) Vater Tabla (A2)	"/ vet rece	CF WETU CF WETU E check all that ap Salt Cru E Biotic Cr	A+-P A+-P , ph/ st (B11) ust (B12)	0771 177 P.	HER I	COD J WRTCH T Sec	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Remarks: Co A IYDROLO Wetland H Primary Ins Surfac High V Satura	SORFACE WAREA W WF) RUPE OGY ydrology Indicators ticators (minimum of e Water (A1) Vater Table (A2) tion (A3)	VIER NGE	t check all that applied to the check all that applied to that	Arr D Arr D st (B11) st (B12) Invertebrab	0771 147 P.	ACLOC		204 D POMTS andary Indicators (2 or more required) Water Marks (B1) (Riverine)
Remarks: CO A IVDROLO Wetland H Primary Into Starfac High V Satura Water	SORFACE WAREA WID EXIPE OGY ydrology Indicators ticators (minimum of e Water (A1) Vater Tabla (A2) tion (A3) Marks (B1) (Nonrive	VIER NCE t one required rine)	t check all that age	Arr D Arr D st (B11) st (B12) Invertebrate in Sulfide O	es (B13) dor (C1)	ACLOC	осл) шетсн 7 	204 D POMTS andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Remarks: Co A IVDROLO Wetland H Primary Ins Surfac Surfac Satura Satura Sedim	SORFACE WAREA W WD EMPE OGY ydrology Indicators ficators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (S1) (Nenrive ent Deposits (B2) (Ne	rine)	t check all that age Salt Crus Biotic Cr Aquatic I Hydroge Oxidized	Arr D Arr D st (B11) st (B12) Invertebrate in Sulfide O	es (813) dor (C1) ores alor	g Living Ro	0 CD) CON) CON SECON SECON 	204 D POMTS andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
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Remarks: Co A IYDROLO Wetland H Primary Ins — Surfac — High V — Satura — Water — Sedim — Duft D — Surfac	SORFACE WAREA W WD EMPE OGY ydrology Indicators ficators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (S1) (Nenrive ent Deposits (B2) (Ne	rine)	Check all that app check all that app check all that app Salt Crue Biotic Crue Biotic Crue Aquatic I Aquatic I Presence Recent I	Arr D Arr D (B11) st (B11) ust (B12) Invertisbrate in Sulfide O I Rhizospho e of Reduc	es (B13) der (C1) ares alon ed Iran (ion in Til	g Living Ro	CCD) CURTING 7 Seco 	204 D N PUNTS andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Seeson Water Table (C2)
Remarks: Co A IYDROLO Wetland H Primary Int Primary Int Surfac High V Satura Water Sodim Duft D Surfac Inunda	SORFACE W AREA W WD EWDE DGY ydrology indicators ticators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nenrive ent Deposits (B2) (Ne eposits (B3) (Nenrive e Soil Cracks (B8)	I UTER	Check all that app check all that app check all that app Salt Crus Biotic Cr Aquatic 1 Hydroge Oxidized Presence Recent 1 Thin Mu	Arr D Arr D st (B11) ust (B12) Invertebration sulfide O I Rhizospho e of Reduci	es (B13) dor (C1) ares alon ed iron (ion in Til (C7)	g Living Ro	CIS (C3)	204 D POMPTS andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Remarks: Co Primary Ins Surfac High V Satura Water Sedim Duft D Surfac Unda Surfac	SORFACE W ANKA W WD EUDE OGY ydrology Indicators ficators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive es Soil Cracks (B6) otion Visible on Aerial Stained Leaves (B9)	I UTER	Check all that app check all that app check all that app Salt Crus Biotic Cr Aquatic 1 Hydroge Oxidized Presence Recent 1 Thin Mu	Arr D Arr D at (B11) st (B11) st (B12) Invertebration suffice O I Rhizosphie e of Reduct inon Reduct dk Surface	es (B13) dor (C1) ares alon ed iron (ion in Til (C7)	g Living Ro	CIS (C3)	204 D P P P P P P P P P P P P P P P P P P P
Remarks: Co A IYDROLO Wetland H Primary Into Surfac High V Satura Water Doft D Surfac Inunda Water Field Obas	SORFACE W AREA W WD EUDE OGY ydrology Indicators ficators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (Ne eposits (B3) (Nonrive e Soil Cracks (B8) dion Visible on Aerial Stained Leaves (B9) ervations:	rine) soniverine) Imagery (B	CF UETU CF UETU CF UETU Salt Crus Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presence Recent I Thin Mu Other (E	Arr D Arr D at (B11) st (B11) st (B12) Invertebration suffice O I Rhizosphie e of Reduct inon Reduct dk Surface	es (B13) dor (C1) ares alon ed iron (ion in Til (C7)	g Living Ro	CIS (C3)	204 D P P P P P P P P P P P P P P P P P P P
Remarks: Co Co Primary Ins Wetland H Primary Ins Surface Water Surface W Surface W	SORFACE W AREA W WD EWDE DGY ydrology Indicators ticators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) arvations: ater Present?	rine) sonriverine) erine) Wagery (B	t check all that age check all that age Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I Thin Mu Other (E No Depth (Arr D Arr D Ar	es (B13) dor (C1) ares alon ed iron (ion in Til (C7)	g Living Ro	CIS (C3)	204 D P P P P P P P P P P P P P P P P P P P
Remarks: Co Co Primary Ins Wetland H Primary Ins Surfac High V Satura Water Surfac UNATER Surfac Water Field Obse Surface W Water Tab Saturation	SORFACE W AMEA W WD EMDE DGY ydrology Indicators (cators (minimum of e Water (A1) Vater Table (A2) fion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B8) dion Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present?	/ UTER	t check all that age check all that age Salt Crus Biotic Cr Aquatic I Hydroge Oxidized Presenc Recent I Thin Mu Other (E No Depth (Arr D Arr D at (B11) ust (B12) Invertebrate in Suffide O I Rhizosphe e of Reduce iron Reduct ck Surface cyplain in Re- unches): inches):	es (B13) dor (C1) ares alon ed iron (ion in Til (C7)	g Living Ro C4) Ied Soils (C	ocn) w/sTCM 7 Sec cts (C3) 6)	204 D P P P P P P P P P P P P P P P P P P P
Remarks: Co A VORUAN Wetland H Primary Ins Surfac High V Satura Water Surface W Water Tab Saturation (includes c	SORFACE W AMEA W WD EMDE DGY ydrology Indicators ticators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive eposits (B3) (Nonrive esoil Cracks (B6) ofton Visible on Aerial Stained Leaves (B9) arvations: ater Present? le Present?	/ UTERA MCLE i one required rine) sorriverine) erine) Imagery (B Yes Yes Yes	CF CF CF CF CF CF CF Salt Crue Salt Crue Salt Crue Salt Crue Salt Crue Salt Crue Salt Crue CF Salt Crue Salt Crue Salt Crue Presence Presence Recent I Thin Mu Other (E No Depth (No Depth (Arr D Arr D phyl at (B11) aust (B12) Invertebrab in Sulfide O I Rhizosphie e of Reduci k Surface ck Surface (inches): (inches): (inches):	es (B13) Idor (C1) ares alon ed Iron (ion in Til (C7) emarks)	g Living Ro C4) led Soils (C	CCD 3 CON 3 CON 5 CON 5 CO	204 D P P P P P P P P P P P P P P P P P P P
Remarks: Co A VODROLO Wetland H Primary Ins Surfac High V Satura Water Surface W Water Tab Saturation (includes c	SORFACE W ANKA W WD EUDE OGY ydrology Indicators ticators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive eposits (B3) (Nonriv	/ UTERA MCLE i one required inne) sonriverine) imagery (B Yes Yes Yes m gauge, mo	NAC Poor OF WETV Salt Crue Salt Crue Biotic Crue Biotic Crue Aquatic I Aquatic I Aquatic I Presence Presence Recent I 7) Thin Mu Other (E No Depth (No Depth (anitoring well, aeric	Arr D Arr D phyl at (B11) aust (B12) Invertebrab in Sulfide O I Rhizosphie e of Reduci k Surface ck Surface (inches): (inches): (inches):	es (B13) Idor (C1) ares alon ed Iron (ion in Til (C7) emarks)	g Living Ro C4) led Soils (C	CCD 3 CON 3 CON 5 CON 5 CO	204 D P P P P P P P P P P P P P P P P P P P
Remarks: Co Co Primary Ins Surfac High V Satura Water Soft Number Surface Water Tab Saturation (includes of Describe F	SORFACE W AREA W WD EUDE OGY ydrology Indicators ticators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (Ne eposits (B3) (Nonrive es oil Cracks (B8) dion Visible on Aerial Stained Leaves (B9) ervations: ater Present? le Present? Present? apillary fringe)	/ UTERA MCLE i one required inne) sonriverine) imagery (B Yes Yes Yes m gauge, mo	NAC Poor OF WETV Salt Crue Salt Crue Biotic Crue Biotic Crue Aquatic I Aquatic I Aquatic I Presence Presence Recent I 7) Thin Mu Other (E No Depth (No Depth (anitoring well, aeric	Arr D Arr D phyl at (B11) aust (B12) Invertebrab in Sulfide O I Rhizosphie e of Reduci k Surface ck Surface (inches): (inches): (inches):	es (B13) Idor (C1) ares alon ed Iron (ion in Til (C7) emarks)	g Living Ro C4) led Soils (C	CCD 3 CON 3 CON 5 CON 5 CO	204 D P P P P P P P P P P P P P P P P P P P
Remarks: Co Co Primary Ins Surfac High V Satura Water Sodim Don't D Surface Water Field Obse Saturation (includes o Describe F	SORFACE W ANKA W WD EUDE OGY ydrology Indicators ticators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive eposits (B3) (Nonriv	/ UTERA MCLE i one required inne) sonriverine) imagery (B Yes Yes Yes m gauge, mo	NAC Poor OF WETV Salt Crue Salt Crue Biotic Crue Biotic Crue Aquatic I Aquatic I Aquatic I Presence Presence Recent I 7) Thin Mu Other (E No Depth (No Depth (anitoring well, aeric	Arr D Arr D phyl at (B11) aust (B12) Invertebrab in Sulfide O I Rhizosphie e of Reduci k Surface ck Surface (inches): (inches): (inches):	es (B13) Idor (C1) ares alon ed Iron (ion in Til (C7) emarks)	g Living Ro C4) led Soils (C	CCD 3 CON 3 CON 5 CON 5 CO	204 D P POMTS andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: Co Co Primary Ins Surfac High V Satura Water Sedim Don't D Surface Water Field Obse Saturation (includes o Describe F	SORFACE W ANKA W WD EUDE OGY ydrology Indicators ticators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive eposits (B3) (Nonriv	/ UTERA MCLE i one required inne) sonriverine) imagery (B Yes Yes Yes m gauge, mo	NAC Poor OF WETV Salt Crue Salt Crue Biotic Crue Biotic Crue Aquatic I Aquatic I Aquatic I Presence Presence Recent I 7) Thin Mu Other (E No Depth (No Depth (anitoring well, aeric	Arr D Arr D phyl at (B11) aust (B12) Invertebrab in Sulfide O I Rhizosphie e of Reduci k Surface ck Surface (inches): (inches): (inches):	es (B13) Idor (C1) ares alon ed Iron (ion in Til (C7) emarks)	g Living Ro C4) led Soils (C	CCD 3 CON 3 CON 5 CON 5 CO	204 D POMPTS andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Site: NW PARCIEL		City/County:	PLACE	R CO.	Sampling	Date: 5/1	7/201
Applicant/Owner: wpwm4				State: CA	Sampling	Point_SF	2.24
nvestigator(s): R. HUDDUESTON		Section, Townsh	hip, Range;	31	12N 0	6E	
andform (hillstope, terrace, etc.):		Local relief (con	cave, conve	(none): NO	NE	Slope (%	1, 42%
Subregion (LRR):							
Soll Map Unit Name: COM FTA - FIDYI							
re climatic / hydrologic conditions on the site typical for this	Collard Service	and the second s	11007.2 - 20 h	Strate States	37 M. P. S. S. S. S.		
re Vegetation, Soll, or Hydrologysk			100 C	영화 다 안 왜 생각하는 것	전 것이 같은 것은 것은 것이라.		Al.
ve Vegetation, Solt, or Hydrology na						1.1.1	MU
	5.00		2	10 AU		0.0	
SUMMARY OF FINDINGS – Attach site map s	showing	sampling p	oint locati	ons, transe	cts, import	ant featur	es, etc.
Hydrophytic Vegetation Present? Yes No	X	2015-01782-					
Hydric Soll Present? Yes X No		17390350	impled Area		and	~	
Welland Hydrology Present? Yes No	X	within a	Wotland?	Yes_	No ,	<u> </u>	
Remarks: ABOVE AVENGE SEAS	AL AR	RAINEAU	er.				
Allocate Monstelland Station		1 Contraction of the					
EGETATION – Use scientific names of plant	5.						
	Absolute	Dominant Indi	cator Don	ninance Test w	orksheet:		
Tree Stratum (Ptot size:)	% Cover	Species? Sta	atus Nur	ther of Domina		1000	
1. <u>HA</u>			Tha	Are OBL, FAC		0	(A)
2			Tota	Number of Do	minant		
3				cies Across All		Z	(B)
4			Per	ent of Dominar	nt Species	10.14	
Sapling/Shrub Stratum (Plot size:)		= Total Cover		Are OBL, FAC		0%	(A/B)
1. P/A			Prov	alence Index	andrahaat-		_
4. C				Total % Cover	2.4.6.	Multiply by:	
2				species	-9147	Contraction of the	
4.			and the second second	W species			
5.			10000	species			
	-	= Total Cover		U species			
Herb Stratum (Plot size:)			1.1.1.2	species			
1. ELYMUS OFPUT-MEDUSAE	63/0	YES N	é	mn Totala:	(A)		(B)
2. FESTUCA (UULPIA) BROMOIDES			4cm	145.000 10			
3. BRIZA MINOR	10%	THE REAL PROPERTY AND INCOME.	4c	Prevalence In			
4. LATHYPEUS HIPESUTUS	15%	And Address of Street	Concession in the local division of the loca	rophytic Vege		rs:	
5. BROMUS HORDBACIEUS	5%			Dominance Ter	19 CO CO CO CO		
6. TRIFOLIUM IFIRTUM	5%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Prevalence Ind	CAN - CAN		
TRIFOLIUM DUBIUM	5/2		PL -	Morphological .	Adaptations ¹ (P larks or on a se		
8. LEONTADON SAXAMUS	5%		tere	Problematic Hy		6-11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	S. G. S.
	752	= Total Cover	-	r routernauc my	orophytic vege	vanniu (chibi	and.
Woody Vine Stratum (Plot size:)			1.00				

= Total Cover

% Cover of Biotic Crust

5%

% Bare Ground in Herb Stratum

1. MIA

Remarks:

2.

No.

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

Yes ____

Hydrophytic Vegetation Present?

Sampling Point:

5P-24

Profile Description: (Descri	100			icator or con	terin une asses	ce or muicatora.
Depth <u>Matri</u> (inches) Color (moist		Color (moist)	Features %	Type ¹ Loc	Texture	Remarks
	13 100%	5555 (110400		THE HOW	Lan	
0-7 1011-1	12 10000_		-			
4-16 7.57R	4/2 959	57123/4	5%		SL	
110 111	"- Live	- in of				
						3/2
	12133					
					_	
					_	
Type: C=Concentration, D=	Depletion, RM=R	educed Matrix, CS	Covered o	r Coated San	d Grains. 2	Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Ap					Indicate	ors for Problematic Hydric Soils ² :
Histosol (A1)		Sandy Redox	x (85)			m Muck (A9) (LRR C)
Histic Epipedon (A2)		Stripped Mat				m Muck (A10) (LRR B)
Black Histic (A3)		Loamy Muck				duced Vertic (F18)
 Hydrogen Sulfide (A4) 		Loamy Gloye		2)		Parent Material (TF2)
 Stratified Layers (A5) (LI 		Depleted Ma			Oth	er (Explain in Remarks)
1 cm Muck (A9) (LRR D		Redox Dark				
 Depleted Balow Dark Su 		Depieted Da			Restant	ors of hydrophytic vegetation and
Thick Dark Surface (A12		— Redox Depression Vernal Pools		9		nd hydrology must be present,
 Sandy Mucky Mineral (S Sandy Glayed Matrix (S- 		Vernai Pools	(-a)			is disturbed or problematic.
Restrictive Layer (if presen					. ar no a	
Тура:	10					
					the second se	The second se
Cardle firehany.					Hydric S	foll Present? Yes X No
Depth (inches):		-			Hydric 8	ioll Present? Yas <u>X</u> No
Remarks:					Hydric 5	ioll Present? Yas <u>X</u> No
Remarks:					Hydric 5	ioll Present? Yas <u>Yas</u> No
Remarks: IYDROLOGY Wetland Hydrology Indicat	ors:	check all that apply	4			
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum	ors:		A second second			condary Indicators (2 or more required)
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1)	ors:	Salt Crust ((B11)			condary Indicators (2 or more required)
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2)	ors:	Salt Crust (Biotic Crus	(811) t (812)	(813)		condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Seturation (A3)	ors: of one required;	Salt Crust (Biotic Crus Aquatic Inv	(B11) t (B12) reitebrates	1		condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) (Nom	ors: of one required; iverine)	Salt Crust (Biotic Crus Aquatic Inv Hydrogen I	(B11) t (B12) reitebrates Sulfide Odo	ır (C1)		condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) (Nom Sediment Deposits (B2)	ors: of one required; iverine) (Nonriverine)	Salt Crust (Biotic Crus Aquatic Inv Hydrogen (Oxidized R	(B11) t (B12) reitebrates Sulfide Odo hizosphere	r (C1) s slong Living		condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nom Sediment Deposits (B3) Drift Deposits (B3) (Nom	ors: .af one required; iverine) (Nonriverine) riverine)	Salt Crust (Biotic Crus Aquatic Inv Hydrogen I Oxidized R Presence of	(B11) t (B12) vertebrates Sutide Odo hizosphere of Reduced	ir (C1) is slong Living liron (C4)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
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Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) (Nom Sediment Deposits (B2) Drift Deposits (B3) (Nom Surface Soil Cracks (B6 Inundation Visible on Ac	ors: of one required; (Nenriverine) (Nenriverine)) riverine))	Salt Crust (Biotic Crus Aquatic Inv Hydrogen I Oxidized R Presence o Recent Inv Thin Muck	(B11) 4 (B12) reitsbrates Sutfide Odd hizosphere of Reduced in Reduction Surface (C	r (C1) is slong Living liron (C4) 1 in Tilled Soils 7)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) (Nom Sediment Deposits (B2) Drift Deposits (B3) (Nom Surface Soil Cracks (B6 Inundation Visible on Ac Water-Stained Leaves (ors: of one required; (Nenriverine) (Nenriverine)) riverine))	Salt Crust (Biolic Crus Aquatic Inv Hydrogen I Oxidized R Presence o Recent Inv	(B11) 4 (B12) reitsbrates Sutfide Odd hizosphere of Reduced in Reduction Surface (C	r (C1) is slong Living liron (C4) 1 in Tilled Soils 7)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Remarks: YDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (AT) High Water Table (A2) Seturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Non Surface Soil Cracks (B6 Inundation Visible on Ac Water-Stained Leaves (Field Observations:	ors: of one required; (Nonriverine) (Nonriverine) riverine)) rial Imagory (B?) 39)	Salt Crust (Biotic Crus Aquatic Inv Hydrogen 3 Oxidized R Presence 0 Recent Iron Thin Muck Other (Exp	(B11) 4 (B12) vertebrates Sutfide Odo hizosphere of Reduced n Reduction Surface (C Iain in Rem	r (C1) is slong Living liron (C4) 1 in Tilled Soils 7)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Remarks: Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) (Nom Sediment Deposits (B2) Drift Deposits (B3) (Nom Surface Soil Cracks (B6 Inundation Visible on Ac Water-Stained Leaves (ors: of one required; (Nonriverine) (Nonriverine) riverine)) rial Imagary (B7) 39) Yes No	Salt Crust (Biotic Crus Aquatic Inv Hydrogen 3 Oxidized R Presence 0 Recent Iron Thin Muck Other (Exp	(B11) 4 (B12) reitebrates Sutfide Odo hizosphere of Reduced in Reduction Surface (C Iain in Rem	r (C1) is slong Living liron (C4) 1 in Tilled Soils 7) arks)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Remarks: YDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) (Nom Sediment Deposits (B2) Drift Deposits (B3) (Non Surface Soil Cracks (B6 Inundation Visible on Ac Water-Stained Leaves (Field Observations: Surface Water Present? Water Table Present?	ors: of one required; (Nonriverine) (Nonriverine) risel Imagary (87) 39) Yes No Yes No Yes No	Salt Crust (Biote Crus Aquatic Inv Hydrogen I Oxidized R Presence o Recent Inv Thin Muck Other (Exp Oxidized R Depth (inc	(B11) t (B12) vertebrates Sutfide Odd hizosphere of Reduced in Reduction Surface (C lain in Rem ches); thes);	r (C1) e slong Living liron (C4) t in Tilled Soik 7) warks)	Roots (C3)	condary Indicators (2 or mote required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum 	ors: of one required; (Nonriverine) (Nonriverine) riverine)) rial Imagary (B7) 39) Yes No Yes No Yes No	Salt Crust (Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence C Recent Inv Recent Inv Other (Exp Other (Exp Depth (inv Depth (inv	(B11) 4 (B12) reitebrates Sutfide Odo hizosphere of Reduced in Reduction Surface (C lain in Rem shes): thes):	r (C1) e slong Living liron (C4) 1 in Tilled Soils 7) marks)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) No
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) (Nom Sediment Deposits (B2) Drift Deposits (B3) (Non Surface Soil Cracks (B6 Inundation Visible on Ac Water-Stained Leaves (Field Observations: Surface Water Present? Water Table Present? Saturation Present?	ors: of one required; (Nonriverine) (Nonriverine) riverine)) rial Imagary (B7) 39) Yes No Yes No Yes No	Salt Crust (Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence C Recent Inv Recent Inv Other (Exp Other (Exp Depth (inv Depth (inv	(B11) 4 (B12) reitebrates Sutfide Odo hizosphere of Reduced in Reduction Surface (C lain in Rem shes): thes):	r (C1) e slong Living liron (C4) 1 in Tilled Soils 7) marks)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) No
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum 	ors: of one required; (Nonriverine) (Nonriverine) riverine)) rial Imagary (B7) 39) Yes No Yes No Yes No	Salt Crust (Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence C Recent Inv Recent Inv Other (Exp Other (Exp Depth (inv Depth (inv	(B11) 4 (B12) reitebrates Sutfide Odo hizosphere of Reduced in Reduction Surface (C lain in Rem shes): thes):	r (C1) e slong Living liron (C4) 1 in Tilled Soils 7) marks)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) No
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum 	ors: of one required; (Nonriverine) (Nonriverine) riverine)) rial Imagary (B7) 39) Yes No Yes No Yes No	Salt Crust (Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence C Recent Inv Recent Inv Other (Exp Other (Exp Depth (inv Depth (inv	(B11) 4 (B12) reitebrates Sutfide Odo hizosphere of Reduced in Reduction Surface (C lain in Rem shes): thes):	r (C1) e slong Living liron (C4) 1 in Tilled Soils 7) marks)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) No
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum 	ors: of one required; (Nonriverine) (Nonriverine) riverine)) rial Imagary (B7) 39) Yes No Yes No Yes No	Salt Crust (Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence C Recent Inv Recent Inv Other (Exp Other (Exp Depth (inv Depth (inv	(B11) 4 (B12) reitebrates Sutfide Odo hizosphere of Reduced in Reduction Surface (C lain in Rem shes): thes):	r (C1) e slong Living liron (C4) 1 in Tilled Soils 7) marks)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) No
Remarks: IYDROLOGY Wetland Hydrology Indicat Primary Indicators (minimum 	ors: of one required; (Nonriverine) (Nonriverine) riverine)) rial Imagary (B7) 39) Yes No Yes No Yes No	Salt Crust (Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence C Recent Inv Recent Inv Other (Exp Other (Exp Depth (inv Depth (inv	(B11) 4 (B12) reitebrates Sutfide Odo hizosphere of Reduced in Reduction Surface (C lain in Rem shes): thes):	r (C1) e slong Living liron (C4) 1 in Tilled Soils 7) marks)	Roots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) No

Project/Site: NW PARCIEC		City/County: PU	- C/E/C CO, Sampling Date: 5/17/20
pplicant/Owner: uParM			State: Sampling Point:SP-25
westigator(s): R. HUPPLESTON, V. UE16			
andform (hillslope, terrace, etc.):	Ē	Local relief (concave,	convex, none): NOME Slope (%): 227
ubregion (LRR):	Lat:	A 14 14.	Long: Datum: NAD8
all Map Unit Name: COMETA - FIDDY	ME	NT	NWI classification:
re climatic / hydrologic conditions on the site typical for this		INSING CONTRACTOR	Sector Statistics (Statistics)
re Vegetation, Soil, or Hydrologysi			"Normal Circumstances" present? Yes X No
e Vegetation Soil, or Hydrology n	1988 6886		eeded, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site map s	showing	sampling point I	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soll Present? Yes No Wetland Hydrology Present? Yes No		is the Sampled within a Wetla	
Remarks: ABOUR AVENAGE SBASI IN DEPRESSION IN WITH READWAY	AT 1	RAINFALL HPPEARS	TE BE AN OLD
EGETATION - Use scientific names of plant	s.		
and the second	Absolute	Dominant Indicator	Dominance Test worksheet:
	% Cover	Species? Status	Number of Dominant Species
. MA			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
k			Species Across All Strata; (B)
4			Percent of Dominant Species 100% (AR)
Sepling/Shrub Stratum (Plot size:)	-	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
NIA			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
k			FACW species x 2 =
			FAC species x 3 =
		= Total Cover	FACU species x 4 =
ferb Stratum (Plot size: 577)	+	1000	UPL species x 5 =
CRASSULA AQUATICA		YES OBL	Column Totals: (A) (B)
RANUNCULUS BONARIENSIS	15%	YES OBL	
DOWNINGLA ORNATISSIMA	15%	YES OBL	Provalence Index = B/A =
PLAGIOBOTTARYS STIPITATUS	5%	FACW	
LYTTHRUM ITYSSOPIFALIUM	SZe	OBL	Dominance Test is >50% Prevalence Index is <3.0'
LEONTAPON SAXATTUS	5/4	FALL	
LOLIUM PERENNE	2%	- FAC	 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
PSILOCA INPITUS BRENISSIMUS	TR	FACW	Problematic Hydrophytic Vegetation1 (Explain)
Woody Vine Stratum (Plot size:)	016	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must
2.	1		be present, unless disturbed or problematic,
		= Total Cover	Rydrophylic
% Bars Ground in Herb Stratum 332 % Cover	of Biotic C		Vegetation Present? Yes X No

33% % Cover of Biotic Crust Remarks: LOLIUM DERENNE = FESTUCA PIERENNIS

i.

Sampling Point SP-25

Profile Description: (Describe to the de Depth Matrix	Redo	Eeatures	8 S				
(inches) Calor (moist) %	Color (moist)	_%_	Type	Loc	Texture	10.25.00	Remarks
0-6 7.57P9/3 85%	7.57124/6	15%	C	M	54	MN	Care.
5-12 7.57144/3 80	2 7.57P4/6	20%	C	M	54		
		_		_			
Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, C5	-Covered	or Coate	d Sand G	arains. ² Lo		re Lining, M=Metrix.
Hydric Soll Indicators: (Applicable to a	all LRRs, unless other	wise note	id.)		Indicators	for Problema	tic Hydric Soils ³ :
 Histosol (A1) Histic Epipedon (A2) 	Sandy Redo	trix (S6)			2 cm	Muck (A9) (LRF Muck (A10) (LF	RB)
Black Histic (A3)	Loamy Muc		2011 P.		the second se	ed Vertic (F18	
Hydrogen Sulfide (A4)	Loamy Gley		(F2)		the second se	arent Material	
Stratified Layers (A5) (LRR C)	Depleted M				Other	(Explain in Rer	marks)
1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11)	Redox Dark	100 C C C C C C C C C C C C C C C C C C	C.C.P				
Thick Dark Surface (A12)	X Redox Depr				^a indicators	of hydrophytic	vegetation and
Sandy Mucky Mineral (S1)	Vernal Pool		-1			hydrology mus	the second s
Sandy Gleyed Matrix (S4)		and a second			unless	disturbed or pro	oblemetic,
Restrictive Layer (if present):							
Туре:					The second second second		3.0
Opth (inches):					Hydric Sol	Present?	/88 X_ No
					Hydric Sol	l Present?	/es <u></u> No
Depth (inches):					Hydric Sol	l Present?	/es / No
Depth (inches): Remarks: {YDROLOGY					Hydric Sol	l Present?	/es / No
Depth (Inches): Remarks: IYDROLOGY Wetland Hydrology Indicators:	red; check all that app	v)					res <u>2 or more required</u>)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regul	107236102475	Secondor.			Sec		rs (2 or more required)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1)	Salt Crust	(B11)			Sec	endary Indicato	rs (2 or more required)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regul Surface Water (A1) High Water Table (A2)	Salt Crust Biotic Cru	(B11) st (B12)	s (813)		Secc	endary Indicator Water Marks (B Sediment Depo	rs (2 or more required) s1) (Riverine)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regul Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust	(B11) st (B12) vertebrate	10000000000		Seco	endary Indicator Water Marks (B Sediment Depo	s (2 or more required) i1) (Riverine) isils (B2) (Riverine) B3) (Riverine)
Depth (inches):	Salt Crust Biolic Cru Aquatic In Hydrogen	(B11) st (B12) vertebrate Sulfide O	dor (C1)	Living R	Sec. 	ndary Indicator Water Marks (B Sediment Depo Drift Deposits (I Drainage Patte	s (2 or more required) i1) (Riverine) isils (B2) (Riverine) B3) (Riverine)
Depth (inches):	Salt Crust Biolic Cru Aquatic In Hydrogen	(B11) st (B12) vertebrate Sulfide O Thizosphe	dor (C1) rea along		Seco 	ndary Indicator Water Marks (B Sediment Depo Drift Deposits (I Drainage Patte	rs (2 or more required) i1) (Riverine) isits (62) (Riverine) 63) (Riverine) ms (610) aler Table (C2)
Depth (inches):	Biotic Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence	(B11) st (B12) vertebrate Sulfide O Thizosphe	dor (C1) res along id fron (C	4)	Sec 	ndary Indicator Water Marks (B Sediment Deposits (Drainage Patte Dry-Season Wa Crayfish Burrov	rs (2 or more required) i1) (Riverine) isits (62) (Riverine) 63) (Riverine) ms (610) aler Table (C2)
Depth (inches):	E Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent In	(B11) st (B12) vertebrate Sulfide Or Thizosphe of Reduce	dor (C1) res along id tron (C on in Tilk	4)	Seco 	ndary Indicator Water Marks (B Sediment Deposits (Drainage Patte Dry-Season Wa Crayfish Burrov	rs (2 or more required) (Riverine) Isits (B2) (Riverine) B3) (Riverine) ms (B10) aler Table (C2) vs (C8) ole on Aerial Imagery (C1
Depth (inches):	Biolic Crust Biolic Cru Aquatic In Hydrogen Oxidized I Presence Recent In (87) Thin Musi	(B11) st (B12) vertebrate Sulfide Or Thizosphe of Reduce an Reducti	dor (C1) res along id tron (C on in Tilk (C7)	4)	Seco 	ndary Indicato Water Marks (E Sediment Deposits (Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit	rs (2 or more required) (1) (Riverine) (Riverine) B3) (Riverine) ms (B10) aler Table (C2) vs (C6) ole on Aerial Imagery (C1 rd (D3)
Depth (inches):	Biolic Crust Biolic Cru Aquatic In Hydrogen Oxidized I Presence Recent In (87) Thin Musi	(B11) st (B12) vertebrate Sulfide Oc Thizosphe of Reduction Surface (dor (C1) res along id tron (C on in Tilk (C7)	4)	Seco 	ndary Indicator Water Marks (B Sediment Depo Drift Deposits (I Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit Shallow Aquita	rs (2 or more required) (1) (Riverine) (Riverine) B3) (Riverine) ms (B10) aler Table (C2) vs (C6) ole on Aerial Imagery (C1 rd (D3)
Depth (Inches):	Biolic Crust Biolic Cru Aquatic In Hydrogen Oxidized I Presence Recent In (87) Thin Musi	(B11) st (B12) vertebrate Sulfide Oc Thizosphe of Reduce an Reducti Surface (plain in Re	dor (C1) res along id tron (C on in Tilk (C7)	4)	Seco 	ndary Indicator Water Marks (B Sediment Depo Drift Deposits (I Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit Shallow Aquita	rs (2 or more required) (1) (Riverine) (Riverine) B3) (Riverine) ms (B10) aler Table (C2) vs (C6) ole on Aerial Imagery (C1 rd (D3)
Depth (inches):	Biolic Crust Biolic Cru Aquatic In Nydrogen Oxidized I Presence Recent Inc (B7)	(B11) st (B12) vertebrate Sulfide Or Thizosphe of Reduce an Reducti Surface (plain in Re whes):	dor (C1) res along id tron (C on in Tilk (C7)	4)	Seco 	ndary Indicator Water Marks (B Sediment Depo Drift Deposits (I Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit Shallow Aquita	rs (2 or more required) (Riverine) (Riverine) (Riverine) ms (B10) ater Table (C2) vs (C6) ote on Aerial Imagery (C1 vs (D5)
Depth (inches):	Biolic Crust Biolic Cru Aquatic In Noto Cru Aquatic In Noto Cru Aquatic In Noto Cru Presence Recent Inc Other (Ex Depth (in Depth (in	(B11) st (B12) vertebrate Sulfide Or Thizosphe of Reduce an Reducti Surface (plain in Re othes): ches):	dor (C1) res along d fron (C on in Tilk (C7) marks)	4) sd Soits (C	Seco 	ndary Indicator Water Marks (B Sediment Deposits (Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit Shallow Aquita FAC-Neutral Te	rs (2 or more required) (1) (Riverine) (Riverine) B3) (Riverine) ms (B10) aler Table (C2) vs (C6) ole on Aerial Imagery (C1 rd (D3)
Depth (inches):	Biolic Crust Biolic Cru Aquatic In Noto Cru Aquatic In Noto Cru Aquatic In Noto Cru Presence Recent Inc Other (Ex Depth (in Depth (in	(B11) st (B12) vertebrate Sulfide Or Thizosphe of Reduce an Reducti Surface (plain in Re othes): ches):	dor (C1) res along d fron (C on in Tilk (C7) marks)	4) sd Soits (C	Seco 	ndary Indicator Water Marks (B Sediment Deposits (Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit Shallow Aquita FAC-Neutral Te	rs (2 or more required) (Riverine) (Riverine) (Riverine) ms (B10) ater Table (C2) vs (C6) ote on Aerial Imagery (C1 vs (D5)
Depth (inches):	Biolic Crust Biolic Crust Aquatic In Aquatic In Noto 200 (B7) Presence Recent Inc Biolic Crust Presence Recent Inc Cother (Ex Depth (in Noto 200 Depth (in monitoring well, aerial	(B11) st (B12) vertebrate Sulfide Or Thizosphe of Reduce an Reducti Surface (plain in Re othes): ches):	dor (C1) res along d fron (C on in Tilk (C7) marks)	4) sd Soits (C	Seco 	ndary Indicator Water Marks (B Sediment Deposits (Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit Shallow Aquita FAC-Neutral Te	rs (2 or more required) (Riverine) (Riverine) (Riverine) ms (B10) ater Table (C2) vs (C6) ote on Aerial Imagery (C1 vs (D5)
Depth (inches):	Biolic Crust Biolic Crust Aquatic In Aquatic In Noto 200 (B7) Presence Recent Inc Biolic Crust Presence Recent Inc Cother (Ex Depth (in Noto 200 Depth (in monitoring well, aerial	(B11) st (B12) vertebrate Sulfide Or Thizosphe of Reduce an Reducti Surface (plain in Re othes): ches):	dor (C1) res along d fron (C on in Tilk (C7) marks)	4) sd Soits (C	Seco 	ndary Indicator Water Marks (B Sediment Deposits (Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit Shallow Aquita FAC-Neutral Te	rs (2 or more required) (Riverine) (Riverine) (Riverine) ms (B10) ater Table (C2) vs (C6) ote on Aerial Imagery (C1 vs (D5)
Depth (inches):	Biolic Crust Biolic Crust Aquatic In Aquatic In Noto 200 (B7) Presence Recent Inc Biolic Crust Presence Recent Inc Cother (Ex Depth (in Noto 200 Depth (in monitoring well, aerial	(B11) st (B12) vertebrate Sulfide Or Thizosphe of Reduce an Reducti Surface (plain in Re othes): ches):	dor (C1) res along d fron (C on in Tilk (C7) marks)	4) sd Soits (C	Seco 	ndary Indicator Water Marks (B Sediment Deposits (Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit Shallow Aquita FAC-Neutral Te	rs (2 or more required) (Riverine) (Riverine) (Riverine) ms (B10) ater Table (C2) vs (C6) ote on Aerial Imagery (C1 vs (D5)
Depth (inches):	Biolic Crust Biolic Crust Aquatic In Aquatic In Noto 200 (B7) Presence Recent Inc Biolic Crust Presence Recent Inc Cother (Ex Depth (in Noto 200 Depth (in monitoring well, aerial	(B11) st (B12) vertebrate Sulfide Or Thizosphe of Reduce an Reducti Surface (plain in Re othes): ches):	dor (C1) res along d fron (C on in Tilk (C7) marks)	4) sd Soits (C	Seco 	ndary Indicator Water Marks (B Sediment Deposits (Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit Shallow Aquita FAC-Neutral Te	rs (2 or more required) (Riverine) (Riverine) (Riverine) ms (B10) ater Table (C2) vs (C6) ote on Aerial Imagery (C1 vs (D5)

Project/Sile:	NW	PARCEL	1	City/County:	PUTCER	CO.	Samplin	g Date: 5/17/201
Applicant/Dwner	wp	WMA		-1-2/5/6-672-7	State	CA	Samplin	g Point SP-26
		WESTER, V.C	BIGHTEN	Section, Tow	nship, Range;	31 1		DEE
		I TEMA		Local relief (conceve, convex, non	e): Nar	1Ë	Slope (%): <u>22/8</u>
Subregion (LRR)		-	Lat:		Long:	_		Deture: 14083
soil Map Unit Na	ume: Co	META -	FIDDYM	ENT		NWI classif	cation:	MONE
Are Vegetation _ Are Vegetation _	Soil Soil		significantly pr	v disturbed? oblematic?	Are "Normal Circ (If needed, expla	umstances' In any answ	present? ers in Rem	Yes <u>)</u> No narks.) tant features, etc.
SUMMARY	14	and the second						

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:)	New Coloring	Dominant Indicate Species? Status		0	(A)
23			Total Number of Dominant Species Across All Strata:	1	(8)
4		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC	0%	(A/B)
Sapling/Shrub Stratum (Plot size:) 1. M/A			Prevalence Index worksheet Total % Cover of:		
2			OBL species		
4			FACW species		
5.			FAC species	x 3 =	
		= Total Cover	FAGU species	x 4 =	_
Herb Stratum (Plot size: 5 F7)	-103	T JES All	UPL species		
2. BROMMS CAPUT-MEDUSAE	5%	TES NL	Containing robato.	(A)	(B)
3 LACTUCA SERRIAL	5%			-	
4 LOLIVM PERENNE	5%	FAC		cators:	
5. FESTUCE BROMODES	TR	FACE	and the second se		
6.			Prevalence Index is ≤3.0 ⁵		
7			Morphological Adaptation data in Remarks or on		
B	85%	= Total Cover	Problematic Hydrophytic	Vegetation ¹ (Exp	lain)
1. MA		·	Indicators of hydric soil and v be present, unless disturbed of		y must
% Bare Ground in Herb Stratum 15% % Cove	Sec. and sec.	= Total Cover	Hydrophytic Vegetation Present? Yes	NoX	
Remarks:					

Carlos and

Sampling Point: 5P-26

Depth Matrix					bsence of indicators.)
a open	% Colo	Redox Features r (moist) %	Type ¹	Loc ² Te	xture Remarks
Alas de la companya		5724/6 10%	- Ches	MS	and the second s
0.10 11511-115		and the second se	5	11	
		5YR2.5/2 5/	0		
18-25					
			-		
Type: C=Concentration, D=Deple	stee PM-Radus	el Malrie, CSaFragra	t or Coated	Sand Grains	² Location: PL+Pore Lining, M=Matrix.
Hydric Soll Indicators: (Applica	ble to all LRRs.	unless otherwise not	ed.)	in	dicators for Problematic Hydric Solis ³ :
Histosol (A1)		Sandy Redox (S5)	20.40		1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)		Stripped Matrix (S6)			2 cm Muck (A10) (LRR B)
Black Histic (A3)		Loamy Mucky Mineral	(F1)	0	Reduced Vertic (F18)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix	(F2)	12	_ Red Parent Material (TF2)
Stratified Layers (A5) (LRR C	.)	Depleted Matrix (F3)			Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)		Redox Dark Surface (
Depieted Below Dark Surface	(A11)	Depleted Dark Surfac		5	
Thick Dark Surface (A12)		Redox Depressions (F8)	3	dicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	-	Vernal Pools (F9)			watland hydrology must be present, unless disturbed or problematic.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):				10	critess distanced or predaminance
and State Manual and an account of the					
Type:				Hu	dric Soil Present? Yes No 🔀
Remarks: NOT IN DISA				1.0	
CLP READWI	AT .				
	17				
YDROLOGY					
IYDROLOGY Wetland Hydrology Indicators:		k all that apply)			Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or					
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1)		_ Salt Crust (811)			Water Marks (B1) (Riverine)
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2)		_ Salt Crust (B11) _ Biotic Crust (B12)	as (B13)		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3)	ne required; chec 	 Saft Crust (B11) Biotic Crust (B12) Aquatic Invertebrate 			Water Marks (B1) (Riverine)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri	ine required; chec 	Salt Crust (B11) Bistic Crust (B12) Aquatic Invertabrate Hydrogen Sulfide O	dor (C1)	Living Roots (C	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Godiment Deposits (B2) (Nor	ne required; chec 	Saft Crust (B11) Biotic Crust (B12) Aquatic Invertabrate Hydrogen Sulfide O Oxidized Rhizosphe	dor (C1) tres along	8	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Sediment Deposits (B2) (Nor Drift Deposits (B3) (Nonriver	ne required; chec 	Salt Crust (B11) Bistic Crust (B12) Aquatic Invertabrate Hydrogen Sulfide O	dor (C1) ares slong ed Iron (C4	4)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Godiment Deposits (B2) (Nor	ine required; chec 	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertabrats Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduc	idor (C1) irres along ed Iron (C4 ion in Tiller	4)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Sediment Deposits (B2) (Nor Drift Deposits (B3) (Nonriver Surface Soil Cracks (B6) Inundation Visible on Aerial I	ine required; chec 	Satt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reduct	dor (C1) mes slong ed Iron (C4 ion in Tiller (C7)	4)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Sediment Deposits (B2) (Non Drift Deposits (B3) (Nonriver Surface Soil Cracks (B6)	ine required; chec 	Salt Crust (B11) Biolic Crust (B12) Aquatic Invertebrats Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct Thin Muck Surface	dor (C1) mes slong ed Iron (C4 ion in Tiller (C7)	4)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Sodiment Deposits (B2) (Nonriveri Drift Deposits (B3) (Nonriveri Surface Soil Cracks (B6) Inundation Visible on Aerial II Water-Stained Leaves (B9) Field Observations:	ine required; chec 	Salt Crust (B11) Biolic Crust (B12) Aquatic Invertebrats Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct Thin Muck Surface	dor (C1) mes slong ed Iron (C4 ion in Tiller (C7)	4)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Godiment Deposits (B2) (Non Drift Deposits (B3) (Nonriver Surface Soil Cracks (B6) Inunclation Visible on Aerial II Water-Stained Leaves (B9) Field Observations: Surface Water Present?	ine) ine) nriverine) rine) imagery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertabrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reduct Thin Muck Surface Other (Explain in Re	dor (C1) mes slong ed Iron (C4 ion in Tiller (C7)	4)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Sediment Deposits (B2) (Non Drift Deposits (B3) (Nonriveri Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9) Field Observations: Surface Water Present? Y) Water Table Present? Y)	ine required; chec ine) nriverine) rine) rine) rine, r	Salt Crust (B11) Biolic Crust (B12) Aquatic Invertebrats Hydrogen Sullide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct Thin Muck Surface Other (Explain in Re Depth (inches):	dor (C1) mes slong ed Iron (C4 ion in Tiller (C7)	() d Soils (C6)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
	ine) ine) nriverine) rine) imagery (B7) res No res No res No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertabrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reduct Thin Muck Surface Other (Explain in Re Depth (inches): Depth (inches):	dor (C1) rres slong ed Iron (C4 ion in Tiller (C7) smarks)	() d Soils (C6)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) 3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitart (D3) FAC-Neutral Test (D5)
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IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverial Sediment Deposits (B2) (Nonriverial Drift Deposits (B3) (Nonriverial Surface Soil Cracks (B6) Inundation Visible on Aerial II Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yo Saturation Present? Yo Cinctudes capitary fringe) Describe Recorded Data (stream)	ine) ine) nriverine) rine) imagery (B7) res No res No res No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertabrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reduct Thin Muck Surface Other (Explain in Re Depth (inches): Depth (inches):	dor (C1) rres slong ed Iron (C4 ion in Tiller (C7) smarks)	() d Soils (C6)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) 3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitart (D3) FAC-Neutral Test (D5)
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverial Sediment Deposits (B2) (Nonriverial Drift Deposits (B3) (Nonriverial Surface Soli Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9) Field Observations: Surface Water Present? Your Table Present? Your Saturation Present? Your Child Construction Present? Water Table Present? Your Saturation Present? Your Child Construction Present? Your Child Consta	ine) ine) nriverine) rine) imagery (B7) res No res No res No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertabrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reduct Thin Muck Surface Other (Explain in Re Depth (inches): Depth (inches):	dor (C1) rres slong ed Iron (C4 ion in Tiller (C7) smarks)	() d Soils (C6)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) 3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitart (D3) FAC-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Sediment Deposits (B2) (Nonriveri Sediment Deposits (B2) (Nonriveri Surface Soli Cracks (B6) Inundation Visible on Aerial II Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yo Water Table Present? Yo Saturation Present? Yo Saturation Present? Yo (includes capilary fringe) Describe Recorded Data (stream	ine) ine) nriverine) rine) imagery (B7) res No res No res No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertabrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reduct Thin Muck Surface Other (Explain in Re Depth (inches): Depth (inches):	dor (C1) rres slong ed Iron (C4 ion in Tiller (C7) smarks)	() d Soils (C6)	Water Marks (B1) (Riverine) Sodiment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) 3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitart (D3) FAC-Neutral Test (D5)

WETLAND DETERMINATION	DATA FORM – Arid West Region
	WCounty: <u>PUACIER CO.</u> Sampling Date: <u>5717/2016</u> State: <u>CA</u> Sampling Point: <u>57-27</u>
Investigator(s): R-HUDDLESTOR U. LIEIGITTON Se	ction, Township, Range: <u>31 M 12N 06E</u> cal relief (concave, convex, none): <u>NONE</u> Stops (%): <u>427</u>
Subregion (LRR): Lat:	Long: Datum: NAD 8.3
Soil Map Unit Name: <u>COMTETA</u> - <u>FIDYME</u> Are climatic / hydrologic conditions on the site typical for this time of year? Are Vegetation, Soil, or Hydrology significantly dis Are Vegetation, Soil, or Hydrology naturally proble SUMMARY OF FINDINGS - Attach site map showing site	Ves No (If no, explain in Remarks.) surbed? Are "Normal Circumstances" present? Yes No
Hydrophytic Vegetation Present? Yes No Hydric Soll Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes <u>Yes</u> No
Remarks: ABOUE AURRAGE SPASONA	L RAINFALL
VEGETATION – Use scientific names of plants. Absolute C	Dominant Indicator Dominance Test worksheet:
DEPENDENT OF THE OWNER OWNER OWNER	pecies? Status Number of Dominant Species

2	(A)
Sarbing/Shrub Stratum (Plot size:)	(8)
1 M/A 2	(A/B)
2.	
3.	
4.	
5.	16
Herb Stratum (Plot size: STP1 = Total Cover FACU species x 4 = 1. PUAGIOSOTHPRYS STDPITATUS 302 HES FACU 2. PALLIOBSOTHPRYS STDPITATUS 302 HES FACU 2. PUAGIOSOTHPRYS STDPITATUS 302 HES OBL 3. GALYCISAVA X OCCINFENTAUS IS YES OBL 3. GALYCISAVA X OCCINFENTAUS IS YES OBL 4. Paumption MonorSPELIENSS STA FACU Hydrophytic Vagetation Indicators: 5. ISPANGIUMI CASTIRIENSE 276 OBL Prevalence Index is >30° 6. UMITHRUM Ifficience 276 OBL Prevalence Index is >30° 7. LEONTAPON SAXATTUS 176 GACU Morphological Adaptations' (Provide suppor data in Remarks or on a separate sheet) 1. Problematic Hydrophytic Vagetation ' (Explain 'Indicators of hydric soil and wetland hydrology in be present, unless disturbed or problematic. 1. PTA	
Herb Stratum (Plot size:) 1. <u>PUAGOBORTHERSS STIPLEMENTS 302 HES FACM</u> 2. <u>PALADOROLULUS BONARIENSIS 205 YES OBC</u> 3. <u>GUY GISPUA X OCCLORENTAUS IS 74.55 (HEJ OBC</u> 4. <u>Pourposon MenSPELLIENSS 57.57.57.57.57.57.57.57.57.57.57.57.57.5</u>	
1. PUAGIOSOFTHRENS STIPLIMUS SOLE YES PACM 2. TANUNCULUS BONARHENSIS 20% YES OBL Prevalence index = B/A =	
2. IA MUNCULUS BONARIENSIS 20% YES 0BL 3. INTORNA X OCCIDENTAUS 15% YES 0BL 4. POUTPOGON MONSPELIENSS 5% FACM 5. IEPANGIUMI CASTRENSE 2% 0BL 6. UNTHRUM INTSSOPIFATION 2% 0BL Prevalence Index = B/A =	
4. PortPoGon MonSPELIENSS 5% FACul Hydrophytic Vegetation Indicators: 5. IERANGIUMI CASTRENSE 2% OBL Dominance Test is >50% 6. UNTHRUM IFTSSOPIFEMUMI 2% OBL Prevalence Index is \$3.0° 7. LEONTAPON SAXATTUS I% FACUL Morphological Adaptations' (Provide suppor data in Remarks or on a separate sheet) 8.	1.1-1
5. Image: Constraint of the state is state in the state is state in the state is state in the state is state in the state in the state is state in the state in the state is state in the state is state in the state in the state is state in the state is state in the state in the state in the state is state in the state is state in the state in the state in the state in the state is state in the state in the state in the state is state in the state is state in the s	-
6. UTITIEUM IFTSSOPIFEMUM 2% OBL	
7.	
7. UEONTADON SAXATTUS 1% FACK	
	ing
1. P/A 2.	1)
S Bare Ground in Herb Stratum 30% Cover of Biotic Crust Present? Yes X No No	ust
Remarks:	_

Sampling Point 5P-27

Profile Desc Depth	ription: (Describe t Matrix	o the deptr		x Features		or commen	The appender		
(inches)	Color (moist)	1/2	Color (moist)	- Yé	Type	Loc	Texture		Remarks
2.5	107 PY/2	90%	578416	10%		M	SL	Mr	Core.
5-16	2.57 1/2	100%			_		SL		
		_		_	_				
Type: C=C	oncentration, D=Dep	etion, RM=	Reduced Matrix, CS	3=Covered	or Coate	ed Sand G			ore Lining, M=Matrix,
Contraction of the log	Indicators: (Applic:	sble to all L			Hd.)				atic Hydric Soils':
_ Histosol	Contraction of the second s		Sandy Red					luck (A9) (LF luck (A10) (L	
	pipedon (A2) istic (A3)		Stripped Ma Loamy Muc		(E1)			d Vertic (F1	
	an Suffide (A4)		Loamy Gle					urent Materia	and the second se
	d Layers (AS) (LRR C	3	X Depleted M		0.54			Explain in R	
	uck (A9) (LRR D)	8) (1)	Redox Darl		F6)				
Deplete	d Below Dark Surfac	a (A11)	Depleted D					- 2010 - 2110 - 2110	and the second sec
the second se	ark Surface (A12)		Redox Dep		-8)			Contraction of the second s	ic vegetation and
	Mucky Mineral (S1)		Vernai Poo	ls (F9)				hydrology m isturbed or p	ast be present,
	Gleyed Matrix (S4) Layer (if present):						Uniess of	provinen or b	codernauc;
Type:	cayer (it present):								
I VOR.							In the second second		toport a face of the toport
2.01 L20723	uthow Ir						Hydric Soll	Present?	Yes No
Depth (ir Remarks:	iches):		_				Hydric Soll	Present?	Yes No
Depth (Ir Remarks:							Hydric Soll	Present?	Yeş No
Depth (Ir Remarka:	OGY						Hydric Soll	Present?	Yas No
Depth (ir Remarks: IYDROLO Wetland Hij)GY drology indicators:		; check all that app	M					Yes No
Depth (in Remarks: IYDROLC Wetland Hy Primary Ind)GY drology Indicators: icators (minimum of c		: check all that app Salt Crust				Secor	idery Indicat	
Depth (in Remarks: IYDROLO Wetland Hy Primary Ind Surface)GY drology indicators:			(811)			Secor V S	idary Indicat Actor Marks odiment Dep	ors (2 or more required) (B1) (Riverine) cosits (B2) (Riverine)
Depth (Ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W)GY drology Indicators: icators (minimum of c 2 Water (A1)		Salt Crust	(811)	s (813)		<u>5ecor</u> W S D	idary Indicat Jater Marks ediment Deposits	ors (2 or more required) (B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine)
Depth (in Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Satural	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2)	ne required	Salt Crust Biotic Crust Aquatic Ir Hydrogen	t (B11) ist (B12) ivertebrate i Sutfide O	dor (C1)		Secor V S 0 0	idary Indicat /ater Marks ediment Dep vift Deposits iralnage Patt	ors (2 or more required) (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10)
Depth (Ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Sedime)GY /drology Indicators: icators (minimum of c water (A1) ater Table (A2) ion (A3) Warks (B1) (Nonriver ent Deposits (B2) (No	ine required ine) nriverine)	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized	t (B11) est (B12) ivertebrate a Sutfide O Rhizosphe	dor (C1) res along		Secor V S 0 0 0 0 0	idary Indicat /ater Marks ediment Dep vift Deposits trainage Patt iry-Sesson V	ors (2 or more required) (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2)
Depth (in Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Sedime Dritt De	GY drology Indicators: cators (minimum of c water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No sposits (B3) (Nonrive	ine required ine) nriverine)	Salt Crust Biotic Cru Aquatic Ir Hydrogan Oxidized Presence	t (B11) est (B12) ivertebrate a Sutlide O Rhizosphe of Reduce	dor (C1) res along id Iron (C	4)	Secor W S 00	idary Indicat /ater Marks ediment Dep vift Deposits irainage Patt irayfish Burn irayfish Burn	ors (2 dr more required) (B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) ows (C8)
Depth (in Remarks: IYDROLC Wetland Hy Primsry Ind Surface High W Satural Water I Satural Dritt De Surface	OGY drology Indicators: cators (minimum of s Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver art Deposits (B2) (No sposits (B3) (Nonrive a Soil Cracks (B6)	ine) ine) nriverine) rine)	Salt Crust Biotic Cru Aquatic Ir Hydrogan Oxidized Presence Recent In	t (B11) est (B12) rivertebrate Sutfide Or Rhizosphe of Reduce on Reduce	dor (C1) res along id Iron (C on in Title	4)	Secor W S 00	idary Indicat Jater Marks ediment Dep vift Deposits iralnage Patt iry-Sesson V irayfish Burn isturation Vis	ors (2 or more required) (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) owa (C8) ible on Aerial Imagery (C9
Depth (in Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Satural Water I Satural Unit De Surface Drift De Surface Inunda	OGY drology Indicators: cators (minimum of s Water (A1) ater Table (A2) ion (A3) Warks (B1) (Nonriver int Deposits (B2) (No sposits (B3) (Nonrive s Soil Cracks (B6) ion Visible on Aerial	ine) ine) nriverine) rine)	Salt Crust Biotic Cru Aquatic Ir Hydrogan Oxidized Presence Recent In Thin Muc	t (B11) ivertebrate a Sutide O Rhizosphe of Reduce on Reduce k Surface (dor (C1) res along id Iron (C on in Title (C7)	4)	Secor V S 0 _0 0 0 0	idary Indicat Jater Marks ediment Dep vift Deposits inlinage Patt iny-Sesson V iny-Sesson V iny-Sesson V ing Sesson V ing	ors (2 or more required) (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) ows (C6) ible on Aerial Imagery (C9 ard (D3)
Depth (Ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Sedime Surface Drift De Surface Unit De Surface Unit De	DGY drology Indicators: icators (minimum of c Water (A1) later Table (A2) ion (A3) Warks (B1) (Nonriver ant Deposits (B2) (No sposits (B3) (Nonrive soli Cracks (B6) ion Visible on Aerial Stained Leaves (B9)	ine) ine) nriverine) rine)	Salt Crust Biotic Cru Aquatic Ir Hydrogan Oxidized Presence Recent In Thin Muc	t (B11) est (B12) rivertebrate Sutfide Or Rhizosphe of Reduce on Reduce	dor (C1) res along id Iron (C on in Title (C7)	4)	Secor V S 0 _0 0 0 0	idary Indicat Jater Marks ediment Dep vift Deposits iralnage Patt iry-Sesson V irayfish Burn isturation Vis	ors (2 or more required) (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) ows (C6) ible on Aerial Imagery (C9 ard (D3)
Depth (in Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Surface Inunda Water- Field Obse	DGY drology Indicators: icators (minimum of c Water (A1) later Table (A2) ion (A3) Warks (B1) (Nonriver ant Deposits (B2) (No sposits (B3) (Nonriver is Soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations:	ine) nriverine) rine) Imagery (87	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In Thin Muc Other (Ex	t (B11) ist (B12) ivertebrate Sutfide O Rhizosphe of Reduce on Reduce k Surface (plain in Re	dor (C1) res along id Iron (C on in Title (C7)	4)	Secor V S 0 _0 0 0 0	idary Indicat Jater Marks ediment Dep vift Deposits inlinage Patt iny-Sesson V iny-Sesson V iny-Sesson V ing Sesson V ing	ors (2 or more required) (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) ows (C6) ible on Aerial Imagery (C9 ard (D3)
Depth (in Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Surface Dritt De Surface Water- Field Obse Surface Wa	OGY drology Indicators: (cators (minimum of s Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver art Deposits (B2) (No sposits (B3) (Nonriver a Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) rvations: ther Present?	ine) nriverine) rine) Imagery (67	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In Chier (Ex No X Depth (in	t (B11) ist (B12) ivertebrate a Sutfide O Rhizosphe of Reduce on Reduce k Surface (plain in Re nches):	dor (C1) res along id Iron (C on in Title (C7)	4)	Secor V S 0 _0 0 0 0	idary Indicat Jater Marks ediment Dep vift Deposits inlinage Patt iny-Sesson V iny-Sesson V iny-Sesson V ing Sesson V ing	ors (2 or more required) (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) ows (C6) ible on Aerial Imagery (C9 ard (D3)
Depth (in Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water Dritt De Surface Water- Field Obse Water Tabl	DGY drology Indicators: icators (minimum of s Water (A1) later Table (A2) ion (A3) Marks (B1) (Nonriver art Deposits (B2) (No sposits (B3) (Nonrive a Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) rvations: ther Present?) a Present?	ine) nriverine) rine) imagery (67 /es 1	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In Cher (Ex No Cher (Ex Depth (ir	t (B11) est (B12) ivertebrate a Sutfide O Rhizosphe of Reduce on Reduce k Surface (splain in Re nches):	dor (C1) res along id Iron (C on in Title (C7)	4) ad Soils (C	Secor W S 0 _0 0 _00000000	dary Indicat Ater Marks ediment Dep vift Deposits insinage Patt iny-Sesson V insyfish Burn sturation Vis hallow Aquit AC-Neutral	ors (2 or more required) (B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) ova (C8) able on Aerial Imagery (C9 ard (D3) Test (D5)
Depth (in Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Surface Surface Wa Water Tabl Saturation (includes ci	DGY drology Indicators: icators (minimum of s Water (A1) later Table (A2) ion (A3) Marks (B1) (Nonriver art Deposits (B2) (No sposits (B3) (Nonrive a Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) rvations: ther Present?) a Present?	ine) nriverine) rine) (magery (67 (as) (as)	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In Thin Muc Other (Ex No X Depth (ir No Depth (ir	t (B11) ist (B12) ivertebrate a Sutfide O Rhizosphe of Reduce on Reducet k Surface (plain in Re nches): nches):	dor (C1) res along id Iron (C on in Tilk (C7) imarks)	4) ed Soils (C	Secor W S 00 00 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _0000 _0000 _0000 _0000 _0000 _0000 _00000 _000000	dary Indicat Ater Marks ediment Dep vift Deposits insinage Patt iny-Sesson V insyfish Burn sturation Vis hallow Aquit AC-Neutral	ors (2 or more required) (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) ows (C6) ible on Aerial Imagery (C9 ard (D3)
Depth (in Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Surface Dritt De Surface Surface Wa Surface Wa Surface Wa Surface R Surface R Surface R Surface R Surface R Surface R	DGY drology Indicators: icators (minimum of c Water (A1) later Table (A2) ion (A3) Warks (B1) (Nonriver art Deposits (B2) (No posits (B3) (Nonriver a Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present? Visible on Aerial Present?	ine) nriverine) rine) imagery (67 'es 1 'es 1 'es 1	Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In Cother (Ex No Depth (ir No Depth (ir No Depth (ir nettoring well, agrical	t (B11) ist (B12) ivertebrate a Sutfide O Rhizosphe of Reduce on Reducet k Surface (plain in Re nches): nches):	dor (C1) res along id Iron (C on in Tilk (C7) imarks)	4) ed Soils (C	Secor W S 00 00 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _000 _0000 _0000 _0000 _0000 _0000 _0000 _00000 _000000	dary Indicat Ater Marks ediment Dep vift Deposits insinage Patt iny-Sesson V insyfish Burn sturation Vis hallow Aquit AC-Neutral	ors (2 or more required) (B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) ova (C8) able on Aerial Imagery (C9 ard (D3) Test (D5)

ZCEL	_ City/County: PLACER CO. Sampling Date: 5717/201
MA	State: CA Sampling Point: 5P-28
TOP, V. LEIGHTON	
TRAPACE	_ Local relief (concave, convex, none): Slope (%):
Lat.	Long: Datum: MAN 8-3
FA - FIDDAM	ENT NWI classification NONE
the site typical for this time of	f year? Yes No 🔀 (If no, explain in Remarks.)
or Hydrology significa	ntly disturbed? Are "Normal Circumstances" present? Yes 🔀 No
r Hydrology naturally	problematic? (If needed, explain any snewers in Remarks.)
Attach site map show	ng sampling point locations, transects, important features, etc.
	 Is the Sampled Area
Yes No	within a Wetland? Yes No
	MA TOP, V. CEIGHTOP <u>TRARACE</u> Lat. IA - F1DPYMD the sile typical for this time of r Hydrology significant r Hydrology naturally

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) 1P/A	Absolute % Cover	Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:	((A)
3				Total Number of Dominant Species Across All Strata:	3	(8)
4Sapling/Shrub Stratum (Piot size:)	_	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC:	33%	(A/B)
1_PIA	-			Prevalence Index worksheet:		_
2				Total % Cover of:	Multiply by:	-
3				OBL species x	1=	_
4				FACW species x	2 =	-
5				FAC species x	3=	
		= Total Co	ver	FACU species x	4 =	
Herb Stratum (Plot size:)				NAMES OF STREET	5=	
1. BREAMINOR	30%	YES	FAC	Column Totals: (A		_
2 ELYMUS CAPUT-MEDHSAL 3. FESTUCA BROMADES	10%		FACU	Prevalence Index = B/A =		
4. TRIFELIUM HIRTON	10%	2	ML	Hydrophytic Vegetation Indica	tors:	-
LOLIUM PERENNE	10%		FAC	Dominance Test is >50%		
B. TRIFELIUM GRACIUSHTUP	1152	YES	NL	Prevalence Index is ≤3.0 ¹		
1. TRIFCHOM DUBIOM	54		UPL	Morphological Adaptations ¹	(Provide suppor	rting
B. VICIA VILLOSA	5%		PL	data in Remarks or on a	separate sheet)
Woody Vine Stratum (Plot size:)	100%	- Total Co	The local division in	Problematic Hydrophytic Ve	getation ¹ (Expl	ain)
1. N/A				⁴ Indicators of hydric soil and web	and hydrology	muet
				be present, unless disturbed or p		(Insearch)
2		= Total Co	ver	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum % Cover	of Biotic Cr	rust		Present? Yes	No	
N Bare Ground in Herb Stratum % Cover Remarks: Louis PERENNE = For		1.1.1.1		Present? Yes	No X	

Sampling Point: 5P-28

rofile Desci Jepth	Matrix		and the second se	Features			1000	200000
inches)	Color (moist)	16	Color (moist)	- 36	Type'	Loc	_Taxture_	Remarks
1-12	7.578-3/3	80%.	7.57/01/6	20%	C	M	56	
_								
				-	-			
				-				
	1			_				
		-						
	(
Duner C=Cr	ancentration, D=Depl	etion RM=	Reduced Matrix, CS	=Covered	for Coste	ed Sand Gr	ains. ^a Lo	cation: PL=Pore Lining, M=Matrix.
vdric Soil I	indicators: (Applica	ble to all L	RRs, unless other	wise not	ad.)			s for Problematic Hydric Soils ¹ :
Histosol			Sandy Redo		11221		1 cm 1	Muck (A9) (LRR C)
	ipedon (A2)		Stripped Ma	ALC: NOT THE REAL PROPERTY OF				Muck (A10) (LRR B)
Black Hi	stic (A3)		Loamy Mud				and the second s	ced Vertic (F18)
	n Suffida (A4)		Loamy Gley		(F2)			Parent Material (TF2)
	i Layers (A5) (LRR C	9	Depleted M		-		Other	(Explain in Remarks)
	ick (A9) (LRR D)		Redox Dark Depleted Dr					
	d Below Dark Surfact ark Surface (A12)	(bezi)	Redox Depr				Indicators	s of hydrophytic vegetation and
	lucky Mineral (S1)		Vernal Pool					I hydrology must be present.
	Sloyed Matrix (S4)		-	59.91.				disturbed or problematic.
	Layer (if present):							
Тура:	o la manados production	_					1	
							1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Present? Yes No 🔀
Depth (in Remarks:	ches):		_				Hydric Soi	il Present? Yes No A
Remarks:							Hydric Soi	a presentry tas No
Permarks:	GY						Hydric Sol	Present? TasNO
YDROLO	GY drology Indicators:		- charts all that ann					
Permarks: YDROLO Wetland Hy Primary Indi	GY drology indicators: cators (minimum of c	ne required					Sec.	ondery Indicators (2 or more required)
YDROLO Wetland Hy Primary Indi Surface	GY drology indicators: cators (minimum of c Water (A1)	ne required	Salt Crust	(B11)			Secc	ondery Indicators (2 or more required) Water Marks (B1) (Riverine)
YDROLO Wetland Hy Primary Indi Surface High Wi	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2)	ne required	Salt Crust Slotic Cru	(B11) st (B12)	es (B13)		Secc	ondery Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Permarks: YDROLO Wetland Hy Primary Indi Surface High Wi Saturati	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3)		Sait Crust Biotic Cru Aquatic In	(B11) st (B12) vertebrate			Secc	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Primarks: YDROLO Wetland Hy Primary Indi Surface High Wi Saturati Water M	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) can (A3) farks (B1) (Nonriver	ine)	Salt Crust Biotic Crust Aquatic In Hydrogen	(B11) st (B12) vertebrate Suffide O	dor (C1)	Juving Ro	Sec	ondery Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Permarks: YDROLO Wetland Hy Primary Indi Saturati Saturati Water M Sedime	GY drology indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) farks (B1) (Nonriver nt Deposits (B2) (No	ine) nriverine)	Sait Crust Biotic Cru Aquatic In Hydrogen Oxidized I	(B11) st (B12) vertebrate Sutlide O Rhizosphe	dor (C1) res along	Living Ro	Sec. 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Permarks: YDROLO Wetland Hy Primary Indi Surface High Wi Saturati Water N Sedime Drift De	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonrive	ine) nriverine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized P Presence	(B11) at (B12) wertebrate Sulfide O Rhizosphe of Reduce	dor (C1) sres along ed Iron (C		Seco 	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Permarks: YDROLO Wetland Hy Primary Indi Saturati Saturati Water N Sedime Drift De Surface	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6)	ine) nriverine) rine)	Sait Crust Biotic Cru Aquatic In Hydrogen Oxidized P Presence Recent In	(B11) st (B12) wertebrate Sullide O Rhizosphe of Reduct on Reduct	dor (C1) res along ed Iron (C ion in Tilk	:4)	Seco ots (C3) 6)	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Permarks: YDROLO Wetland Hy Primary Indi Saturati Water N Sedime Drift De Surface Inundat	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonrive	ine) nriverine) rine)	Sait Crust Biotic Cru Aquatic In Hydrogen Oxidized P Presence Recent In	(B11) st (B12) wertebrate Sulfide O Rhizosphe of Reduct on Reduct s Surface	dor (C1) res along ed Iron (C ion in Tilk (C7)	:4)	Seco ots (C3) 6)	widary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Primarks: YDROLO Wetland Hy Primary Indi Surface High Wi Saturati Water N Sedime Drift De Surface Inundat Water-S	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9)	ine) nriverine) rine)	Sait Crust Biotic Crus Aquatic In Hydrogen Coddized P Presence Recent Inc 7) Thin Much	(B11) st (B12) wertebrate Sulfide O Rhizosphe of Reduct on Reduct s Surface	dor (C1) res along ed Iron (C ion in Tilk (C7)	:4)	Seco ots (C3) 6)	widary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Permarks: YDROLO Wetland Hy Primary Indi Surface High Wi Saturati Water N Sedime Drift De Surface Inundat Water-S Field Obser	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations:	ine) nriverine) rine) magery (B)	Sait Crust Biotic Crus Aquatic In Hydrogen Coddized P Presence Recent Inc 7) Thin Much	(B11) st (B12) wertebriste Sulfide O Rhizosphe of Reduct on Reduct s Surface plain in Ri	dor (C1) res along ed Iron (C ion in Tilk (C7)	:4)	Seco ots (C3) 6)	widary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Permarks: YDROLO Wetland Hy Primary Indi Surface High Wi Saturati Water N Sedime Drift De Surface Inundat Water-S Field Obser Surface Wa	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations: tor Present?	ine) nriverine) rine) Imagery (B)	Sait Crust Biotic Crus Aquatic In Hydrogen Oxidized I Presence Recent Inc Thin Muck Other (Ex	(B11) at (B12) wertebrate Suffide O Rhizosphe of Reduct on Reduct Surface plain in Re-	dor (C1) res along ed Iron (C ion in Tilk (C7)	:4)	Seco ots (C3) 6)	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Permarks: YDROLO Wetland Hy Primary Indi Surface High Wi Saturati Water N Sedime Drift De Surface Inundat Water-S Field Obser Surface Wa Water Table	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) farks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Y	ine) nriverine) imagery (B) ies 1	Sait Crust Biotic Cru Aquatic In Hydrogen Oxidized P Presence Recent Inc Thin Much Other (Ex No	(B11) at (B12) wertebrate Sulfide O Rhizosphe of Reduct on Reduct Surface plain in Re uches): uches):	dor (C1) res along ed Iron (C ion in Tilk (C7)	(4) ad Soils (C	ots (C3)	widary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
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Permarks: YDROLO Wetland Hy Primary Indi Surface High Wi Saturati Water N Sedime Drift De Surface Inundat Water-S Field Obser Surface Wa Water Table Saturation F includes ca Describe Re	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver nt Deposits (B2) (Non posits (B3) (Nonriver Soit Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present? Present? Stainey timpe)	ine) nriverine) imagery (B) iss i iss i	Sait Crust Biotic Cru Aquatic In Hydrogen Oxidized P Presence Recent Inc Thin Much Other (Ex No Depth (in No Depth (in	(B11) st (B12) wertebrate Sulfide O Rhizosphe of Reduct on Reduct Surface plain in Re uches): sches):	dor (C1) res along ed Iron (C ion in Tilk (C7) emarks)	(C	ots (C3) 6) land Hydrolo	widary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
VDROLO Vetland Hy Yimary Indi Surface High Wi Saturati Water N Sedime Drift De Surface Inundat Water-S Field Obset Surface Wa Saturation F includes ca Describe Re	GY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver nt Deposits (B2) (Non posits (B3) (Nonriver Soit Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present? Present? Stainey timpe)	ine) nriverine) imagery (B) iss i iss i	Sait Crust Biotic Cru Aquatic In Hydrogen Oxidized P Presence Recent Inc Thin Much Other (Ex No Depth (in No Depth (in	(B11) st (B12) wertebrate Sulfide O Rhizosphe of Reduct on Reduct Surface plain in Re uches): sches):	dor (C1) res along ed Iron (C ion in Tilk (C7) emarks)	(C	ots (C3) 6) land Hydrolo	widary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Site: M	wp	ARCEC	1	_	City/County	PLACE	R co.	Samp	ling Date: 5/17/2013
	WPU	UMA			005-50-438			4_ Samp	ling Point: SP-29
Investigator(s):			V. 45161	Hell	Section, Tow	nship, Renge:	3	1 IZN	OSE
Landform (hillslope, terr					Local relief (concave, conve	ix, none):	NAVE	Slope (%):
Subregion (LRR):	C			Lat		Lor	g:		Datum: NAD 83
Soil Map Unit Name:									NOME
Are climatic / hydrologic Are Vegetation, Are Vegetation, SUMMARY OF FIN	Soll Soil	_, or Hydrolo _, or Hydrolo	gy si gy n	gnificantly aturally pro	disturbed? oblematic?	Are "Norm (If needed	nal Circumsta I, explain any	nces" present answers in R	17 Yes 🗶 No
Hydrophytic Vegetatio Hydric Soll Present? Wetland Hydrology Pr		1002		00	512453	Sampled Ares a Wetland?		a I	No
Romarks: ABou	EA	urers ca	E SEA	sand	te RA	TRACI			

VEGETATION - Use scientific names of plants.

2 3 4						
				Total Number of Dominant Species Across All Strate:	Z	(B)
57.5 (32.7) U.S. (10.7) (22.8) (23.7) (20.7) (20.7)		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC:	100%	(A/B)
Sapling/Shrub Stratum (Plot size:) 1//4				Prevalence index worksheet: Total % Cover of:	Multiply by:	- 10,400
2				OBL species x 1		-
3		_		FACW species x 2		
5				FAC species x 3		
		= Total Co	wer	FAGU species x 4		
Harb Stratum (Plot size: 5PT)				UPL species x 5		
1. LASTITEMIA GUABERRIMA 2. PUALIOBOTITRYS STIPITATUS	40%		OBL FACW	Column Totals: (A)	(<u>1</u>	_ (B)
3. RANUNCULUS BONIARIENSIS	15%		OBL	Prevalence index = B/A = _		_
4 ELEOCITARIS MACROSTACHTA	5%		OBL	Hydrophytic Vegetation Indicate	ors:	
5 POLYPOGON MONSPELIENSIS	2%		FACW	Dominance Test is >50%		
B. DOWNINGIA ORMITTSSIMA	1%		OBL	Prevalence Index is ≤3.0 ¹		
7,				Morphological Adaptations ¹ (F data in Remarks or on a se		
8	972	= Total Co	ver	- Problematic Hydrophytic Vege	etation ¹ (Expla	uim)
Woody Vine Stratum (Plot size:) 1//A				¹ Indicators of hydric soil and wetla be present, unless disturbed or pre-		must
2		= Total Co	over	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 38 % Cover	of Biotic C	rust		Present? Yes	No	
Remarks:	ervie Aedia	CONTRACTOR OF STREET		Lease and the second		

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P-2	9
	*

rofile Description: (Describe t Depth Matrix		Redax	Features				
(inches) Color (moist)	- 16- 5-	Color (moist)	14	Type'	Loc	Texture	Remarks
0-8.5 7.5712/2	75%	7.57124/4	25%	C	MAC	56	
8.5+6 107R573	80%	7.5784/4	20%	c	M	SL	
		;		_	_	_	
Type: C=Concentration, D=Depl tydric Soll Indicators: (Applica	etion, RM=I able to all L	Reduced Matrix, CS= RRs, unless otherw Sandy Redox	rise noted	or Coate	d Sand Grai	Indicators	ation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : Nck (A9) (LRR C)
 Histosol (A1) Histic Epipedon (A2) 		Stripped Matr	ix (S6)			2 om N	tuck (A10) (LRR B)
Black Histic (A3)		Loamy Mucky					ed Vertic (F18)
Hydrogen Sulfide (A4)		Loamy Gleye		F2)			arent Material (TF2)
Stratified Layers (A5) (LRR C	2)	Depleted Mat Redox Dark 3		63		Other (Explain In Remarks)
1 cm Muck (A9) (LRR D) Depleted Below Dark Surface	(411)	Depleted Dar					
Thick Dark Surface (A12)	- franty	Redox Depre				⁹ Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (81)		Vernal Pools					hydrology must be present,
Sandy Gleyed Matrix (S4)		1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1405			unless d	sturbed or problematic.
Restrictive Layer (if present):					-		
Турес							
SSAM Manager 1807						14. 14. 14. 18. 18.	Ware Mar
Depth (inches): Remarks:						Hydric Soll	Present? Yes No
Depth (inches): Remarks:						Hydric Soll	Present? Yes No
Depth (inches):						Hydric Soll	Present? Yes No
Depth (inches): Remarks: IYDROLOGY		; check all that apply)			Secon	dary Indicators (2 or more required)
Depth (inches): Ramarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of c Surface Water (A1)		Salt Crust (811)			<u>Seco</u> r	dary Indicators (2 or more required) Vater Marks (B1) (Riverine)
Depth (inches): Ramarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2).		Salt Crust (B11) (B12)			<u>Seco</u> r V S	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) Jediment Deposits (B2) (Riverine)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3)	ine required	Salt Crust (Biotic Crust Aquatic Inv	B11) (B12) ertebrates			<u>Secon</u> V S C	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) Frift Deposits (B3) (Riverine)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of of 	ine required	Salt Crust (Biotic Crust Aquatic Inv Hydrogen S	B11) (B12) ertebrates Sulfide Od	or (C1)	Line Pert	<u>Secon</u> V S 0	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) Infit Deposits (B3) (Riverine) Insinage Patterns (B10)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of of 	ine required (ine) ariverine)	Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized R0	B11) (B12) ertebrates Jullide Od hizosphere	or (C1) es along	1.3 × 1.0 × 1 × 1 × 1 × 2	<u>Secon</u> Y S Q s (C3)Q	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) Rediment Deposits (B2) (Riverine) Initi Deposits (B3) (Riverine) Valnage Patterns (B10) Vry-Season Water Table (C2)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of of 	ine required (ine) ariverine)	Salt Crust (Biotic Crust Aquatic Inve Hydrogen S Oxidized Ri Presence o	B11) (B12) ertebrates Sulfide Od hizosphere f Reduces	or (C1) es along i Iron (C	4)	<u>Secon</u> V S C s (C3) C	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) Initi Deposits (B3) (Riverine) Irainage Patterns (B10) Iry-Season Water Table (C2) Irayfish Surrows (C8)
Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of of 	ine required Ine) nriverine) rine)	Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized Ri Presence o Recent Iron	B11) (B12) ertebrates Jullide Od hizosphere f Reduced Reductio	or (C1) es along i Iron (C n in Tille	4)	<u>Secon</u> V S C s (C3) C S	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) Initi Deposits (B3) (Riverine) Irainage Patterns (B10) Iry-Season Water Table (C2) Irayfish Surrows (C8)
Depth (inches):	ine required Ine) nriverine) rine)	Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized Ri Presence o Recent Iron	B11) (B12) ertebrates Sullide Od hizosphere f Reductio Surface (C	or (C1) es along i Iron (C n in Tille 27)	4)	<u>Secon</u> V S C s (C3) C S S	Adary Indicators (2 or more required) Vater Marks (B1) (Riverine) Indiment Deposits (B2) (Riverine) Indiment Deposits (B3) (Riverine) Indimage Patterns (B10) Indimage Patterns (B10) Indimage Patterns (B10) Indimage Patterns (B10) Indimage Patterns (C2) Indimage Patterns (C2) Indimage Patterns (C2)
Depth (inches):	ine required Ine) nriverine) rine)	Salt Crust (Biolic Crust Aquatic Inv Hydrogen S Oxidized Ri Presence o Repent Iron Thin Muck	B11) (B12) ertebrates Sullide Od hizosphere f Reductio Surface (C	or (C1) es along i Iron (C n in Tille 27)	4)	<u>Secon</u> V S C s (C3) C S S	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) Inft Deposits (B3) (Riverine) Valinage Patterns (B10) Vry-Season Water Table (C2) Vrayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Phallow Aquitard (D3)
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Depth (inches):	ine required Ine) Inagery (Bi Imagery (Bi Imagery (Bi Imagery (Bi Imagery (Bi	Salt Crust (Bioflo Crust Aquatic Inv Hydrogen S Oxidized RU Presence o Repent Iron Thin Muck Other (Expl No Depth (inc No Depth (inc	B11) (B12) entebrates Julfide Od- hizosphere f Reductio Reductio Surface (C ain in Ren hes): hes):	or (C1) es along i Iron (C n in Tille 77) narks)	4) d Solts (C6)	<u>Secon</u> V S C s (C3) C S S S F	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) Infi Deposits (B2) (Riverine) Infi Deposits (B3) (Riverine) Inainage Patterns (B10) Inv-Season Water Table (C2) Tayfish Burrows (C8) Inturation Visible on Aerial Imagery (C9 Inailow Aquitard (D3) (AC-Neutral Test (D5)
Depth (inches):	ine required inriverine) inriverine) imagery (87 /es 1 /es 1 /es 1 /es 1	Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized Ri Presence o Repent Iron Thin Muck Other (Expl No Depth (inc No Depth (inc No Depth (inc No Depth (inc	B11) (B12) entebrates Julfide Od- hizosphere f Reductio Reductio Surface (C ain in Ren hes): hes):	or (C1) es along i Iron (C n in Tille 77) narks)	4) d Solts (C6)	<u>Secon</u> V S C s (C3) C S S S F	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) Infi Deposits (B2) (Riverine) Infi Deposits (B3) (Riverine) Inainage Patterns (B10) Inv-Season Water Table (C2) Tayfish Burrows (C8) Inturation Visible on Aerial Imagery (C9 Inailow Aquitard (D3) (AC-Neutral Test (D5)
Depth (inches):	ine required inriverine) inriverine) imagery (87 /es 1 /es 1 /es 1 /es 1	Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized Ri Presence o Repent Iron Thin Muck Other (Expl No Depth (inc No Depth (inc No Depth (inc No Depth (inc	B11) (B12) entebrates Julfide Od- hizosphere f Reductio Reductio Surface (C ain in Ren hes): hes):	or (C1) es along i Iron (C n in Tille 77) narks)	4) d Solts (C6)	<u>Secon</u> V S C s (C3) C S S S F	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) Infi Deposits (B2) (Riverine) Infi Deposits (B3) (Riverine) Inainage Patterns (B10) Inv-Season Water Table (C2) Tayfish Burrows (C8) Inturation Visible on Aerial Imagery (C9 Inailow Aquitard (D3) (AC-Neutral Test (D5)
Depth (inches):	ine required inriverine) inriverine) imagery (87 /es 1 /es 1 /es 1 /es 1	Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized Ri Presence o Repent Iron Thin Muck Other (Expl No Depth (inc No Depth (inc No Depth (inc No Depth (inc	B11) (B12) entebrates Julfide Od- hizosphere f Reductio Reductio Surface (C ain in Ren hes): hes):	or (C1) es along i Iron (C n in Tille 77) narks)	4) d Solts (C6)	<u>Secon</u> V S C s (C3) C S S S F	adary Indicators (2 or more required) Vater Marks (B1) (Riverine) Infi Deposits (B2) (Riverine) Infi Deposits (B3) (Riverine) Inainage Patterns (B10) Inv-Season Water Table (C2) Tayfish Burrows (C8) Inturation Visible on Aerial Imagery (C9 Inailow Aquitard (D3) (AC-Neutral Test (D5)

Investigator(s): 12.4	WPWMA		on, Township, Range:	31 12N	Ing Point <u>SP-30</u> 06/E Slope (%): <u>42%</u>
	race, etc.):		relief (concave, convex, none		
Subregion (LRR): Soli Man Unit Name:		FIDDYMEN		NWI classification:	
Are Vegetation,		r naturally problem:		n any answers in R	
and they be readed as a financial	2020 P	× No No ×	Is the Sampled Area within a Wetland?	Yes	io ×

VEGETATION - Use scientific names of plants.

1. NIA 2.	That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A'B) Prevalence Index worksheet: 100% (A'B) OBL species × 1 = FACW species × 2 = FAC species × 3 = FACU species × 4 =
4 = Total Cover Sapling/Shrub Stratum (Plot size:) 1. N/A 2 3 4 5 Herb Stratum (Plot size: SFT) 1. LATHYRUS HIRSUTUS SOLO YES FA 2. JBRIZA MINOR ZOZ YES FA 3. FESTUCA BROMOIDES IOLO FAC 4. BROMUS HONFACEUS IOLO FAC 5. LEONTADON TARAJON SLO	That Are OBL, FACW, or FAC: 100% (A/B) Prevalence Index worksheet:
1. NIA 2	Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 =
3	OBL species x 1 = FACW species x 2 = FAC species x 3 =
4	FACW species x 2 = FAC species x 3 =
5	FAC species x 3 =
Herb Stratum (Plot size: SFT) = Total Cover 1. LATHYRUS HIRSUTUS 50% YES FA 2. BRIZA MINOR ZO% YES FA 3. FESTUCA BROMOIDES 10% FAC 4. BROMUS HORPHOEUS 10% FAC 5. LEONTADON TARAKI 5% FA 8. SAXATILIS	
Herb Stratum (Plot size: SFT) 1. LATHYRUS HIRSUTUS 50% YES FA 2. BRIZA MINOR ZO% YES FA 3. FESTUCA BROMOIDES 10% FAC 4. BROMUS HORPHOEUS 10% FAC 5. LEONTADON TARAKI 5% FA 6. SAXATILIS	CAUCIDIA A.4
BRIZA MINOR ZOZ YES FA FESTUCA BROMOIDES IOL FAC BROMUS HORPHOEUS IOLE FAC LEONTADON FARAGE SZO FA 6. SAXATILIS	UPL species x 5 =
BROMUS HARAGENS 10% FAC BROMUS HARAGENS 10% FAC LEONTADON FARAGENS 5% FAC B SAXATIUS	
A BROMUS HOLPHACEUS 10% FAC 5 LEONTADON FARAGU STO EA 6 SAXATIUS	Constant Activity and a second state of the se
5 LEONTADON TARAKI 5% FA B SAXATILIS	
6. SAXATIUS	
7	Prevalence Index is ≤3.01
	 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
6 95% = Total Cover	Problematic Hydrophytic Vagetation* (Explain)
Woody Vine Stratum (Plot size:) 1*/A	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 = Total Cover % Bara Ground in Herb Stratum 5% % Cover of Biotic Crust	Hydrophytic Vegetation Present? Yes Xo
Remarks:	
a value a fair res	

×

1

Sempling Point: 57-30

Color (moist) % Color (moist) % Type' 2-/6 7.5 7/P 1/3 80% 7.57/P 1/4 20% c 1 2-/6 7.5 7/P 1/3 80% 7.57/P 1/4 20% c 1 2-/6 7.5 7/P 1/3 80% 7.57/P 1/4 20% c 1 2-/6 7.5 7/P 1/4 20% c 1 <td< th=""><th>Indicators 1 cm 1 2 cm 1 Reduct Red P Other Indicators wetland</th><th>Cation: PL=Pore Lining, M=Matrix. for Problematic Hydric Solls³: Muck (A9) (LRR C) Muck (A10) (LRR B) arent Material (TF2) (Explain in Remarks) of hydrophytic vegetation and hydrology must be present,</th></td<>	Indicators 1 cm 1 2 cm 1 Reduct Red P Other Indicators wetland	Cation: PL=Pore Lining, M=Matrix. for Problematic Hydric Solls ³ : Muck (A9) (LRR C) Muck (A10) (LRR B) arent Material (TF2) (Explain in Remarks) of hydrophytic vegetation and hydrology must be present,
Ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated S ydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	Sand Grains. ² Lo Indicators 1 cm / 2 cm / 2 cm / Redux Red P Red P Other 	for Problematic Hydric Solls ³ : Muck (A9) (LRR C) Muck (A10) (LRR B) sed Vertic (F18) arent Material (TF2) (Explain in Remarks) of hydrophytic vegetation and
ydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histie (A3) Loamy Mucky Mineral (F1) Hydrogen Sulide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Balow Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Rodox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Leaser (if present):	Indicators 1 cm 1 2 cm 1 Reduct Red P Other Indicators wetland	for Problematic Hydric Solls ³ ; Muck (A9) (LRR C) Muck (A10) (LRR B) sed Vertic (F18) arent Material (TF2) (Explain in Remarks)
vertic Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedion (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfids (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4)	Indicators 1 cm 1 2 cm 1 Reduct Red P Other Indicators wetland	for Problematic Hydric Solls ³ : Muck (A9) (LRR C) Muck (A10) (LRR B) sed Vertic (F18) arent Material (TF2) (Explain in Remarks)
vertic Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Strabified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Sandy Gleyed (F7)	Indicators 1 cm 1 2 cm 1 Reduct Red P Other Indicators wetland	for Problematic Hydric Solls ³ ; Muck (A9) (LRR C) Muck (A10) (LRR B) sed Vertic (F18) arent Material (TF2) (Explain in Remarks)
vertic Soli Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedion (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfids (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4)	Indicators 1 cm 1 2 cm 1 Reduct Red P Other Indicators wetland	for Problematic Hydric Solls ³ ; Muck (A9) (LRR C) Muck (A10) (LRR B) sed Vertic (F18) arent Material (TF2) (Explain in Remarks)
ydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histie (A3) Loamy Mucky Mineral (F1) Hydrogen Sulide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Balow Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Rodox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Leaser (if present):	Indicators 1 cm 1 2 cm 1 Reduct Red P Other Indicators wetland	for Problematic Hydric Solls ³ : Muck (A9) (LRR C) Muck (A10) (LRR B) sed Vertic (F18) arent Material (TF2) (Explain in Remarks) of hydrophytic vegetation and
ydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histie (A3) Loamy Mucky Mineral (F1) Hydrogen Sulide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 om Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Balow Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Rodox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Loamy Fools (F9)	Indicators 1 cm 1 2 cm 1 Reduct Red P Other Indicators wetland	for Problematic Hydric Solls ³ ; Muck (A9) (LRR C) Muck (A10) (LRR B) sed Vertic (F18) arent Material (TF2) (Explain in Remarks)
Histosol (A1)	1 cm f 2 cm f Reduc Red P Other ³ Indicators wetland	Muck (A9) (LRR C) Muck (A10) (LRR B) sed Vertic (F18) arrent Material (TF2) (Explain in Remarks)
Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 om Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Rodox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Loamy Mucky Mineral (S1)	2 cm / Reduc Red P Other ³ Indicators wetland	Muck (A10) (LRR B) and Vertic (F18) arrent Material (TF2) (Explain in Remarks) of hydrophytic vegetation and
Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 om Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Radox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Estrictive Layer (if present):	Redux Red P Other ³ Indicators wetland	ed Vertio (F18) arent Material (TF2) (Explain in Remarks) of hydrophytic vegetation and
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Estrictive Layer (if present):	Red P Other ³ Indicators wetland	erent Material (TF2) (Explain in Remarks) of hydrophytic vegetation and
Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) testrictive Layer (if present):	³ Indicators wetland	(Explain in Remarks) of hydrophytic vegetation and
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	⁹ Indicators wetland	of hydrophytic vegetation and
Depleted Bolow Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Lestrictive Layer (if present):	wetland	
Thick Dark Surface (A12) Rodox Depressions (FB) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) testrictive Layer (if present):	wetland	
Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) testrictive Layer (if present):	wetland	
Sandy Gleyed Matrix (S4) testrictive Layer (if present):		Production multiplet be proport.
lestrictive Layer (if present):		Isturbed or problematic.
Туре:		
Depth (inches):	Hydric Sol	Present? Yes No X
YDROLOGY		
Wetland Hydrology Indicators:		
Yimary Indicators (minimum of one required; check all that apply)	Seco	indary Indicators (2 or more required)
Surface Water (A1) Salt Crust (B11)		Water Marks (B1) (Riverine)
		Sediment Deposits (B2) (Riverine)
		Drift Doposits (B3) (Riverine)
		Drainage Patterns (B10)
	and the second sec	Dry-Season Water Table (C2)
		Creyfish Burrows (CB)
	States and States and States and	Saturation Visible on Aerial Imagery (C9
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled	2002385050	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagory (B7) Thin Muck Surface (C7)		화가 같아요. 한 것 같아요. 것이 왜 해야지 않는
Water-Stained Leaves (89) Other (Explain in Remarks)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No 🔀 Depth (inches):	-	
Nater Table Present? Yes No 🔀 Depth (inches):	Constanting of the second	
Saturation Present? Yes No 🔀 Depth (inches):	Wetland Hydrolog	gy Present? Yes No 🗡
includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aanal photos, previous inspi	ections), if available:	
	- 66	
Romarks:		

wma	City/County: PCA GEN	State: CA	Sampling Date: 5/17/201 Sampling Point: 5P 31
and a state of the second second			Deschald Louis
NESTER, V. LEIGHTON	Section, Township, Range: _		12N OSE
* TEARACE	Local relief (concave, conve	K, none): No	NE Slope (%): 222
Lat	Lon	Ŧ	Datum: 14083
META-FIDDYMEN	of computer	NVVI classifi	cation: NONE
, or Hydrology significantly	y disturbed? Are "Norm	al Circumstances*	present? Yes 🔀 No
t? Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?		< No
	Let: META - FIDDYME ms on the site typical for this time of y , or Hydrology	Lat: Langen META - FIDD MMEMT Com PUE > ms on the site typical for this time of year? Yes	Lat: Long: META - FIDDYMKent Com PUEX NVI dassifiers on the site typical for this time of year? Yes No

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) 1/A	A COLUMN TWO IS	Dominant Species?	Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Z (B)
4		= Total Co	wer	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
1. <u>PIA</u>				Prevalence Index worksheet: Total % Cover of: Multiply by:
2				OBL species x 1 =
4				FACW species x 2 = FAC species x 3 =
Herb Stratum (Plot size: SFT)		= Total Co	iver	FACU species x 4 = UPL species x 5 =
1. LASTITEMA GUABERFUMA		YES	OBL	Column Totals: (A) (B)
2 ELEOCITARIS MACLOSTACHYA 3. DESCHAMPSIA DANTHONOLDES		YES	FACU	Prevalence Index = B/A =
4. <u>PLAGICBORHEYS</u> STIPITATUS 5 6 7 8	TR			Hydrophytic Vegetation Indicators: Oominance Test is >50% Prevalence Index is <3.0' Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation' (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
% Bara Ground in Herb Stratum 107 % Cover		- Total Co		Hydrophytic Vegetation Present? Yes X No
% Bare Ground in Herb Stratum <u>107</u> % Cover Remarks:				Vegetation

	ription: (Describe to	the depth		Features				A
lepth inches)	Color (moist)	%	Color (moist)	%	Type	Loc2	Taxtu	re Remarks
2.5	7.5712 2.57	100%	Contraction (State of Contraction of Contraction ()				5:1	<u> </u>
2.5-10	7.STRY/2	75%	7.57F3/4	25%	C	M	5:0	2
0-16	10712/2	90%	7.5703/4	10%	c	M	SCL	
Histosof Histosof Histic Eg Black Hi	encentration, D=Deple Indicators: (Applicat (A1) alpedon (A2) stic (A3) en Sutfide (A4)	tion, RM=R	Reduced Matrix, CS RRs, unless other Sandy Redo Stripped Ma Loamy Muci Loamy Gley	wise note x (S5) trix (S6) cy Mineral	d.) (F1)	nd Sand G	India 	² Location: PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ : t cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2)
Stratified 1 cm Mu Depleted Thick Da Sandy M	d Layers (A5) (LRR C) ick (A9) (LRR D) d Below Dark Surface ark Surface (A12) Aucky Mineral (S1)		Depleted Mr Redox Dark Depleted Da Redox Depr Vernal Pool	atrix (F3) Surface (F rk Surface essions (F	=6) = (F7)		"inde	Other (Explain in Remarks) estors of hydrophytic vegetation and riland hydrology must be present, itess disturbed or problematic.
Sandy G	Ileyed Matrix (S4)							
	Ileyed Matrix (S4) Layer (If present):						-	
	the second se							
Restrictive Type: Depth (in	Layer (if present):						Hydri	c Soll Present? Yes No
Restrictive Type: Depth (in Remarks:	Layer (If present): chee):						Hydri	c Soll Present? Yes No
Restrictive Type: Depth (in Remarks:	Layer (If present): chee):						Hydri	c Soll Present? Yes No
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy	Layer (If present): chee):	e sensited	chaok all that and				Hydri	
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indi	Layer (If present): chee): GGY drology Indicators: cators (minimum of on	e required;					Hydri	Secondary Indicators (2 or more required)
Restrictive Type: Depth (in Remarks: Remarks: Remarks: Properties Wetland Hy Primary Inde Surface High Wi Saturati Water N Sectime Drift De Surface Inundet	Layer (If present): chee):	ne) riverine) ne)	Salt Crust Biotic Crus Aquatic Im Hydrogen Oxidized F Presence Recent Iro	(B11) et (B12) vertebrates Sulfide Od Ihizospher of Reducer n Reductio Surface (f	lor (C1) res along d tron (C an in Till C7)	:4)	oals (C3)	
Restrictive Type: Depth (in Remarks: IYDROLO Wetland Hy Primary Indie Surface High Wi Saturati Water N Sectime Drift De Surface Unift De Surface Unift De Surface Water Table Saturation F	Layer (If present): chee):	ne) ne) nagery (B7 is N is N	Saft Crust Biotic Crus Aquatic Im Hydrogen Oxidized F Presence Recent Inc Thin Muck Other (Exp	(B11) it (B12) vertebrates Sulfide Od thizospher of Reducer n Reductio Surface (blain In Re- ches): ches):	lor (C1) res along d tron (C an in Till C7)	:4) ed Soils (0	oals (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Chainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indie Surface High Wi Saturati Water N Sedime Drift De Surface Inundat Sturface Water Table Saturation F Includes ca	Layer (If present): chee): GGY drology Indicators: catars (minimum of on Water (A1) ater Table (A2) on (A3) Aarks (B1) (Nonriverin nt Deposits (B2) (Non posits (B3) (Nonriverin stained Leaves (B9) rvations: ter Present? Ye Present? Ye	ne) ne) nagery (B?) is N is N	Saft Crust Biofe Crust Aquatic Im Hydrogen Oxidized F Presence Recent Iro Thin Muck Offser (Exp Io X Depth (In Io X Depth (In	(B11) it (B12) vertebrates Suifide Od Reduced of Reduced n Reductic Suiface (olain in Red ches): ches):	lor (C1) res along d Iroin (C an in Tilb C7) marks)	:4) ed Soils ((oals (C3) C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutrel Test (D5) drology Present? Yes X Ne
Restrictive Type: Depth (in Remarks: Primarks: Wetland Hy Primary Indie Surface Surface Sectime S	Layer (If present): chee):	ne) ne) nagery (B?) is N is N	Saft Crust Biofe Crust Aquatic Im Hydrogen Oxidized F Presence Recent Iro Thin Muck Offser (Exp Io X Depth (In Io X Depth (In	(B11) it (B12) vertebrates Suifide Od Reduced of Reduced n Reductic Suiface (olain in Red ches): ches):	lor (C1) res along d Iroin (C an in Tilb C7) marks)	:4) ed Soils ((oals (C3) C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutrel Test (D5) drology Present? Yes X Ne

1.00

WETLAND	DETERMINATION	DATA FORM -	Arid Wes	t Region
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Project/Sile: NW	PARCEL		City/County:	PLACE	RCO.	Samplin	ng Date: 5/1	7/2017
the second se	UPWMA		100-100-000	312	State: 4	4 Samplin	g Point _SI	-32
Investigator(s): R. 140	DDUESTER, U.L	1516Ittan	Section, Town	ship, Range:	31	1 IZN	08E	
Landform (hillslope, terrace,			Local relief (o	oncave, conve	ax, none):	NANE	Stope (%	6): 22%
Subregion (LRR):		Lat		Lor	ng:		Datum: /	w1083
Soll Map Unit Name:	CMRETA - FIPP				NWI	lassification:	NONE	
Are climatic / hydrologic con	ditions on the site typical fo	or this time of ye	ar? Yes	No X	(If no, expla	ain in Remarks.)	1	
Are Vegetation, Soil	, or Hydrology	significantly	disturbed?	Are "Norm	tai Circumsta	nces" present?	Yes	No
Are Vegetation, Soil	, or Hydrology	naturally pro	blematic?	(If needed	, explain any	answers in Ren	narks.)	
SUMMARY OF FINDI	NGS – Attach site m	ap showing	sampling	point local	tions, tran	sects, impo	rtant featu	res, etc.
Hydrophytic Vegetation Pri Hydric Soil Present? Wetland Hydrology Presen	Yes	No X No X	1.122 2.22	Sampled Area		8 No	×_	
Remarks: ABOURE	AVE. SEASO	mite p	ANDEACO	222				

VEGETATION - Use scientific names of plants.

% Cover	Species?	t Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC		0	(A)
			Total Number of Dominant		r	(B)
		over	Percent of Dominant Species		0%	(A/B)
					diels be	
			- Charles March 1997 (1997)			
			- ACCESSION ACCESSION			
		_				
	_= Total C	over				
60%	YES	FALL				
	100		Column Fotals;	IAI -		_ (B)
and in the second s		a provide the second second	Provalence Index = B/A	=		
		a second second second	Hydrophytic Vegetation Ind	icatora	č .	
an anterference	_					
		and an other states and and				
	-		Morphological Adaptation	ns ¹ (Pro		
90	= Total O	mutic	1	1.1.1.1.1.1.1		5. August 199
			¹ Indicators of hydric soil and v be present, unless disturbed	wetland or probl	hydrology lematic.	must
	1.19.01	83331	Hydrophytic Vegetation Present? Yes	N	10 ×	
	60% 10% 10% 5% 5% 5%	= Total C	= Total Cover = Total Cover 60% YIES FACU 10% FAC 10% FAC 5% FACU 5% FACU 5% FACU 5% FACU	Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC Prevalence Index workshoe Total & Cover Prevalence Index workshoe Total & Cover of: OBL species Prevalence Index workshoe Total & Cover of: OBL species Prevalence Index workshoe Total & Cover FACW species FACU species FACU species UPL species UPL species Column Totals: IOB SS FACU SS FACU	Total Number of Dominant Species Across All Strate: = Total Cover = Total Cover Prevalence Index worksheet: Total % Cover of: Min OBL species = Total Cover Prevalence Index worksheet: Total % Cover of: Min OBL species = Total Cover FACW species = Total Cover FACW species FACW species X3 = FACW species YIES FACU YIES FACU	Instruct Out, Frank, Brack Total Number of Dominant Species = Total Cover Prevalence Index worksheet: Total X Cover of: Prevalence Index worksheet: Total X Cover of: Multiply by: OBL species * Total Cover FACW species * Total Cover * FACU * Total Cover * FACU * Sta * FACU * Sta<

Sampling Point 59-32

	ription: (Describe	e one seepen				
Depth (inches)	Color (moist)	%	Color (moist)	% Type ¹ Lo	c ² Texture	a Remarks
0.2.5	104RZ.5/1	100%			SiL	
	1-11-11					
2.5-11	7.5712/2	60%			LS	
C . 1 - 11						
	7.57123/4	10%0-				
1.1		60.9			10	
11-16	7.57R3M	80%			45	
	7.57P4/2	20%	_			
Type: CeCr	ncentration D=Dec	letion RM=P	educed Matrix, C	S=Covered or Coated Sa	nd Grains.	Location: PL=Pore Lining, M=Matrix.
Hydric Soll I	indicators: (Applic	able to all L	RRs, unless oth	erwise noted.)	Indica	tors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Re-	dox (85)		om Muck (A9) (LRR C)
	pipedon (A2)		Stripped M	latrix (S6)		cm Muck (A10) (LRR B)
Black Hi	stic (A3)			cky Mineral (F1)		educed Vertic (F18)
	n Sulfide (A4)			eyed Matrix (F2)		ed Parent Material (TF2)
	Layers (A5) (LRR	C)		Matrix (F3)	_ 08	her (Explain in Remarks)
CONTRACTOR AND	ick (A9) (LRR D)			rk Surface (F6)		
	d Below Dark Surfac	æ (A11)		Dark Surface (F7)	Justin	tors of hydrophytic vegetation and
	ark Surface (A12)			pressions (F8)		and hydrology must be present.
a local balance	fucky Mineral (S1) Sleyed Matrix (S4)		Vernal Po	ous (Ia)		es disturbed or problematic.
	Layer (if present):					
Туре:	0.059/06/06/2010/06					
Depth (in	ches):		-		Hydric	Soil Present? Yes Ne
Depth (in Remarks:			_		Hydric	Soll Present? Yes No
Depth (in Remarks:	GY		_		Hydric	Soll Present? Yes No
Depth (in Remarks: IYDROLO Wetland Hy	IGY drology Indicators			njuj		
Depth (in Remarks: IYDROLO Wetland Hy Primary Inde	GY drology Indicators cators (minimum.ol					econdary indicators (2 or more required)
Depth (in Remarks: IYDROLO Wetland Hy Primery Inde	GY drology Indicators cators (minimum.ol Water (A1)		Salt Cru	st (B11)		econdary indicators (2 or more required) Water Marks (81) (Riverine)
Depth (in Remarks: IYDROLO Wetland Hy Primery Inde Surface High We	GY drology Indicators cators (minimum of Water (A1) ster Table (A2)		Salt Cru Biotic Cr	st (B11) ust (B12)		econdary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (in Remarks: IYDROLO Wetland Hy Primery Inde Surface High Wa Seturati	IGY drology Indicators cators (minimum of Water (A1) ster Table (A2) on (A3)	one required;	Salt Cru Biotic Cr Aquatic	st (811) ust (812) invertebrates (813)		econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (in Remarks: IYDROLO Wetland Hy Primery Inde Surface High Wi Seturati Water N	GY drology Indicators cators (minimum of Water (A1) ster Table (A2) on (A3) Marks (B1) (Nonrive	one required; rine)	Salt Cru Biotic Cr Aquatic Hydroge	st (B11) ust (B12) invertebrates (B13) n Sulfide Odor (C1)	§	econdary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (in Remarks: IYDROLO Wetland Hy Primery India Surface High Wi Seturati Water N Sectime	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (No	nine) nine)	Salt Cru Biotic Cr Aquatic Hydroge Oxidized	st (B11) ust (B12) invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres along Livir	§	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Seoson Water Table (C2)
Depth (in Remarks: IYDROLO Wetland Hy Primary India Surface High We Saturati Saturati Sectimes Drift De	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (Nonrive posits (B3) (Nonrive	nine) nine)	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc	st (B11) ust (B12) invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres along Livir e of Reduced Iron (C4)	ng Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Dritt Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Depth (in Remarks: IYDROLO Wetland Hy Primary India Surface High Wa Seturati Seturati Seturati Drift De Surface	GY drology Indicators cators (minimum.ol Water (A1) ster Table (A2) on (A3) Marks (B1) (Monrive nit Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6)	nine) nine) antiverine) artine)	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I	st (B11) ust (B12) invertebrates (B13) in Sulfide Odor (C1) i Rhizospheres along Livir e of Reduced Iron (C4) ron Reduction in Titled So	ng Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Depth (in Remarks: IYDROLO Wetland Hy Primary Inde Surface High Wa Saturati Water N Seturati Drift De Surface Inundati	GY drology Indicators cators (minimum of Water (A1) ster Table (A2) on (A3) Marks (B1) (Nonrive nit Deposits (B2) (No posits (B3) (Nonrive soil Cracks (B6) ion Visible on Aerial	nine) nine) aniverine) imagory (B7	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Thin Mu	st (B11) ust (B12) invertebrates (B13) in Sulfide Odor (C1) i Rhizospheres along Uvir e of Reduced Iron (C4) ron Reduction in Tilled So ck Surface (C7)	ng Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Depth (in Remarks: IYDROLO Wetland Hy Primery Inde Surface High Wi Seturati Seturati Setime Drift De Surface Inundati Water S	IGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9)	nine) nine) aniverine) imagory (B7	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Thin Mu	st (B11) ust (B12) invertebrates (B13) in Sulfide Odor (C1) i Rhizospheres along Livir e of Reduced Iron (C4) ron Reduction in Titled So	ng Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Depth (in Remarks: IYDROLO Wetland Hy Primary Inde Surface High Wi Seturati Sectime Drift De Surface Drift De Surface Inundat Water S	IGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations:	nne required; nine) prine) Imagory (B7	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	st (B11) ust (B12) invertebrates (B13) in Sulfide Odor (C1) i Rhizospheres along Livir e of Reduced Iron (C4) ron Reduction in Titled So ck Surface (C7) ixplain in Romarks)	ng Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
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Depth (in Remarks: IYDROLO Wetland Hy Primary Indu Surface High Wi Saturation Surface Inundat Water S Field Obser Surface Wal Water Table Saturation F (includes ca	GY drology Indicators cators (minimum.ol. Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present? present? present? present?	rine) prine) prine) (magory (B7 Yes N Yes N	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E Depth (Depth (st (B11) ust (B12) invertebrates (B13) in Sulfide Odor (C1) i Rhizospheres along Livir s of Reduced Iron (C4) ron Reduction in Titled So ck Surface (C7) xplain in Ramarks) inches): inches):	ng Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drit Deposits (B3) (Riverine) Drit Deposits (B3) (Riverine) Dry-Sector Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) stature (D5)
Depth (in Remarks: IYDROLO Wetland Hy Primery Inde Surface High Wi Seturation Sectimes Drift De Surface High Water N Sectimes Surface Wal Water Table Saturation F (includes ca Describe Re	GY drology Indicators cators (minimum.ol. Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present? present? present? present?	rine) prine) prine) (magory (B7 Yes N Yes N	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E Depth (Depth (st (B11) ust (B12) invertebrates (B13) in Sulfide Odor (C1) i Rhizospheres along Livir s of Reduced Iron (C4) ron Reduction in Titled So ck Surface (C7) xplain in Ramarks) inches): inches):	ng Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drit Deposits (B3) (Riverine) Drit Deposits (B3) (Riverine) Dry-Sector Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) stature (D5)
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Depth (in Remarks: IYDROLO Wetland Hy Primery Inde Surface High Wi Seturation Sectimes Drift De Surface High Water N Sectimes Surface Wal Water Table Saturation F (includes ca Describe Re	GY drology Indicators cators (minimum.ol. Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present? present? present? present?	rine) prine) prine) (magory (B7 Yes N Yes N	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E Depth (Depth (st (B11) ust (B12) invertebrates (B13) in Sulfide Odor (C1) i Rhizospheres along Livir s of Reduced Iron (C4) ron Reduction in Titled So ck Surface (C7) xplain in Ramarks) inches): inches):	ng Roots (C3)	econdary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drit Deposits (B3) (Riverine) Drit Deposits (B3) (Riverine) Dry-Sector Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5) staturation Visible (D5)
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ver.	PARO	UEL		_ City/County:	PHOM	2 00.	Sampl	ing Date: 5717/201
wp	wma			S (V) 42	_	State: CA	Sampl	ing Point: SP-34
uppus	stor ,	U. LEIG	SHTION	Section, Tow	nship, Range: _			
ace, etc.	- 7	EPA40	E	Local relief (concave, conve	x, none):	ane	Slope (%): 222
C			Lat					
conditio	ns on the s	site typical fo	r this time of	year7 Yes	No X	(If no, explain i	n Remarks	J
Sol	or Hy	drology	significan	tly disturbed?	Are "Norma	al Circumstance	s" present?	Yes 📈 Na 🔜
Soll	or Hys	drology	naturally (problematic?	(If needed,	explain any ans	wers in Re	marks.)
DING	s – Atta	ch site m	ap showir	ng sampling	point locati	ons, transe	sts, impo	ortant features, etc.
n Presen				(5 111	AN ADDRESS OF		XN	0
1 10 10 10 10 10 10 10 10 10 10 10 10 10	condition soll	wpwM uppuestor, ace, etc.): conditions on the s soll or Hys Soll or Hys IDINGS - Atta n Present?	ace, etc.):	UPWM4 UPPESTER, U. UEIGIHTEN ace, etc.): <u>TERMAGE</u> <u>C</u> Lat: <u>contrested</u> conditions on the site typical for this time of Soll or Hydrology significant Soll or Hydrology naturally (NDINGS - Attach site map showing n Present? Yes No	wpwm4 uppuEstor, v. LEIGHTTOM Section, Tow ace, etc.): TEAMAGE Local relief (r c Lat:	wpwm4 uppuEstor, v. LEIGHTTEN Section, Township, Range:	WPWMA State: CA VPPUESTON, V. LEIGHTON Section, Township, Range: 37.7 ace, etc.): TEMMAGE Local relief (concave, convex, none): A	upwind State: CA Sample uppuestor, v. Lielantion Section, Township, Range: 31 12 N 0 ace, etc.): TEMMALE Local relief (concave, convex, none): MME C Lat: Long: NWI classification: Computer conditions on the site typical for this time of year? Yes No (If no, explain in Remarks Soll or Hydrology significantly disturbed? Are "Normal Circumstances" present? Soll or Hydrology naturally problematic? (If needed, explain any answers in Re IDINGS – Attach site map showing sampling point locations, transects, import Yes No resent? Yes No Is the Sampled Area

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) 1. MA		Dominan Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:	Z	(A)
2				Total Number of Dominant Species Across All Strata:	z	(B)
4Sapling/Shrub Stratum (Plot size:)	_	= Total Co	over	Percent of Dominant Species That Are OBL, FACW, or FAC;	100%	(A/B)
1. MA				Prevalence Index worksheet: Total % Cover of:	Multiply by:	_
2					1 =	
3				FACW species x		
4				FAC species x	10	_
5		= Total Co		FACU species x		
Herb Stratum (Plot size:)	-		IVEF	UPL species x		
1. LASTITIENIA GLABELRIMA	20%	YES	OBL	Column Totals: (A	14	
2. RANUNCULUS BONARIENSIS		YES	OBL			_ (0)
3. PLAGIOBOTTHEYS STIPITATUS			Frew	Prevalence Index = B/A =	-	
4. LOLIUM PERENNE	10%		FAC	Hydrophytic Vegetation Indica	stors:	_
5. GLYCERIA X OCUPENTAL	5 5%	-	the second se	X Dominance Test is >50%		
B. UTTHRUM HYSSOPIFCHUM				Prevalence Index is \$3.01		
7		_		Morphological Adaptations' data in Remarks or on a	(Provide suppor	rting
8	65%	= Total Co	wer	Problematic Hydrophysic Ve	영양 양양 전 일을 사망한 것을 했다.	
Woody Vine Stratum (Plot size:) 1.				¹ Indicators of hydric soil and wet be present, unless disturbed or p		must
		= Total Co rust		Hydrophytic Vegetation Present? Yes	No	
				Vegetation	No	

Sampling Point: 5P-34

Profile Description: (Describe to the Depth Matrix		Features	10.2	10.000	and the second second	data and	
(inches) Color (moist) %	Color (moist)	% Type	Loc	Texture		Remarks	<u> </u>
0-16 7.5714/2 70	0% 7.57RY/4	10% C	M	SE S	:CL		
	10			1000			
	10			-	-		
Type: C=Concentration, D=Depletion.	RM=Reduced Matrix, CS=	Covered or Coate	d Sand Gra	ins. Loc	ation: PL	=Pore Lining,	M=Matrix.
lydric Soll Indicators: (Applicable to						ematic Hydri	
Histosol (A1)	Sandy Redox	(\$5)		1 cm M	fuck (A9)	(LRR C)	
Histic Epipedon (A2)	Stripped Matr					(LRR B)	
Black Histic (A3)	Loamy Mucky	Contraction of the second second			ed Vertic		
Hydrogen Sulfide (A4)	Loamy Gleye	Contraction of the contraction o				erial (TF2)	
Stratified Layers (A5) (LRR C)	Z Depleted Mat			and the second se		Romarks)	
1 cm Muck (A9) (LRR D)	Redox Dark S				25.0		
Depleted Below Dark Surface (A11)) Depleted Dar	k Surface (F7)					
Thick Dark Surface (A12)	Redox Depre	ssions (F8)		² Indicators	of hydrop	hytic vegetatio	in and
Sandy Mucky Mineral (S1)	Vemal Pools	(F9)		wetland	hydrology	must be presi	ant,
Sandy Gieyed Matrix (S4)				unless d	isturbed o	r problematic.	100.000
Restrictive Layer (if present):							
Туре:						1.41	
Depth (inches):			-	Hydric Soll	Present?	Yest	No
ternanta:							
YDROLOGY							
YDROLOGY Wetland Hydrology Indicators:							
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req						sators (2 or me	CO. INC. INC. INC.
YDROLOGY Wetland Hydrology Indicators: Primery Indicators (minimum of one req Surface Water (A1)	Salt Crust (8	311)		v	ater Mari	us (B1) (Riveri	ne)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1) High Water Table (A2)	Salt Crust (E Salt Crust	311) (812)			Vater Mari ediment D	ts (B1) (Riveri)eposits (B2) (ne) Riverine)
YDROLOGY Wetland Hydrology Indicators: Primery Indicators (minimum of one req Surface Water (A1)	Salt Crust (E Salt Crust	311)			Vater Mari ediment D	us (B1) (Riveri	ne) Riverine)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1) High Water Table (A2)	Salt Crust (E Biotic Crust Aquatic Inve	311) (812)			Vater Mari ediment C rift Depos	ts (B1) (Riveri)eposits (B2) (ne) Riverine)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust (5 Selfic Crust Aquatic Inve Hydrogen S	311) (812) rtebrates (813)	Living Root		Vater Mari ediment C rift Depos rainago P	os (B1) (Riveri)eposits (B2) (Its (B3) (River	ne) Riverine) (ine)
YDROLOGY Wetland Hydrology Indicators: Printery Indicators (minimum of one reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	Salt Crust (5 Solidic Crust Aquatic Inve Hydrogen S Oxidized Rh	811) (812) rtebrates (813) utfide Odor (C1)			Vater Mari ediment C rift Depos rainago P ry-Seaso	os (B1) (Riveri Deposits (B2) (Its (B3) (River atterns (B10)	ne) Riverine) (ine)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Burlace Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriveri	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of	311) (B12) rtebrates (B13) utlide Odor (C1) izospheres along	4)		Vater Mari ediment C rift Depos rainago P ry-Seaso rayfish Bi	os (B1) (Riveri Deposits (B2) (Its (B3) (River atterns (B10) n Water Table srows (C8)	ne) Riverine) (ine) (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Ine) Salt Crust (E Salt Crust (E Aquatic Inve Hydrogen S Oxidized Re Resence of Recent Iron	311) (B12) rtebrates (B13) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille	4)		Vater Mari ediment (inft Depos irainage P iry-Seaso irayfish Bi aturation	os (B1) (Riveri Deposits (B2) (Its (B3) (River atterns (B10) n Water Table srows (C8)	ne) Riverine) (ine) (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	 Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Rocent Iron y (B7) 	311) (B12) rtebrates (B13) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille	4)		Vater Mari ediment (rift Depos rainago P ry-Seaso rayfish Br aturation hallow Aq	ts (B1) (Riveri Deposits (B2) (Its (B3) (River attems (B10) 1 Water Table arrows (C8) Visible on Aer	ne) Riverine) (ine) (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg 	 Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Rocent Iron y (B7) 	311) (B12) rtebrates (B13) utilde Odor (C1) izospheres along Reduced iron (C Reduction in Tille iurface (C7)	4)		Vater Mari ediment (rift Depos rainago P ry-Seaso rayfish Br aturation hallow Aq	es (B1) (Riveri Deposite (B2) (Its (B3) (River attems (B10) h Water Table snows (C8) Visible on Aen uitard (D3)	ne) Riverine) (ine) (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg 	Salt Crust (5 Self Crust (5 Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron y (87) Thin Muck S Other (Expla	311) (B12) rtebrates (B13) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille Surface (C7) ain in Remarks)	4) d Soils (C6)		Vater Mari ediment (rift Depos rainago P ry-Seaso rayfish Br aturation hallow Aq	es (B1) (Riveri Deposite (B2) (Its (B3) (River attems (B10) h Water Table snows (C8) Visible on Aen uitard (D3)	ne) Riverine) (ine) (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg 	Salt Crust (8 Selfic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron (87) Thin Muck S Other (Expla No 2000 Depth (inch)	311) (812) intebrates (813) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille surface (C7) ain in Romarks) res):	4) d Soils (C6)		Vater Mari ediment (rift Depos rainago P ry-Seaso rayfish Br aturation hallow Aq	es (B1) (Riveri Deposite (B2) (Its (B3) (River attems (B10) h Water Table snows (C8) Visible on Aen uitard (D3)	ne) Riverine) (ine) (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestion) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes	Salt Crust (E Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rin Presence of Recent Iron (B7) Thin Muck S Other (Expla No X Depth (inch No X Depth (inch	811) (B12) rtebrates (B13) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille jurface (C7) ain in Remarks) res):	4) d Soils (C6)	Y S 0 0 0 S S F	Vater Mari ediment (inft Depos rainage P rry-Seaso rayfish Bi aturation hallow Aq AC-Neutr	es (B1) (River Deposite (B2) (Its (B3) (River atterns (B10) 1 Water Table snows (C8) Visible on Aen uitard (D3) al Test (D5)	ne) Riverine) (C2) al Imagery (C8
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes	Salt Crust (8 Selfic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron (87) Thin Muck S Other (Expla No 2000 Depth (inch)	811) (B12) rtebrates (B13) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille jurface (C7) ain in Remarks) res):	4) d Soils (C6)	Y S 0 0 0 S S F	Vater Mari ediment (inft Depos rainage P rry-Seaso rayfish Bi aturation hallow Aq AC-Neutr	es (B1) (Riveri Deposite (B2) (Its (B3) (River attems (B10) h Water Table snows (C8) Visible on Aen uitard (D3)	ne) Riverine) (C2) al Imagery (C9
YDROLOGY Wetland Hydrology Indicators: Printary Indicators (minimum of one reg	Salt Crust (8 Salt Crust (8 Biolic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron y (87) Thin Muck S Other (Expla No Depth (inch No Depth (inch	311) (812) rtebrates (813) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille surface (C7) ain in Romarks) es): es):	4) d Soils (C6)		Vater Mari ediment (inft Depos rainage P rry-Seaso rayfish Bi aturation hallow Aq AC-Neutr	es (B1) (River Deposite (B2) (Its (B3) (River atterns (B10) 1 Water Table snows (C8) Visible on Aen uitard (D3) al Test (D5)	ne) Riverine) (C2) al Imagery (C8
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Unit Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager, Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes	Salt Crust (8 Salt Crust (8 Biolic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron y (87) Thin Muck S Other (Expla No Depth (inch No Depth (inch	311) (812) rtebrates (813) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille surface (C7) ain in Romarks) es): es):	4) d Soils (C6)		Vater Mari ediment (inft Depos rainage P rry-Seaso rayfish Bi aturation hallow Aq AC-Neutr	es (B1) (River Deposite (B2) (Its (B3) (River atterns (B10) 1 Water Table snows (C8) Visible on Aen uitard (D3) al Test (D5)	ne) Riverine) (C2) al Imagery (C9
Wetland Hydrology Indicators: Primary Indicators (minimum of one reg	Salt Crust (5 Salt Crust (5 Sibilic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron y (87) Thin Muck S Other (Expla No Depth (inch No Depth (inch t, monitoring well, aerial ph	311) (812) rtebrates (813) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille surface (C7) ain in Romarks) es): es):	4) d Soils (C6)		Vater Mari ediment (inft Depos rainage P rry-Seaso rayfish Bi aturation hallow Aq AC-Neutr	es (B1) (River Deposite (B2) (Its (B3) (River atterns (B10) 1 Water Table snows (C8) Visible on Aen uitard (D3) al Test (D5)	ne) Riverine) (C2) al Imagery (C9
Wetland Hydrology Indicators: Primary Indicators (minimum of one reg	Salt Crust (5 Salt Crust (5 Sibilic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron y (87) Thin Muck S Other (Expla No Depth (inch No Depth (inch t, monitoring well, aerial ph	311) (812) rtebrates (813) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille surface (C7) ain in Romarks) es): es):	4) d Soils (C6)		Vater Mari ediment (inft Depos rainage P rry-Seaso rayfish Bi aturation hallow Aq AC-Neutr	es (B1) (River Deposite (B2) (Its (B3) (River atterns (B10) 1 Water Table snows (C8) Visible on Aen uitard (D3) al Test (D5)	ne) Riverine) (C2) al Imagery (C9
Wetland Hydrology Indicators: Primary Indicators (minimum of one reg	Salt Crust (5 Salt Crust (5 Sibilic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron y (87) Thin Muck S Other (Expla No Depth (inch No Depth (inch t, monitoring well, aerial ph	311) (812) rtebrates (813) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille surface (C7) ain in Romarks) es): es):	4) d Soils (C6)		Vater Mari ediment (inft Depos rainage P rry-Seaso rayfish Bi aturation hallow Aq AC-Neutr	es (B1) (River Deposite (B2) (Its (B3) (River atterns (B10) 1 Water Table snows (C8) Visible on Aen uitard (D3) al Test (D5)	ne) Riverine) (C2) al Imagery (C8
Wetland Hydrology Indicators: Primary Indicators (minimum of one reg	Salt Crust (5 Salt Crust (5 Sibilic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron y (87) Thin Muck S Other (Expla No Depth (inch No Depth (inch t, monitoring well, aerial ph	311) (812) rtebrates (813) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille surface (C7) ain in Romarks) es): es):	4) d Soils (C6)		Vater Mari ediment (inft Depos rainage P rry-Seaso rayfish Bi aturation hallow Aq AC-Neutr	es (B1) (River Deposite (B2) (Its (B3) (River atterns (B10) 1 Water Table snows (C8) Visible on Aen uitard (D3) al Test (D5)	ne) Riverine) (C2) al Imagery (C8
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg	Salt Crust (5 Salt Crust (5 Sibilic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron y (87) Thin Muck S Other (Expla No Depth (inch No Depth (inch t, monitoring well, aerial ph	311) (812) rtebrates (813) utilde Odor (C1) izospheres along Reduced Iron (C Reduction in Tille surface (C7) ain in Romarks) es): es):	4) d Soils (C6)		Vater Mari ediment (inft Depos rainage P rry-Seaso rayfish Bi aturation hallow Aq AC-Neutr	es (B1) (River Deposite (B2) (Its (B3) (River atterns (B10) 1 Water Table snows (C8) Visible on Aen uitard (D3) al Test (D5)	ne) Riverine) (C2) al Imagery (C8

Project/Site: NW PARCEL	_ City/County: City/County: City/County: Sampling Date: 5/17/2017
Applicant/Owner: WPWM	State: CA Sempling Point: 5P-35
Investigator(s): R. Ituppuestor, U. LEAGHTD	
Landform (hillslope, terrace, etc.): TTENNICE	Local relief (concave, convex, none): Mark Slope (%): 42%
Subregion (LRR): Lat:	
Soll Map Unit Name _ COMPERA - FIDDYA	HENT COMPCIEX NWI classification: NOVE
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 significant	itly disturbed? Are "Normal Circumstances" present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	
Remarks: A Rowe And Statsoutt RA	NEAL I

VEGETATION - Use scientific names of plants.

(A)	pecies 🥱	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:		Species?	Absolute % Cover	e <u>Stratum</u> (Plot size:)
(B)		Total Number of Dominant Species Across All Strata:				
32 (A/B)	1111 5	Percent of Dominant Species That Are OBL, FACW, or FAC:	over	= Total Co	_	pling/Shrub Stratum (Plot size:)
	2249933	Prevalence Index worksheet:				MA
		Total % Cover of:				
		OBL species >				
		FACW species 3				
		FAC species				
		FACU species >	over	= Total Co		Free Contraction
	×5 =	UPL species >			~ *	rb Stratum (Plot size: 5FT)
(8)	(A)	Column Totals: (YES		PLAGIOBOTHINGS STIPISATUS
		where the second states are the second states and the second states are second states and the second states are second are second states are second are s		TES	150	RANCHCULUS BOMARIKENSIS
		Prevalence Index = B/A -	OBL		5%	LASTHENIA GABERIIMA
		Hydrophytic Vegetation Indic	OBL			DOWNINGIA ORNATISSIMA
	>50%	Dominance Test is >50%	OBL		2%	Danning BicaeNUTA
	i≤3.0 ^t =	Prevalence Index is ≤3.0 ⁴				
	otations ¹ (Provide suppo a or on a separate sheet)	Morphological Adaptations data in Remarks or on a			_	
Explain)	hytic Vegelation ¹ (Expla	— Problematic Hydrophytic V	SWEET	= Total Co	40%	ody Vine Stratum (Plot size:)
		¹ Indicators of hydric soil and we be present, unless disturbed or				MA PIG STREET
8	reed of providination					
	× No	Hydrophytic Vegetation Present? Yes X		= Total Co ust		Bare Ground in Herb Stratum 60% % Cover
						AL
						NAME OF CO.
	1 <u>×</u> N6_	Present? Yos		ust	of Biotic Cr	Bare Ground in Herb Stratum <u>602</u> % Cover marks:

Sampling Point: 14-35

Profile Description: (Describe to the Depth Matrix		Features				
(inches) Color (moist) %	Color (moist)	%	Type	Loc ²	Texture	Remarks
0.2 7.57123/2 99	5% 7.57FYM	5%	C	M	SICL	
				-		
2-10 107/23/2 90	7 7 5 4 74/14	102	1	M	C	
610 1011012 10	10 1.3 11 119	INIC	-			
	rs		-	The second	1. A.	
1016 107P3/2 95	6 10785/1	5/2	2	M	د .	
			-			
Type: C=Concentration, D=Dopletion,	DU-Ondunad Matrix CS	-Countrad	or Cost	ad Smoot	Senina 21 -	ocation: PL=Pore Lining, M=Matrix.
ype: C=Concentration, D=Depletion, lydric Soil Indicators: (Applicable to				ed sand (s for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redo					Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Ma				the second se	Muck (A10) (LRR B)
Black Histic (A3)	Loamy Much	2010 C. P. C. P. C	(F1)			ced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gley				the second se	Parent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Ma	0	and and a second second		Other	r (Explain in Remarks)
_ 1 cm Muck (A9) (LRR D)	Kedox Dark		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Depleted Below Dark Surface (A11)						
Thick Dark Surface (A12)	- Redox Depr		8)			s of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Vernal Pools	s (F9)				d hydrology must be present, disturbed or problematic.
estrictive Layer (if present):					- unitess	usu del a propriate.
Type:						
Depth (inches):						
					Hydric So	Il Present? Yes No
					Hydric So	ll Present? Yes No
ternarics:					Hydric So	ll Present? Yes No No
YDROLOGY					Hydric So	ll Present? Yes No
Remarks: YDROLOGY Vetland Hydrology Indicators:	uked check all that area	A				
Remarks: YDROLOGY Wetland Hydrology Indicators: Primery Indicators (minimum of one requ	Strand Selfan and the third	21 - C - C - C - C - C - C - C - C - C -			Sec	ondary Indicators (2 or more required)
YDROLOGY Yetland Hydrology Indicators: Yimary Indicators (minimum of one req Surface Water (A1)	Salt Crust	(811)			Sec.	ondary Indicators (2 or more required) Water Marks (B1) (Riverine)
YDROLOGY Yetland Hydrology Indicators: Yimary Indicators (minimum of one req Surface Water (A1) High Water Table (A2)	Salt Crust	(B11) t (B12)	(813)		Sec.	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Ternarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust	(B11) t (B12) vertebrates			Sec.	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Ternarks: YDROLOGY Vetland Hydrology Indicators: <u>Yimary Indicators (minimum of one req</u> <u>Surface Water (A1)</u> High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen	(B11) It (B12) Vertebratet Sutficte Od	lar (C1)	Livino Re	Sec.	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Vetand Hydrology Indicators: <u>Primary Indicators (minimum of one req</u> <u>Surface Water (A1)</u> High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen 3 ne) Oxidized R	(B11) ± (B12) vertebrates Sutfide Od thizospher	lor (C1) res along		<u>Sec</u> 	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2)
YDROLOGY Vetiand Hydrology Indicators: <u>Mimery Indicators (minimum of one reg</u> Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen 3 Oxidized R Presence of	(B11) ± (B12) vertebrates Sutfide Od thizospher of Reduce	lor (C1) res along d Iron (C	4)	Sec: 	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8)
Vetland Hydrology Indicators: <u>Minary Indicators (minimum of one requ</u> Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	Salt Crust Solitic Crust Aquatic Inv Aquatic	(B11) ertsbrats Suffice Od thizospher of Reducer n Reducer	lor (C1) res along d Iron (C on in Tille	4)	Sec. 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
VDROLOGY Vetland Hydrology Indicators: Timary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery	Salt Crust Solitic Crust Aquatic Inv Aquatic Inv Hydrogen 3 Hydrogen 3 Oxidized R Presence of Recent Iroi y (B7) Thin Muck	(B11) ertsbrates Suffice Od trizospher of Reduce n Reductic Surface (0	lor (C1) res along d Iron (C on in Tille C7)	4)	Sec. 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagory (C9 Shallow Aquitard (D3)
VDROLOGY Vetland Hydrology Indicators: Trimary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9)	Salt Crust Solitic Crust Aquatic Inv Aquatic	(B11) ertsbrates Suffice Od trizospher of Reduce n Reductic Surface (0	lor (C1) res along d Iron (C on in Tille C7)	4)	Sec. 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
VDROLOGY Vetland Hydrology Indicators: Trimary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Dift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Teld Observations:	Salt Crust // Biotic Crus Aquatic Inv Hydrogen 3 (ne) Oxidized R Presence of Recent Iron y (B7) Thin Muck Other (Exp	(B11) tr (B12) vertebrates Suffice Od thizospher of Reduceio Reduceio Norface (O Surface (O	lor (C1) res along d Iron (C on in Tille C7) marks)	4) Id Solls (C	Sec. 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagory (C9 Shallow Aquitard (D3)
YDROLOGY Yetiand Hydrology Indicators: Yimary Indicators (minimum of one reg	Salt Crust / Kitic Crust / Kitic Crust / Kitic Crust / Aquatic Inv Aquatic Inv Hydrogen 3 Oxidized R Presence of Recent Iron y (B7) Thin Muck Other (Exp No X Depth (inc	(B11) tr (B12) vertsbrates Suffice Od thizospher of Reducer n Reducer Surface (C Surface (C surface):	lor (C1) res along d Iron (C on in Tille C7) marks)	4) Id Solls (C	Sec. 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagory (C9 Shallow Aquitard (D3)
Vetiand Hydrology Indicators: Yimary Indicators (minimum of one requested in the second sec	Salt Crust Salt Crust Biotic Crus Aquatic Inv Hydrogen 3 No Presence of Recent Iroi Y (B7) Thin Muck Other (Exp No Depth (inc Depth (inc)	(B11) tr (B12) vertebrates Suffice Od thizospher of Reducer n Reduction Surface (C lain in Rer ches): ches):	lor (C1) res along d Iron (C on in Tille C7) marks)	4) Ind Soils (C		andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shalkow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Yimary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Teld Observations: Surface Water Present? Yes Saturation Present? Yes	Salt Crust X Biotic Crus Aquatic Inv Hydrogen 3 ne) Oxidized R Presence of Recent Irol y (B7) Thin Muck Other (Exp No Depth (inc Depth (inc	(B11) tr (B12) vertebrates Suffice Od thizospher of Reducer n Reduction Surface (C lain in Rer ches): ches):	lor (C1) res along d Iron (C on in Tille C7) marks)	4) Ind Soils (C		andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagory (C9 Shallow Aquitard (D3)
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Remarks: YDROLOGY Netiand Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Soliment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Nater Table Present? Yes	Salt Crust X Biotic Crus Aquatic Inv Hydrogan 3 Oxidized R Presence of Recent Iroi y (B7) No Depth (inc No Depth (inc No Depth (inc)	(B11) tr (B12) vertsbrates Suffice Od trizospher of Reducer n Reducer n Reducer (surface (0 lain in Ref ches): ches):	lor (C1) es along d Iron (C on in Tille C7) marks)	4) Ind Soils (C	Dots (C3) 26) tland Hydrolo	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shalkow Aquitard (D3) FAC-Neutral Test (D5)
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ternarks: YDROLOGY Vetiand Hydrology Indicators: Yimery Indicators (minimum of one reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Aurface Water Present? Yes Vater Table Present? Yes Aurface Water Present? Yes Aurface Capillary fringe) Describe Recorded Data (stream gauge	Salt Crust K Biotic Crus Aquatic Inv Hydrogen 3 ne) Oxidized R Presence c Recent Irol y (B7) Thin Muck Other (Exp No Depth (inc No Depth (inc i, monitoring well, aerial p	(B11) tr (B12) vertsbrates Suffice Od trizospher of Reducer n Reducer n Reducer (surface (0 lain in Ref ches): ches):	lor (C1) es along d Iron (C on in Tille C7) marks)	4) Ind Soils (C	Dots (C3) 26) tland Hydrolo	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shalkow Aquitard (D3) FAC-Neutral Test (D5)

WETLAND DETERMIN	ATION DATA FORM – Arid West Region
ProjecuSite: NW PARCEL Applican/Owner: WPWM4	City/County: PLACKER_CC Sampling Date: 5/17/2017 State: Sempling Point: 5P-36
Investigator(s): <u>R.Ifuppue stor</u> , <u>V. USI6HT</u> Landform (hillslope, terrace, etc.): <u>TTEMACE</u> Subregion (LRR): <u>C</u> Lat	Dr Section, Tawnship, Range: 31 12 N 06/E Local relief (concave, convex, none): None Slope (%): 62%
Soil Map Unit Name: * CONTERA -FTDPT	HEAT COMPLET NWI classification: NENE
Are climatic / hydrologic conditions on the site typical for this time Are Vegetation, Soil, or Hydrology signific	ef year? Yes No K. (If no, explain in Remarks.) antly disturbed? Are "Normal Circumstances" present? Yes K. No
Are Vegetation, Soil, or Hydrology natural	Ity problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soll Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	is the Sampled Area within a Wetland?	Yes <u>X</u> No
Remarks: ABOUTE MUE	SEASONAL RA	NEARC	
* SOLG - FIDD	YMENT-KASEB	ERG LAAMS	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test workshee Number of Dominant Specie		2	
1. MA				That Are OBL, FACW, or FA	C:	3	(A)
2				Total Number of Dominant		-	
3				Species Across All Strata:		3	(B)
4				Percent of Dominant Species			
		= Total Co	zver	That Are OBL, FACW, or FA		100%	(A/B)
Sapino/Shrub Stratum (Plot size:)							2010
1. NA		_		Prevalence Index workshe			
2				Total % Cover of:		altiply by	
3				OBL species			
4				FACW species			
5.	-			FAC species			
A second s		= Total Co	over	FACU species	x 4 =		-
Herb Stratum (Plot size:)				UPL species	×5=		
1. LOUICOM PIERENNE		YES	FAC	Column Totala:	(A)	_	(8)
2. UTTHRUM ITTSSOPIFOLIUM	15%	765	OBC	Service of the servic			
3LOLLEM MORDEUM MARINUM	157	YES	FAC	Provalence Index = B/	A=		-
4. LEONTADON SAXATIUS	10%		FACU	The second s			
5	-04		-	Dominance Test is >50%			
6.			_	Prevalence index is <3			
7				Morphological Adaptatic	ins ¹ (Pro	vide suppo	rling
8				data in Remarks or o			
u,	602	= Total C	over	Problematic Hydrophyle	: Vegetat	tion' (Expla	uin)
Woody Vine Stratum (Plot size:)							
1 MA				¹ Indicators of hydric soil and	wetland	hydrology	must
2				be present, unless disturbed	or proble	ematic.	19220
		- Total C	over	Hydrophytic			
% Bare Ground in Herb Stratum 40% % Cover				Vegetation Present? Yes	N	o	
Remarks:							

Sampling Point _ 5P-36

Profile Description: (Describe to t	the depth nee				or commit	the appende	
Depth Matrix	-	Redox or (moist)	Features	Tune	Loc2	Texture	Remarks
(inches) Color (moist)		orymolag		146		SICL	Toomas na
and the second s	50%		<u> </u>			2:00	
7.57,24/6	40%			-			
7.54R3A	100	_	_	_			
9-16 104112 6	cn 2 -						
1-10 1010116 0	10/2						
	70%		-				
					-		
¹ Type: C=Concentration, D=Deplet	on. RM=Redu	oed Matrix, CS	=Covered	d or Coate	d Sand G	raina. ² Lo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicabl	le to all LRRs.	unless other	wise not	ed.)	2012/07/201	Indicators	for Problematic Hydric Solls ³ :
Histosol (A1)		Sandy Redd				1 am l	Muck (A9) (LRR C)
Histic Epipedon (A2)		Stripped Ma	trix (S6)				Muck (A10) (LRR B)
Black Histic (A3)		Loamy Mud	ky Minera	I (F1)			ced Vertic (F18)
Hydrogen Sulfide (A4)	2	Loamy Gley					Perent Material (TF2)
Stratified Layers (A5) (LRR C)		_ Depleted M				∑ Other	(Explain in Remarks)
1 cm Muck (A9) (LRR D)		Redox Dark		and the second se			
Depleted Below Dark Surface (A11) _	_ Depleted D		· · · · · · · · · · · · · · · · · · ·		12.2.2	and a share share and
Thick Dark Surface (A12)	-	_ Redox Dep		(18)			s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	-	Vernal Pool	s (F9)				I hydrology must be present, disturbed or problematic.
Sandy Gleyed Matrix (\$4)						uness	disurbed of problematic.
Restrictive Layer (if present):							
Туре:							v 7
Depth (inches):							
- UECETATON, It	TTS OF	7.57	124/6 661ES		REPO)	Hydric Sol K C/C / B/C CO	Present? Yes X No ?
Romarks: 1416H AMON - UECETATION, 14 PRESENT	TPRCLO	7.57	6612 S	s - ,	REPO) HYPH	Hydric Sol K C/C / R/C CO	ALKED SOLC?
Remarks: ItiGH AMON - UECETATION, IT PRESENT	HTS OF TORCLOC	7.57	66125		REPO) HTP	Hydric Sol K are r erc co	I Present? Yes A No
Remarks: IHGH AMON - UECETATION, IT PRESENT HYDROLOGY Wetland Hydrology Indicators:		_	_		REPO) HTP	erc co	NORD SOLL?
Remarks: IHIGH AMOW - UECETA TROW, IT PRESENT HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one		ck all that app	w		REPO) HTP	erc co sec	andary Indicators (2 or more required)
Remarks: I+ICH AMOW - UECETA TRON, IT PRESENT IYDROLOGY Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one</u> Surface Water (A1)	a required; che	ck all that app Salt Crust	v) (811)		REPO) HTP	erc co	ridary Indicators (2 or more required) Water Marks (B1) (Riverine)
Remarks: I+16H Amou - UECETATION, IT PIRESENT HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one 	a required; che	ck all that app Salt Crust X Biotic Cru	V) (B11) st (B12)		REPO) HTPI	erc co	ridary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Remarks: IHIGH AMOW - UECETATION, IT PICESEM HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3)	a required; che	ck all that app Salt Crust Biotic Cru Aquatic In	v) (B11) st (B12) vertebrati	es (813)	RE. po) 17 pr	erc co sec co Seco 	Water Marks (B1) (Riverine) Drift Deposits (B3) (Riverine)
Remarks: IHGH AMOU - UECETATION, IT PRESENT HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine	e)	ck all that app Salt Crust Biotic Cru Aquatic In Hydrogen	y) (B11) at (B12) verlebratu Sulfide C	es (813))der (C1)		erc co sec co Sec 	Mater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patierns (B10)
Remarks: IHGH AMOU - UECETATION, IT PRESENT HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one 	e) iverine)	ck all that soo Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized I	v) (B11) st (B12) vertebratu Sulfide C Thizosphi	es (813) Idor (C1) eres along	Living Ro	erc co secc co Secc 	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patierns (B10) Dry-Season Water Table (C2)
Remarks: IHIGH AMOW - UECETA Trow), IH PRESENT HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one 	e) iverine)	ck all that app Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized I Presence	y) (B11) st (B12) vertebrate Sulfide O Rhizosphi of Reduc	es (813) Ider (C1) eres along ed Iron (C	Living Ro	c or r erc co 	Al KGD Solc? Portfords andary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patiens (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
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Project/Site: NW PARCEL	City/County: PLACER CO. Sampling Data: 5/17/2017
Applicans/Owner: WPWMA	State: CA Sampling Point: SP-37
Investigatoria): R. HUPPLESTON, V.LEIGIHTON	
Landform (hillslope, terrace, etc.): TIS-CA4-C/E	Local retef (concave, convex, none): NONE Slope (%): 222
Subregion (LRR): Lat:	Long: Datum: 14083
Soll Map Unit Name: FIDDYMENT- LCASEBI	ERG LOAM NWI classification NONE
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes 左 No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampling point locations, transects, important features, etc.

Hydrophylic Vegetation Present? Hydric Soll Present? Wetland Hydrology Present?	Yes No Yes No X Is the Sampled Area within a Wetland?	Yes No
Remarks: ABOUE AVE	SEASONAL RAINFALL	

VEGETATION - Use scientific names of plants.

2				That Are OBL, FACW, or F/	AC:	0	(A)
		_	_	Total Number of Dominant Species Across All Strata:		Z	(8)
4Sapling/Shrub Stratum (Plot size:)	_	= Total Co	wer	Percent of Dominant Specie That Are OBL, FACW, or F/			(A/B)
1. N/A				Prevalence Index workshe	eet:		
2				Total % Cover of:	M	ultiply by:	
3				OBL species	x 1 =	Unconneeur	
4				FACW species	x 2 =	S	
5.		_		FAC species			
and the second		= Total Co	ver	FACU species	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Herb Stratum (Plot size: 5/-7)	100			UPL species			_
1. FESTUCA BROMOIDES	30%	YES	FACL	Column Totals:			
2. TRIFOLIUM DUBIUM	20%	YES	UPL		- **		_ 107
3. TRIFOLIUM HARTUM	15%		NL	Prevalence Index = B	/A,=		_
4. VICIA VILLOSA	10%		ML	Hydrophytic Vegetation In	dicators	ĸ	
5. HOLOCARPHA VIRGATA	10%		FAC	Dominance Test is >50	%		
B. LATHYRUS HIRSUMS	15%		FAC	Prevalence Index is ≤3.	01		
1. BRIZZ MINOR	10%		FAL	 Morphological Adaptati data in Remarks or it 	ons' (Fro	wide suppo	nting
B	100%	= Total Co	wer	Problematic Hydrophyti	202001		24240
Neody Vine Stratum (Plot size:) 1(A	_			¹ Indicators of hydric soil and be present, unless disturbed			must
2				and be seen of the states region has	a production	Carl Carlingo	
% Bare Ground in Herb Stratum % Cover o		= Total Co ust		Hydrophytic Vegetation Present? Yes	N	la <u>×</u>	
Remarks:	and the second	100-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1				No. Contraction	

1

Sampling Point SP-37

	ription: (Describe to Matrix	o the ach		x Features				
Depth (inches)	Color (moist)	%	Color (moist)	- M	Type ¹	Loc	Texture	Remarks
0-12	7.5783/M	50%					45	MIMED
	7 5712411	30%					1	
	7.5723/3	20%	-			_		
	113 11-2/2	2010	-	1000				
12-16	7.578572	85%	7.5784/4	15%	c	M	SC	
Type: C=C tydric Soll	oncentration, D=Depl	etion, RM=	Reduced Matrix, Cl	S=Coveres	d or Coate	ad Sand G		cation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histoso			Sandy Red					Auck (A9) (LRR C)
Histic E	pipedon (A2)		Stripped Ma					Auck (A10) (LRR B)
	listic (A3)		Loamy Muc				the second se	ed Vertic (F18)
	en Sulfide (A4)	a 1	Loamy Gler	Construction of the				arent Material (TF2) (Explain in Remarks)
	d Layers (A5) (LRR C	.)	— Depleted M Redox Darl				Other	(extreme at reachers)
	uck (A9) (LRR D) d Below Dark Surface	(0.11)	Redox Dan Depleted D					
	ark Surface (A12)	0,804	Redax Dep		1 C		³ Indicators	of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Poo		12			hydrology must be present,
	Gleyed Matrix (S4)						unless o	listurbed or problematic.
Restrictive	Layer (if present):							
Type:								1-
- 11.							and the second second	and the second second second
Depth (ir Remarks:	nches):						Hydric Sol	I Present? Yes No X
Depth (ir Remarks:							Hydric Sol	I Present? Yes No 🔼
Depth (ir Remarks: IYDROLC	DGY						Hydric Sol	I Present? Yes No 🔼
Depth (ir Remarks: IYDROLC Wetland Hy	DGY ydrology Indicators:	ne require	d; sheck all that app	iv)				ndary Indicators (2 or more required)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind	OGY ydrology Indicators: icators (minimum of o	ne require	d: check all that app Salt Crus				Seco	
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface	OGY ydrology Indicators: icators (minimum of o a Water (A1)	ne require		t (811)			Seco	ndary Indicators (2 or more required)
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W	OGY vdrology Indicators: icators (minimum of o a Water (A1) vater Table (A2)	ne require	Salt Crus Biotic Cru	t (811) ist (812)	ss (B13)		Seco	ndary Indicators (2 or more required) Nater Marks (B1) (Riverine)
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural	OGY ydrology Indicators: icators (minimum of o a Water (A1)	a.ca,	Salt Crus Biotic Cru Aquatic Ir	t (811)			Seco 1 	ndary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water	OGY ydrology Indicators: icators (minimum of o a Water (A1) /ater Table (A2) icen (A3)	ine)	Salt Crus Biotic Cru Aquatic Ir Hydrogen	t (B11) ist (B12) wertebreti Suifide C	dar (C1)	y Living Ro	Seco	ndary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Weter I Setime	DGY ydrology Indicators: icators (minimum of o a Water (A1) /ater Table (A2) icon (A3) Marks (B1) (Nonriver	ine) nriverine)	Salt Crus Biotic Cru Aquatic Ir Hydrogen Oxidized	t (B11) ist (B12) wertebreti Suifide C	dor (C1) eres alon(Seco \ \ \ \ \ \ \	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Satural Drift De	OGY ydrology Indicators: icators (minimum of o a Water (A1) /ater Table (A2) icen (A3) Marks (B1) (Nonriver ant Deposits (B2) (No	ine) nriverine)	Salt Crus Biotic Cru Aquafic III Hydrogen Oxidized Presence	t (B11) ist (B12) wertebrate Suitide C Rhizosphe of Reduc	Xdor (C1) ares alon(ad Iron (C		Seco 	ndary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Satural Drift De Surface	OGY vdrology Indicators: icators (minimum of o a Water (A1) vater Table (A2) ion (A3) Marks (B1) (Nonriver ant Deposits (B2) (No eposits (B3) (Nonrive	ine) nriverine) rine)	Salt Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In [7] Thin Muc	t (B11) ist (B12) wertebrete Suitide C Rhizosphi of Reduct on Reduct k Surface	odor (C1) eres along ed Iron (C tion in Till (C7)	(4)	Seco 	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Satural Unit De Surface Inunda	OGY vdrology Indicators: icators (minimum of o a Water (A1) /ater Table (A2) icen (A3) Marks (B1) (Nonriver ant Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6)	ine) nriverine) rine)	Salt Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In [7] Thin Muc	t (B11) ist (B12) wortebrate Suifide C Rhizosphi of Reduct on Reduct	odor (C1) eres along ed Iron (C tion in Till (C7)	(4)	Seco 	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Satural Water I Satural Unit De Surface Inunda	OGY vdrology Indicators: icators (minimum of o a Water (A1) /ater Table (A2) icon (A3) Marks (B1) (Nonriver ant Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) don Visible on Aerial I Stained Leaves (B9)	ine) nriverine) rine)	Salt Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In [7] Thin Muc	t (B11) ist (B12) wertebrete Suitide C Rhizosphi of Reduct on Reduct k Surface	odor (C1) eres along ed Iron (C tion in Till (C7)	(4)	Seco 	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
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Depth (ir Remarks: IVDROLC Wetland Hy Primary Ind Surface High W Satural Water I Sotime Drift Do Surface Drift Do Surface Inunda Water- Field Obse	DGY vdrology Indicators: icators (minimum of o a Water (A1) vater Table (A2) tion (A3) Marks (B1) (Nonriver ant Deposits (B2) (No sposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) invations: ater Present? Y	ine) nriverine) rine) magery (B	Salt Crus Biotic Cru Aquafic Ir Hydrogen Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ist (B12) wertebrete Suitide C Rhizosphe of Reduct on Reduct k Surface splain in R	odor (C1) eres along ed Iron (C tion in Till (C7)	(4)	Seco 	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
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Depth (ir Remarks: PDROLC Wetland Hy Primary Ind Surface High W Satural Water I Surface Inunda Water- Field Obse Surface Wa Water Tabl Seturation (includes of	DGY verology Indicators: icators (minimum of o a Water (A1) vater Table (A2) ion (A3) Marks (B1) (Nonriver ant Deposits (B2) (No sposits (B3) (Nonrive e Soil Cracks (B6) don Visible on Aerial I Stained Leaves (B9) irvations: ster Present? Y Present? Y apiliary fringe)	ine) nriverine) magery (B /es /es	Salt Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Other (Ex No No No No Depth (ir Depth (ir	t (B11) ist (B12) wertebretu Suitide C Rhizosphe of Reduct on Reduct k Surface cplain in R nches): nches):	Ader (C1) entits along ed Iron (C tion in Tilli (C7) entiterks)	24) ed Soits (0	Sess 	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
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WETLAND DETERMINATION DATA FO	ORM - Arid	West Region
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Project/Site: New	PARCEL	City/County:	PLACER CO	Sampling Date: 5/17/201
Applicant/Owner:	UPWMA		State:	Sampling Point:SP-38
Investigator(s): R. Itun	PURSTER, V. LEI	Sitter Section, Town	ship, Range:3/ /	2N OBIE
Landform (hillslope, terrace,	etc.):	Local relief (o	oncave, convex, none): 🔜 🐣	10~12 Slope (%): 423
Subregion (LRR):	C	Lat:	Long:	Datum:83
Soil Map Unit Name:	COMISTA - FI	DAAMENT C	CAN PLEX NWI das	silication: NONE
Are climatic / hydrologic con	ditions on the site typical for t	his time of year? Yes	No 🔀 (If no, explain	in Remarks.)
Are Vegetation, Soil	, or Hydrology	significantly disturbed?	Are "Normal Circumstance	es' present? Yes 💒 No
Are Vegetation Soil	or Hydrology	naturally problematic?	(If needed, explain any an	swers in Remarks.)
SUMMARY OF FINDI	NGS - Attach site maj	showing sampling	point locations, transe	cts, important features, etc.

Hydrophytic Vegetation Present? Hydric Soll Present? Wetland Hydrology Present?	Yes X No Yes No Yes No Yes No Yes No Yes No Yes	is the Sampled Area within a Wetland?	Yes X No
Remarks: ABCUE AVE	SEASONAL PRA	ecit, TAMON	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) 1.	_		Status	Total Number of Dominant	A) B)
4	_	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A	
				Total % Cover of: Multiply by:	
2				OBL species x 1 =	
4,				FACW species x 2 =	
5				FAC species x 3 =	
and the second se		= Total Co	ver	FACU species x 4 =	
Herb Stratum (Plot size 5FT) 1. POUYPOGON MONSPIELIENSIS 2. PLAGIOBOTTARYS STIPITATUS	35%		FACUL	UPL species x 5 = Column Totais: (A)	
3. GRATIOLA BASE EBRACTE	the second second second second	and the second second	same of the local division of the local division of the	Prevalence Index = B/A =	
second designed and the second s	TTC		FAC	Hydrophytic Vegetation Indicators:	
5. JUNCUS BUFONIUS	TR		FACW	Dominance Test is >50%	
6				Prevalence Index is <3.0 ¹	
7				 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	9
8	70%	= Total Co	ver	Problematic Hydrophytic Vegetation ¹ (Explain)	
Woody Vine Stratum (Plot size:) 1.				⁹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	st
312	of Biatic C	= Total Co rust	ver	Hydrophytic Vegetation Present? Yes No	
Remarka:					

143

3

Sampling Point: SP-38

Depth Matrix Redox Features		2
(inches) Color (moist) % Type'		
0-7.5 7.578 1/2 50%	Sil	-L-
7.57123/3 30%		
57/24/3 20%		
7.5-12 7.5789/1 100%	C	
	Contra la	A surface of all states that a state bits
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coate lydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)	d Sand Grains, Indica	² Location: PL=Pore Lining, M=Matrix, tors for Problematic Hydric Solls ³ :
		em Muck (A9) (LRR C)
Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6)		am Muck (A10) (LRR B)
Black Histic (A3) Loamy Mucky Mineral (F1)		educed Vertic (F18)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)		ed Parent Material (TFZ)
Stratified Layers (A5) (LRR C) Depleted Matrix (F3)		ther (Explain in Remarks)
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7)		
Thick Dark Surface (A12) Redox Depressions (F8)	*Indica	ators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Vernal Pools (F9)	web	land hydrology must be present,
Sandy Glayed Matrix (S4)	uni	ess disturbed or problematic.
Restrictive Layer (if present):		
Тура:		K
Remarks:	? - 44	
Depth (inches): Remarks: SOILS HIGHLY MIXIED - RIEPOX INDILATE INDILATE INDILATE INDILATE CO	? - 44	EBETATION AND
Depth (inches): Remarks: SOILS HIGHLY MIXIED - RIEPOX INDIGTOR INDIGTE INTRALC CO	? - 44	EBETATION AND
Depth (inches): Remarks: SOILS HIGHLY MIXIED - RIEPOY IMDROLOGY INDIVITE IMDRIL CO IYDROLOGY Wetland Hydrology Indicators:	? - Uk	SEFATION AND
Depth (inches): Remarks:	? - Uk	Secondary Indicators (2 or more required)
Depth (inches):	? - Uk	Secondary Indicators (2 or more required)
Depth (inches):	? - Uk	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches):	? - Uk	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (inches):	? - Uk	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patierns (B10)
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drit Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drinage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (Riverine) Drift Deposits (Riverine
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (Riverine) Drift Deposits (Riverine
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (Riverine) Drift Deposits (Riverine
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (Riverine) Drift Deposits (Riverine
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (Riverine) Drift Deposits (Riverine
Depth (inches):	? - UK ~Pr900	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Statuation Visible on Aerial Imagery (C8) Shallow Aquitard (D3) FAC-Neutral Test (D5) rology Present? Yes X No

	Local relief (concave	, convex, none): Stope (%): 22.
I Map Unit Name: COMETA - FIPI	DYMENT COM	NWI classification
climatic / hydrologic conditions on the site typical for th	is time of year? Yes No	Kino, explain in Remarks.)
Vegetation Soil or Hydrology	significantly disturbed? Are	e "Normal Circumstances" present? Yes Kan No
Vegetation Soli or Hydrology	naturally problematic? (If r	needed, explain any answers in Remarks.)
		and the second
IMMARY OF FINDINGS – Attach site map	showing sampling point	locations, transects, important features, etc
hydrophytic Vegetation Present? Yes 1	No X	1990.00
lydric Soll Present? Yes	No.	~
/etiand Hydrology Present? Yes		and? TesNo
emarks: ABOUE AUE SIEASON		
EGETATION – Use scientific names of pla	and the second se	Dominance Test worksheet:
ree Stratum (Ptot size:)	Absolute Dominant Indicator % Cover Species? Status	Dominance rest workshoet.
PIA		 Number of Dominant Species That Are OBL, FACW, or FAC. (A)
		-
		Total Number of Dominant Species Across All Strata: C (B)
		_ Species Across Air Sealar.
	- Total Course	 Percent of Dominant Species That Are OBL, FACW, or FAC: (A/8)
epling/Shrub Stratum (Plot size:)	= 10tal Cover	That Are OBL, FACW, or FAC: (A/B)
- P/A		Prevalence Index worksheet:
		Total % Cover of Multiply by:
		OBL species x 1 =
		FACW species x 2 =
-		FAC species x 3 =
9	= Total Cover	FACU species x 4 =
terb Stratum (Plot size: 5FT)		UPL species x 5 =
AURIA BARBATA	50% YES NL	Column Totals: (A) (B)
ECYMUS CAPUT-MEDUSA	E 35% YES NL	
GERANIUM DISSECRM	15% NL	Prevalence Index = 8/A =
UICIA VILLOSA	TR NL	Hydrophytic Vegetation Indicators:
BREMUS PIANOPUS	TR NL	Dominance Test is >50%
		Prevalence Index is <3.0 ¹
		Morphological Adaptations* (Provide supporting
·		data in Remarks or on a separate sheet)
k	100% = Total Cover	Problematic Hydrophytic Vegetation' (Explain)
Woody Vine Stratum (Plot size:)	JUNTE - TOUR OWN	
NIA		¹ Indicators of hydric soil and welland hydrology must
17.0	State State State	be present, unless disturbed or problematic.
	= Total Cover	Hydrophytic
		Vegetation

i)

Sampling Point 5P-39

Depth Matrix	th needed to document the indicator or con Redox Features		
(inches) Color (moist) %	Color (moist) % Type' Loo		Remarks
0-9 7.5781/3 80%		SL	ACD 2.52 /01A
7.578412 15%			
5712 3/4 5/0			
9-12 107/1/2 50%	1		
7.57123/3 50%			
Type: C+Concentration, D=Depletion, RM=	Reduced Matrix, CS=Covered or Coated Sar	d Grains. ^I Location: I	PL=Pore Lining, M=Matrix,
Hydric Soil Indicators: (Applicable to all		Indicators for Pro	blematic Hydric Soils ⁵ :
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (As	(LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)	
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Verti	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Ma	sterial (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Explain	in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	 Depleted Dark Surface (F7) 	10.00	
Thick Dark Surface (A12)	Redox Depressions (F8)		phytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)		gy must be present.
Sandy Gleyed Matrix (S4)	All MELENCEMPER	unless disturbed	or problematic.
Restrictive Layer (if present):			
Туре:			
Depth (inches): Remarks:		Hydric Soll Preser	1? Yes No 2
Remarks:		Hydric Soll Preser	1? Yes No 2
Remarks:		Hydric Soll Preser	1? Yes No 2
Remarks: HYDROLOGY Wetland Hydrology Indicators:			
Remarks:	d; check all that apply)		dicators (2 or more required)
Remarks: HYDROLOGY Wetland Hydrology Indicators:	d: check all that apply) Saft Crust (B11)	Secondary In Water Ma	dicators (2 or more required) arks (B1) (Riverime)
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primery Indicators (minimum of one require		Secondary In Water Ma Sedimen	dications (2 or more required) arks (B1) (Riverine) t Deposits (B2) (Riverine)
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Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3)	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sullide Odor (C1) 	Secondary In Water Mi Sediment Drift Dep Drainage	dicators (2 or more required) arks (B1) (Riverine) t Deposits (B2) (Riverine) osits (B3) (Riverine)
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sullide Odor (C1) 	Secondary In Water Mi Sedimen Drift Dep Drainage I Roots (C3) Dry-Sear	dicators (2 or more required) arks (B1) (Riverine) t Deposits (B2) (Riverine) osits (B3) (Riverine) Pattems (B10)
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Appendix D Plant Species Observed

Scientific Name	Common Name	Status	Wetland Indicato Status
LYCOPHYTES			
ISOETACEAE			
Isoetes orcuttii	Orcutt's quillwort	Native	OBL
FERNS			
MARSILEACEAE			
Pilularia americana	American pillwort	Native	OBL
GYMNOSPERMS			
PINACEAE			
Pinus radiata	Monterey pine	Native	NL
EUDICOTS			
ADOXACEAE			
Sambucus nigra ssp. caerulea	blue elderberry	Native	FACU
APIACEAE			
Eryngium castrense	Great Valley button-celery	Native	OBL
ASTERACEAE			
Achyrachaena mollis	blow wives	Native	FAC
Anthemis cotula	stinking chamomile	Naturalized	FACU
Baccharis pilularis	coyote brush	Native	NL
Carduus pycnocephalus	Italian thistle	Naturalized	NL
Centaurea solstitialis	yellow starthistle	Naturalized	NL
Centromadia fitchii	Fitch's tarweed	Native	FACU
Gnaphalium palustre	cudweed	Native	FACW
Holocarpha virgata	narrow tarplant	Native	NL
Hypochaeris glabra	smooth cat's ear	Naturalized	NL
Lactuca serriola	prickly lettuce	Naturalized	FACU
Lasthenia fremontii	Fremont's goldfields	Native	OBL
Lasthenia glaberrima	smooth goldfields	Native	OBL
Leontodon saxatilis ssp. saxatilis	hairy hawkbit	Naturalized	NL
Logfia gallica	narrowleaf cottonrose	Naturalized	NL
Matricaria discoidea	pineapple weed	Naturalized	FACU
Psilocarphus brevissimus	woolly marbles	Native	FACW

Scientific Name	Common Name	Status	Wetland Indicator Status
Senecio vulgaris	common groundsel	Naturalized	FACU
Silybum marinum	milk thistle	Naturalized	NL
Sonchus oleraceus	common sowthistle	Naturalized	UPL
BORAGINACEAE			
Amsinckia menziesii	common fiddleneck	Native	NL
Plagiobothrys bracteatus	vernal pool popcorn flower	Native	FACW
Plagiobothrys stipitatus	slender popcorn flower	Native	FACW
Plagiobothrys undulatus	wavy-stemmed popcorn flower	Native	OBL
BRASSICACEAE			
Draba verna	spring whitlow-grass	Naturalized	NL
Raphanus sativus	wild radish	Naturalized	NL
CAMPANULACEAE			
Downingia bicornuta	two-horned downingia	Native	OBL
Downingia ornatissima	folded downingia	Native	OBL
Downingia pusilla	dwarf downingia	Native (CRPR 2B.2)	OBL
CARYOPHYLLACEAE			
Cerastium glomeratum	mouse-ear chickweed	Naturalized	UPL
Silene gallica	windmill pink	Naturalized	NL
Spergularia rubra	red sandspurry	Naturalized	FAC
CONVOLVULACEAE			
Convolvulus arvensis	bindweed	Naturalized	NL
CRASSULACEAE			
Crassula aquatica	Water pygmyweed	Native	OBL
Crassula connata	pygmyweed	Native	FAC
EUPHORBIACEAE			
Croton setiger	dove weed	Native	NL
Euphorbia maculata	spotted spurge	Naturalized	UPL
FABACEAE			
Lathyrus hirsutus	Caley pea	Naturalized	FAC
Lupinus bicolor	miniature lupine	Native	NL
Medicago sativa	alfalfa	Naturalized	UPL
Trifolium dubium	little hop clover	Naturalized	UPL

Scientific Name	Common Name	Status	Wetland Indicato Status
Trifolium fragiferum	strawberry clover	Naturalized	FAC
Trifolium glomeratum	clustered clover	Naturalized	NL
Trifolium hirtum	rose clover	Naturalized	NL
Trifolium incarnatum	crimson clover	Naturalized	NL
Trifolium repens	white clover	Naturalized	FACU
Trifolium subterraneum	subterranean clover	Naturalized	NL
Trifolium variegatum	whitetip clover	Native	FAC
Vicia sativa	spring vetch	Naturalized	FACU
Vicia villosa ssp. varia	winter vetch	Native	NL
Vicia villosa ssp. villosa	hairy vetch	Naturalized	NL
FAGACEAE			
Quercus douglasii	blue oak	Native	NL
Quercus lobata	valley oak	Native	NL
GENTIANACEAE			
Cicendia quadrangularis	Oregon timwort	Native	FAC
GERANIACEAE			
Erodium botrys	Stork's bill filaree	Naturalized	FACU
Erodium moschatum	white-stem filaree	Naturalized	NL
Geranium dissectum	cut-leaf geranium	Naturalized	NL
Geranium molle	dove's-foot geranium	Naturalized	NL
LAMIACEAE			
Trichostema lanceolatum	vinegar weed	Native	FACU
LYTHRACEAE			
Lythrum hyssopifolia	hyssop loosestrife	Naturalized	NL
MALVACEAE			
Malva parviflora	cheeseweed	Naturalized	NL
MONTIACEAE			
Calandrinia menziesii	red maids	Native	NL
Claytonia perfoliata	miner's lettuce	Native	FAC
Montia fontana	water chickweed	Native	OBL
MYRSINACEAE			
Lysimachia arvensis	scarlet pimpernel	Naturalized	FAC

Scientific Name	Common Name	Status	Wetland Indicator Status
Lysimachia minima	chaffweed	Native	FACW
MYRTACEAE			
<i>Eucalyptus</i> sp.	eucalyptus	Naturalized	-
ONAGRACEAE			
Epilobium densiflorum	dense boisduvalia	Native	FACW
OROBANCHACEAE			
Castilleja attenuata	valley tassels	Native	NL
Parentucellia viscosa	yellow glandweed	Naturalized	FAC
Triphysaria eriantha	Johnnytuck	Native	NL
PHRYMACEAE			
Mimulus guttatus	common monkeyflower	Native	OBL
Mimulus tricolor	tricolor monkeyflower	Native	OBL
PLANTAGINACEAE			
Callitriche marginata	winged water-starwort	Native	OBL
Gratiola ebracteata	bractless hedgehyssop	Native	OBL
Plantago coronopus	buckhorn plantain	Naturalized	FAC
Veronica peregrina ssp. xalapensis	purslane speedwell	Native	FAC
POLEMONIACEAE			
Navarretia intertexta	needle-leaf pincushion-plant	Native	FACW
POLYGONACEAE			
Polygonum aviculare ssp. depressum	common knotweed	Naturalized	FAC
Rumex crispus	curly dock	Naturalized	FAC
Rumex pulcher	fiddle dock	Naturalized	FAC
RANUNCULACEAE			
Ranunculus bonariensis var. trisepalus	vernal pool buttercup	Native	OBL
RHAMNACEAE			
Frangula californica	California coffeeberry	Native	NL
ROSEACEAE			
Rosa californica	California wild rose	Native	NL
RUBIACEAE			
Galium aparine	goose grass	Native	FACU
Galium parisiense	wall bedstraw	Naturalized	NL

Table D-1. Plant Species Observed in the WPWMA Project Area, May and June 2017

Scientific Name	Common Name	Status	Wetland Indicator Status
SALICACEAE			
Populus fremontii	Fremont cottonweed	Native	NL
Salix exigua	narrow-leaf willow	Native	FACW
Salix gooddingii	black willow	Native	FACW
ZYGOPHYLLACEAE			
Tribulus terrestris	puncture vine	Naturalized	NL
MONOCOTS			
CYPERACEAE			
Cyperus eragrostis	tall flatsedge	Native	FACW
Eleocharis macrostachya	creeping spine rush	Native	NL
JUNCACEAE			
Juncus bufonius var. bufonius	toad rush	Native	FACW
Juncus bufonius var. occidentalis	western toad rush	Native	FACW
Juncus capitatus	dwarf rush	Native	FACU
Juncus oxymeris	pointed rush	Native	FACW
JUNCAGINACEAE			
Triglochin scilloides	flowering quillwort	Native	OBL
POACEAE			
Alopecurus saccatus	Pacific foxtail	Native	OBL
Avena fatua	wild oat	Naturalized	NL
Briza minor	small quaking grass	Naturalized	FAC
Bromus diandrus	rip-gut brome	Naturalized	NL
Bromus hordeaceus	soft chess	Naturalized	FACU
Cynodon dactylon	Bermuda grass	Naturalized	FACU
Deschampsia danthonioides	annual hairgrass	Native	FACW
Elymus caput-medusae	Medusa head	Naturalized	NL
Festuca bromoides	brome fescue	Naturalized	NL
Festuca microstachys	Pacific fescue	Native	NL
Festuca perennis	Italian rye grass	Naturalized	NL
Glyceria _x occidentalis	western manna grass	Naturalized	OBL
Hordeum marinum ssp. gussoneanum	Mediterranean barley	Naturalized	FAC
Hordeum murinum ssp. leporinum	hare barley	Naturalized	FACU

Table D-1. Plant Species Observed in the WPWMA Project Area, May and June 2017

Scientific Name	Common Name	Status	Wetland Indicator Status
Phalaris lemmonii	Lemmon's canarygrass	Native	FACW
Phalaris paradoxa	hood canarygrass	Naturalized	FAC
Poa annua	annual bluegrass	Naturalized	FAC
Polypogon monspeliensis	rabbitsfoot grass	Naturalized	FACW
THEMIDACEAE			
Dichelostemma capitatum	blue dicks	Native	FACU
Dichelostemma congestum	Ookow	Native	NL
Triteleia hyacinthina	white brodiaea	Native	FAC
Triteleia laxa	Ithuriel's spear	Native	NL

Notes:

FAC = Facultative

FACU = Facultative upland

FACW = Facultative wet

NL = Not listed

OBL = Obligate

UPL = Upland

Taxonomic nomenclature follows the Jepson On-Line Interchange for California Floristics (University of California, Berkeley, 2017).

Wetland indicator status follows the *National Wetland Plant List* (Lichvar, R. W., D. L. Banks, W. N. Kirchner, and N. C. Melvin. 2016. "The National Wetland Plant List: 2016 Wetland Ratings." *Phytoneuron*. 2016-30. pp. 1-17).

Appendix 2D Cultural Resources Technical Memorandum



Cultural Resources Desktop Literature Review for the Western Placer Waste Management Authority Master Planning Project, Placer County, California

PREPARED FOR:	Western Placer Waste Management Authority
COPY TO:	Project File Doug Brown/Douglas Environmental
PREPARED BY:	Gloriella Cardenas/CH2M
DATE:	January 30, 2018

Introduction

This technical memorandum summarizes the findings from the cultural resources desktop literature review performed in August 2017 for the Western Placer Waste Management Authority (WPWMA) Master Planning Project (project) in Placer County, California. The review was performed by CH2M HILL Engineers, Inc. (CH2M) archaeologist Gloriella Cardenas, who meets the qualifications for Archaeological Principal Investigator in the Secretary of the Interior's Professional Qualification Standards. WPWMA proposes to expand their existing operations at the Western Regional Sanitary Landfill and Materials Recovery Facility (MRF) near Roseville, California. The purpose of this high-level desktop screening was to assess the general project sensitivity for potential impacts to cultural resources on the WPWMA's properties, such as known sites of historical importance, and to identify areas that may require additional study.

Project Description and Area of Potential Effects

WPWMA's Active Facility (landfill, compost facility, MRF, and ancillary operations) is located at 3033 Fiddyment Road, Roseville, California 95747. Operation of the Active Facility is conducted on 314 acres. In addition, the WPWMA owns adjacent properties east (155 acres) and west (459 acres) of the Active Facility, for a total area of potential effects (APE) of 928 acres. Figure 1, on the following page, shows the relative location and size of the Active Facility and the two WPWMA (east and west) properties adjacent to the Active Facility. Fiddyment Road runs between the Active Facility and the western property. Athens Avenue borders the northern portion of the Active Facility.

The WPWMA is in the process of developing a master plan to define new facility modifications, enhancements, and development projects for the WPWMA Active Facility. The WPWMA has determined it is critical to modify, upgrade, and expand its current facility to have sufficient future operational capacity. Enhancements are also necessary to comply with upcoming regulatory changes that will have a significant impact on both the WPWMA and its participating agencies (Lincoln, Rocklin, Roseville, Placer County, Auburn, Loomis, and Colfax). CULTURAL RESOURCES DESKTOP LITERATURE REVIEW FOR THE WESTERN PLACER WASTE MANAGEMENT AUTHORITY MASTER PLANNING PROJECT, PLACER COUNTY, CALIFORNIA

Defining Cultural Resources

In evaluating a project's potential to adversely affect cultural resources, the analysis focuses on whether impacts will occur on historical resources or unique archaeological resources. Historical resources or properties are those listed on or eligible for listing in the National Register of Historic Places (NRHP) [36 Code of Federal Regulations (CFR) 800.16(I)(1)]. A property may be listed in the NRHP if it meets any of the criteria provided in the NRHP regulations (36 CFR 60.4) and retains integrity. Typically, properties must also be 50 years old or older [36 CFR 60.4(d)].

Determining the NRHP eligibility of a site or district is guided by the specific legal context of the site's significance as set out in 36 CFR Part 60.4 (see below). The National Historic Preservation Act authorizes the Secretary of the Interior to maintain and expand a national register (the NRHP) of districts, sites, buildings, structures, and objects of significance in American history, architecture, archaeology, engineering, and culture. A property may be eligible for listing in



the NRHP if it meets the criteria for evaluation defined in 36 CFR 60.4, as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- Are associated with events that have made a significant contribution to the broad patterns of our history;
- Are associated with the lives of persons significant in our past;
- Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; and
- Have yielded, or may be likely to yield, information important in prehistory or history.

The California Environmental Quality Act (CEQA) offers directives regarding impacts on historical resources and unique archaeological resources. The State CEQA Guidelines define a "historical resource" to include more than one category of resources. The first category is "resource(s) listed or eligible for listing on the

California Register of Historical Resources (CRHR)." (*California Code of Regulations* [CCR] Section 15064.5[a][1]; see also Public Resources Code Sections 5024.1 and 21084.1.) A historical resource may be eligible for inclusion in the CRHR, as determined by the State Historical Resources Commission or the lead agency, if the resource:

- 1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; or
- 2. Is associated with the lives of persons important in our past; or
- 3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- 4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, a resource is presumed to constitute a "historical resource" if it is included in a "local register of historical resources" unless "the preponderance of evidence demonstrates that it is not historically or culturally significant." (CCR Section 15064.5[a][2])

CEQA and the State CEQA Guidelines also require consideration of unique archaeological sites (Public Resources Code Section 21083.2, 14 CCR Section 15064.5). A "unique archaeological resource" is defined in CEQA (Public Resources Code Section 21083.2[g]) as:

"...an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person."

Literature Search

CH2M conducted a cultural resources-focused literature review for the 928-acre APE located in Roseville, California, using a U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map for Township 12N, Range 6E, Sections 5, 6, and 31, plus a 1-mile buffer. A map of this study area is provided in the attachment to this technical memorandum. CH2M coordinated with the California Historical Resources Information System (CHRIS), North Central Information Center (NCIC), located at California State University, Sacramento, to conduct a literature search for this study area.

In addition to the archaeological site location maps maintained at the NCIC, the following sources were examined:

- NRHP
- State and local listings for the presence of historic buildings, structures, landmarks, points of historical interest, or other cultural resources
- Historical maps
- Archaeological sites (historic and prehistoric)
- Previous investigations of the study area

CULTURAL RESOURCES DESKTOP LITERATURE REVIEW FOR THE WESTERN PLACER WASTE MANAGEMENT AUTHORITY MASTER PLANNING PROJECT, PLACER COUNTY, CALIFORNIA

Results

CH2M's review of the literature search results for the study area revealed one previously recorded cultural resource within the APE, in addition to thirteen cultural resource sites and seven isolates within a 1-mile radius of the APE (NCIC, 2017). Table 1 contains a summary of the cultural sites within the study area (including the APE and the 1-mile radius) with the evaluation recommendations made by the investigator.

Isolates are defined as fewer than three artifacts in a location that is not associated with an archaeological site. The seven isolates within a 1-mile radius of the project are not included in Table 1 because by definition, isolates lack immediate cultural context and therefore lack the data potential required to be considered eligible for the NRHP or CRHR; no further examination of isolates is required.

	Sites within the	Area of Potential Effects	
Site Number	Site Type	Site Description	Evaluation CRHR/ NRHP Year
P-31-001422	Historic	Fiddyment Road	Not eligible/2004 and 2015
	Sites within 1-Mile Radiu	us of the Area of Potential Effects	
Site Number	Site Type	Site Description	Evaluation CRHR/ NRHP Year
P-31-000016	Multicomponent	Homestead/lithic scatter	Not evaluated
P-31-000017	Historic	Stone alignments	Not evaluated
P-31-001250	Historic	Refuse deposit	Not evaluated
P-31-001405	Historic	Homestead	Not evaluated
P-31-001424	Prehistoric	Lithic scatter	Not evaluated
P-31-001702	Historic	Ranch	Not eligible/1997
P-31-001705	Historic	Ranch Complex	Not eligible/1999
P-31-005846	Historic	Homestead	Not evaluated
P-31-005847	Historic	Homesite	Not evaluated
P-31-005849	Historic	Fences, water conveyance	Not eligible/2015
P-31-005850	Historic	Homesite	Not evaluated
P-31-005851	Historic	Fences, water conveyance	Not eligible/2015
P-31-005854	Historic	Well	Not evaluated

Table 1. Cultural Sites within the Study Area

Source: CHRIS NCIC, 2017.

As shown in Table 1, only one site, P-31-001422, was located within the APE. P-31-001422 is identified as the historic Fiddyment Road. It was evaluated by Pappas and Webb of ECORP in 2015 and found not eligible for listing in the NRHP, concurring with the first evaluation of ineligibility in 2004 by JRP Historical Consulting. No further evaluation of this resource is recommended.

Thirteen sites are documented within the 1-mile buffer (Table 1). Four have received evaluation recommendations of "not eligible" to the CRHR/NRHP by the recording investigators; the other nine sites were not evaluated by the investigator at the time of recordation. No ground-disturbing activities will be

conducted outside of the 928-acre APE and therefore no impacts to these sites are expected. No further work or evaluations are recommended.

Eight cultural resources studies have been conducted of segments within the APE, resulting in approximately 40 percent (370 acres) of the project area having been subject to previous cultural resources investigations. These studies were conducted between 1981 and 2008.

Review of historic maps, specifically the General Land Office Plat Map (USGS, 1855), revealed that the project region had been geologically surveyed and sectioned, and contained agricultural fields, homesites, roads, and waterways, all of which were mapped by 1855.

Summary and Clearance

The NCIC search resulted in the identification of one historic period road within the APE, evaluated as not eligible for listing in the NRHP or CRHR; thirteen sites within the study area 1-mile buffer, none of which have been evaluated as eligible for listing in the NRHP or CRHR; and no historic properties in all of the study area.

The potential for historic period resources is moderate due to long-term agricultural use of the area (USGS, 1855); there is a potential for historic roads, farming features, and like elements of the historic period to be present. The potential for prehistoric/archaeological resources is low because the APE has been subject to agricultural and solid waste facility uses.

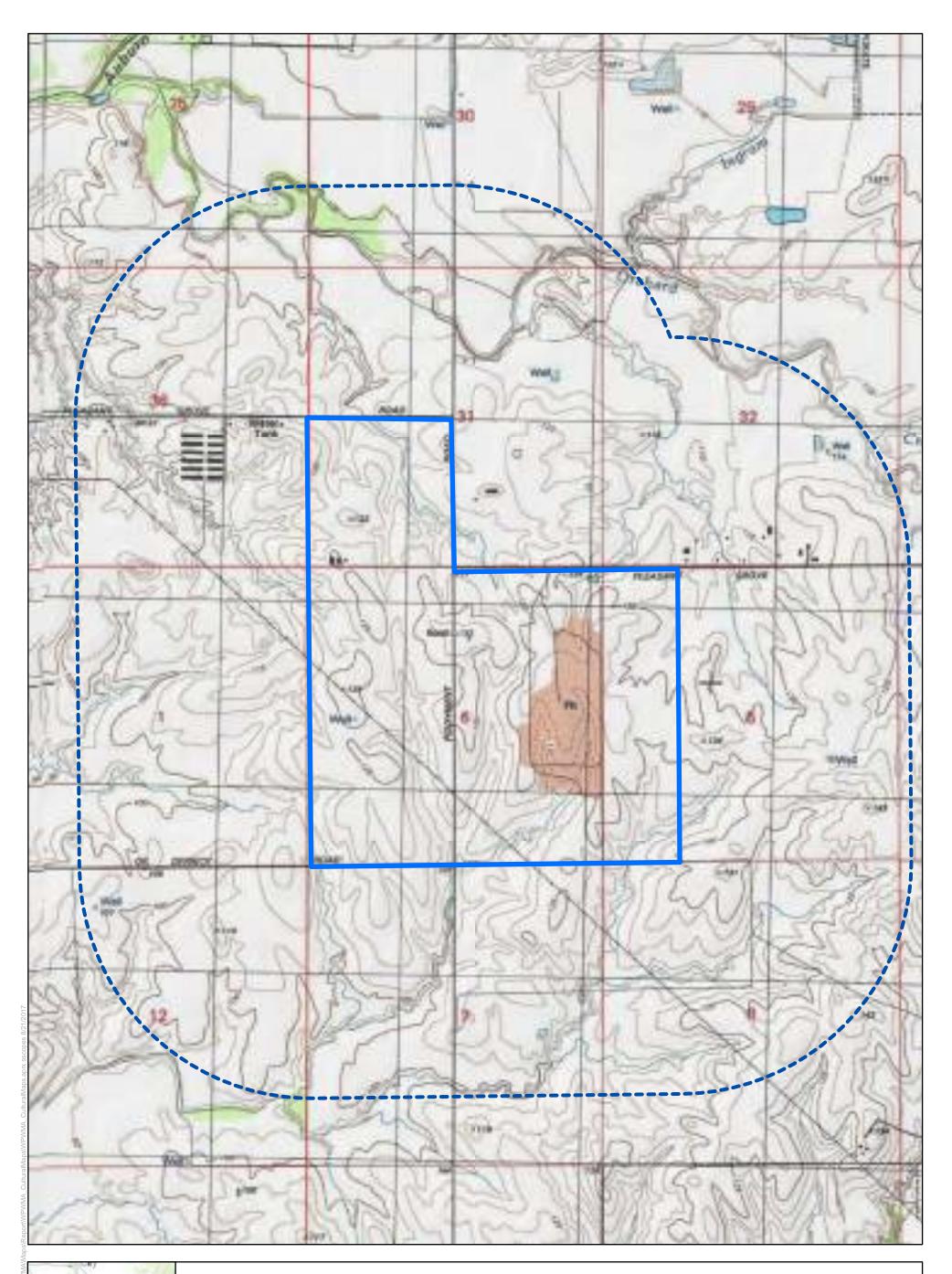
Because a large portion of the APE has not been subject to pedestrian survey, and the sections that have been studied were done so outside of the permissible investigation period (all but one study was conducted over 10 years ago), per California State Historic Preservation guidelines, it is recommended that a cultural resources pedestrian survey be conducted during preparation of the Master Plan's Environmental Impact Report.

References

California Historical Resources Information System North Central Information Center (CHRIS NCIC). 2017. Literature Search Results SAC-17-127. On file with CH2M, Santa Ana, California.

U.S. Geological Survey (USGS). 1855. Township 12 N, 6E, Mount Diablo Meridian, GLO Plat Map. On file with CH2M, Santa Ana, California.

Attachment Area of Potential Effects Map



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RAMENTO VALLEY Western Placer WWTP-Roseville Project

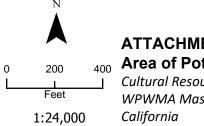
Sacramento

Elk Grove

Western Placer WWTP Project

1-mile Buffer of WPWMA Location

USGS Quad: ROSEVILLE Township 12N, Range 6E, S29, 30, 31, 32 Township 12N, Range 5E, S25, 36 Township 11N, Range 5E, S01+12 Township 11N, Range 6E, S05, 06, 07, 08



ATTACHMENT

$_{\rm 400}\,$ Area of Potential Effects Map

Cultural Resources Desktop Literature Review WPWMA Master Planning Project, Placer County,



Appendix 2E Geotechnical Evaluation



Geotechnical Exploration Report

Proposed Expansion of Western Regional Sanitary Landfill

Submitted to:

Jacobs

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August 2018

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Table of Contents

1.0	INTRO	DDUCTION	1
2.0	FIELD	EXPLORATION	1
3.0	LABC	PRATORY TESTING	2
	3.1	Testing of Bag Samples	.2
	3.2	Testing of Bulk Samples	.3
	3.3	Interface Shear Strength Testing	.3
4.0	SITE	GEOLOGY AND SUBSURFACE CONDITIONS	4
	4.1	Site Conditions	.4
	4.1.1	Location	.4
	4.1.2	Topography	4
	4.1.3	Surface Water	4
	4.1.4	Groundwater	.4
	4.2	Site Geology	4
	4.3	Subsurface conditions	4
5.0	CONC	CLUSIONS AND RECOMMENDIAIONS	4

TABLES

Table 1: Summary of Laboratory Test Results – Bag SamplesTable 2: Summary of Laboratory Test Results – Bulk Samples

FIGURES

Figure 1: Site Plan

APPENDICES

APPENDIX A Test Borings Logs

APPENDIX B Laboratory Test Results - Bag Samples



APPENDIX C

Laboratory Test Results - Bulk Samples

APPENDIX D

Laboratory Test Result - Clay/GCL Interface Shear

1.0 INTRODUCTION

The Western Placer Waste Management Authority (WPWMA) owns the Western Regional Sanitary Landfill (WRSL). Solid waste management activities at WRSL include a public drop-off area, materials recovery facility, construction and demolition debris processing facility, composting facility, and landfill.

In recognition of the projected growth of the WPWMA's service area, recent laws requiring increased waste diversion, and constraints related to the size of WPWMA's existing facilities, the WPWMA is considering expanding its facilities. One expansion element being considered is a lateral expansion of the existing landfill to the east, to the property owned by the WPWMA (the Site). Expanding to the east would allow a contiguous landfill and avoid a valley between the existing landfill and the expansion area; thereby providing increased disposal capacity. The landfill expansion would also provide disposal capacity for waste relocated from the Pre-Title D unlined modules of the existing landfill (Modules 1, 2, 10, and 11) to minimize long-term environmental risk and the opportunity to expand non-landfill solid waste management activities adjacent to their existing locations.

The WPWMA-owned property to the east of the existing landfill is approximately 178 acres. The property has been used for cattle grazing and no field exploration of the property has occurred. In order to provide information for design and to support an environmental impact report, Golder Associates Inc. (Golder) conducted a field exploration program consistent with the scope of work contained in its proposal, dated November 10, 2016.

2.0 FIELD EXPLORATION

Golder advanced geotechnical borings at the Site on September 11 through September 16, 2017 to infer stratigraphy and characteristics of the existing subsurface materials. A total of five (5) borings (designated BG-1, BG-2, BG-3, PZ-1, and PZ-2) were drilled using a CME-95 truck mounted hollow stem auger rig to final depths ranging from approximately 92 to 111.5 feet below ground surface (bgs). The locations of the boreholes are shown in Figure 1. The borings were drilled by Cascade Drilling of Sacramento, California, under subcontract to Golder.

Prior to the field exploration, the boring locations were cleared of underground utilities through Underground Service Alert (USA). Golder obtained the necessary boring permits through the Placer County Department of Environmental Health. All five boreholes were used as exploratory borings for geotechnical subsurface characterization, and borings PZ-1 and PZ-2 were used to install piezometers for future use measuring depth to groundwater.

Soil samples were primarily obtained using a standard penetration test (SPT) split-spoon sampler every 5 feet for the first 50 vertical feet, and every 10 feet thereafter. The split-spoon sampler consists of a 2.0-inch outside diameter, 1.4-inch inside diameter split barrel driven a total of 18 inches (or to refusal) into the soil at the bottom of the boring using an automatic 140-pound hammer falling a vertical distance of 30 inches. The number of hammer blows required to drive the sampler the final 12 inches is considered the SPT "N" value, which provides a measure of the relative density of granular soils and relative stiffness of cohesive soils. Refusal of the sampler was considered to be achieved when it took 50 hammer blows to advance the sampler 6 inches or less. The procedures employed in the field were generally consistent with those described in ASTM D1586.

Soil collected inside the split barrel sampler was visually classified in the field, placed in sealed plastic bags, and stored for future reference and laboratory testing. Bulk disturbed soil samples were also collected from the auger

cuttings at various depths, placed in sealed 5-gallon buckets, and stored for laboratory testing. The following bulk samples were collected:

<u>Boring</u>	<u>Depth (ft)</u>	<u>Soil Type</u>
BG-1	25 - 40	clayey silt (3 buckets)
	50 - 60	silty clay
BG-2	20 - 25	clay
BG-3	5 - 10	sand
	10.5 - 15	clay
	20 - 25	sand
	40.5 - 45	sand
PZ-1	11 - 15	sand
	15 - 30	silty clay (3 buckets)
PZ-2	40 - 45	silty sand to clayey sand

Upon reaching termination depth, borings BG-1 through BG-3 were filled completely with cement grout to the ground surface using the rig augers as a tremie pipe. Borings PZ-1 and PZ-2 were used to construct piezometers.

The logs for the borings are presented in Appendix A. The logs (Report of Borehole) describe the earth materials encountered and the samples obtained. The logs also show the boring number, drilling date, and the name of the Golder geologist that logged the boring. The soils were described in general accordance with ASTM D2487 (i.e., the Unified Soil Classification System). The boundaries between different soil types shown on the logs are approximate, as the actual transition between layers may be more gradual.

3.0 LABORATORY TESTING

3.1 Testing of Bag Samples

Selected bag samples collected from the test borings were tested in Golder's geotechnical testing laboratory located in Atlanta, Georgia to verify the field classification. The following index tests were performed on selected samples:

- Natural moisture content (16 samples)
- Grain-size analysis (16 samples)
- Atterberg limits (10 samples)

The laboratory test results for the bag samples are presented in Appendix B. The results are summarized in Table 1.



As can be seen in Table 1, the coarser-grained soils classify as sand, silt, or a mix of sand and silt (SM). The finer-grained soils range from low-plasticity clayey sand (SC) to silty clay (CL) with the plasticity index (PI) ranging from 5 to 19.

3.2 Testing of Bulk Samples

Selected clayey bulk samples of the drill cutting were tested in the laboratory to further characterize the encountered soils. The following index tests were performed on selected samples:

- Natural moisture content (9 samples)
- Grain-size analysis (9 samples)
- Atterberg limits (9 samples)
- Modified Proctor (9 samples)
- Saturated hydraulic conductivity/permeability (5 samples)

The above tests were performed mainly to assess the suitability of the clayey soils for landfill liner. The laboratory test results for the bulk samples are presented in Appendix C. The results are summarized in Table 2.

As can be seen from Table 2, the clayey soils tested had a PI of between 4 and 21 suggesting low plasticity. The maximum dry density from the modified Proctor tests (ASTM D1557) ranged from 108.6 to 127 pounds per cubic feet (pcf), and the optimum moisture content ranged from 10 to 17.8 percent.

The hydraulic conductivity tests were performed on test specimens recompacted to approximately 90 percent dry density and approximately 2 percent wet of optimum from the modified Proctor tests. The saturated hydraulic conductivity ranged from 4.7×10^{-8} to 2.6×10^{-7} centimeters/second (cm/s).

3.3 Interface Shear Strength Testing

Two large-scale direct shear tests were performed using two bulk clayey soil samples (PZ-1 and BG-1) to estimate the interface shear strength between the clayey soils and a shear-reinforced geosynthetic clay liner (GCL). The interface shear strength is important for the slope stability of the landfill. This interface shear strength testing was performed by SGI Testing Services, LLC, Atlanta, Georgia using readily available samples of Bentomat DN GCL manufactured by CETCO. The ASTM D6243 test procedure was used. Both tests were performed by remolding the clay at a moisture content of 3% wet of optimum and compacting the clay to 88 percent compaction relative to the maximum modified Proctor dry density.

The result of the interface shear strength test is presented Appendix D. The results show a large displacement shear strength envelope (corresponding to 3-inch shear displacement) defined the following adhesion (a) and friction angle (δ):

- Test 1 (using bulk sample from PZ-1): a=845 psf, δ=19 degrees
- Test 2 (using bulk sample from BG-1): a=835 psf, δ=20 degrees

4.0 SITE GEOLOGY AND SUBSURFACE CONDITIONS

4.1 Site Conditions

4.1.1 Location

The proposed expansion area is bounded to the west by the existing landfill, to the north by Athens Avenue, and to the east and south by undeveloped land. Ground cover consists mostly of topsoil and grass. Land uses in the general vicinity consist of cattle grazing, agriculture, and light industry.

4.1.2 Topography

The current topography of the expansion area is generally flat with a slight slope to the southeast. The center of the expansion area is located at approximately 130 feet above mean sea level (amsl).

4.1.3 Surface Water

Surface water generally drains to adjacent properties or infiltrates into the ground. Several vernal pools, swales, and seasonal wetlands have been mapped on the Site.

4.1.4 Groundwater

First encountered groundwater measured in nearby wells at the existing landfill varies from approximately 70 to 110 feet below the native ground surface. The groundwater gradient at the landfill is approximately 0.002 foot per foot and flows primarily toward the southwest.

4.2 Site Geology

The Site is located in the northeastern portion of the Great Central Valley geomorphic province. The Great Valley is an alluvial plain about 50 miles wide and 400 miles long in the central part of California. The Great Valley is a trough in which sediments have been deposited since the Jurassic period (approximately 160 million years ago). The local geology consists of Quaternary-aged (up to 2.6 million years ago) alluvial deposits of terrestrial origin underlain by sandstone, shale, and gravel deposits of primarily Pleistocene to Pliocene age (0.01 to 5.3 million years ago) with some deposits as old as Miocene (up to 23 million years ago). Bedrock was not encountered in any of the borings during the field exploration.

4.3 Subsurface conditions

The specific subsurface conditions encountered at the Site during the field exploration are presented in the boring logs (Appendix A). In all the borings, the first 5 feet of material encountered was a sandy clay of low plasticity. In general, the materials encountered after the first 5 feet consisted of sand, silt, and clay mixtures. Most of the soil encountered after 50 feet was fine-grained and consisted of clayey sand and sandy clay. No bedrock was encountered in any of the borings.

5.0 CONCLUSIONS AND RECOMMENDTAIONS

Based on the results of the field exploration and laboratory testing, we conclude that:

- The proposed site for the lateral expansion of WRSL, located to the east of the existing landfill, is suitable from geotechnical considerations.
- Selected clayey soils underlying the site will be suitable for the construction for base liner after proper moisture conditioning and adequate compaction.



The measured clay/GCL interface shear strengths are within the upper range of typical values encountered by Golder on other past projects.

Golder recommends the following exploration and analyses during the design of the individual modules of the landfill expansion:

- Geotechnical test borings and laboratory tests
- Analysis of the stability of excavation slopes and settlement of the landfill subgrade
- Updated seismic hazard analysis for the site
- Static and seismic slope stability of waste slopes to estimate the minimum base liner shear strengths required
- Settlement analysis for the landfill subgrade to evaluate its impact on the leachate collection and removal system, and determine the minimum landfill subgrade slopes
- Shear strength testing of the proposed base liner components



5

Signature Page

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Tables

Sample Identification	Sample Type	Sample Depth	Soil Classi- fication	Natural Moisture		Atterber	g Limits		I % finer	Grain Size Distribution % Finer	% finer
				%	L.L.	P.L.	P.I.	L.I.	No.4 Sieve	No. 200 Sieve	.005 mm
BG-1-5	Bag	5.0	(SM)	14.6	-	-	-	-	100.0	48.3	-
BG-1-20	Bag	20.0'	CL	25.8	36	22	14	0.28	100.0	80.3	-
BG-1-70	Bag	70.0'	(SM)	22.3	-	-	-	-	98.6	37.9	-
BG-2-5	Bag	5.0'	ML	23.8	39	26	13	-0.18	100.0	84.2	28.0
BG-2-15	Bag	15.0'	(SM)	23.8	-	-	-	-	100.0	12.3	-
BG-2-35	Bag	35.0'	ML	26.3	31	26	5	0.03	100.0	76.1	15.0
BG-2-50	Bag	50.0'	(SM)	19.7	-	-	-	-	99.9	42.8	-
BG-3-30	Bag	30.0'	CL	17.2	34	20	14	-0.21	99.6	60.7	27.5
BG-3-50	Bag	50.0'	(ML)	21.6	-	-	-	-	100.0	76.7	-
BG-3-70	Bag	70.0'	CL	14.0	37	21	16	-0.41	93.3	36.3	19.5
PZ-1-5	Bag	5.0'	ML	20.9	37	30	7	-1.40	99.9	85.3	19.0
PZ-1-40	Bag	40.0'	CL	19.7	43	24	19	-0.21	100.0	68.7	33.0
PZ-1-80	Bag	80.0'	(SC)	11.2	-	-	-	-	91.8	23.2	-
PZ-2-10	Bag	10.0'	CL	22.0	35	20	15	0.12	100.0	88.7	24.0
PZ-2-30	Bag	30.0'	ML	28.2	44	29	15	-0.03	100.0	78.1	25.0
PZ-2-60	Bag	60.0'	SC	18.2	30	20	10	-0.18	99.7	38.2	17.5

 Table 1

 Summary of Laboratory Test Results - Bag Samples

ABBREVIATIONS:

LIQUID LIMIT (LL), PLASTIC LIMIT (PL), PLASTICITY INDEX (PI), LIQUIDITY INDEX (LI) SILTY SAND (SM), SILTY CLAY (CL), SANDY SILT (ML), CLAYEY SAND (SC)

Sample	Sample	Sample	Soil Classi-	Natural Moisture		Atterber	g Limits		% Finer	Grain Size Distributior % Finer		Compa Maximum	action Optimum	Unit V	Veight	Permeability
Identification	Туре	Depth	fication	%				-	No.4	No. 200	.005	Dry Density	Moisture	Moisture	Dry	(cm/sec)
					L.L.	P.L.	P.I.	L.I.	Sieve	Sieve	mm	(lb/cuft)	%	%	(lb/cuft)	
BG-1	Bulk	25.0-40.0'	CL	20.9	41	20	21	0.02	100.0	76.3	44.0	109.5	16.2	18.1	98.8	1.5E-07
BG-1	Bulk	50.0-60.0'	CL	34.0	35	17	18	0.93	100.0	67.5	34.0	119.0	12.9	-	-	-
BG-2	Bulk	20.0-25.0'	CL	21.2	40	20	20	0.07	100.0	76.8	46.0	114.1	16.7	18.7	103.1	4.7E-08
BG-3	Bulk	5.0-10.0'	CL	24.6	43	23	20	0.06	100.0	84.9	48.5	108.6	17.8	20.5	97.4	1.6E-07
BG-3	Bulk	10.5-15.0'	CL	17.5	37	17	20	0.00	100.0	69.8	39.5	119.0	13.2	-	-	-
BG-3	Bulk	20.0-25.0'	SC	10.0	30	17	13	-0.53	100.0	49.7	30.0	126.8	10.3	-	-	-
PZ-1	Bulk	11.0-15.0'	SC-SM	6.9	19	15	4	-2.16	100.0	43.0	21.0	127.0	10.0	-	-	-
PZ-1	Bulk	15.0-30.0'	CL	28.2	41	21	20	0.35	100.0	85.2	42.6	113.3	17.0	18.3	102.8	5.0E-08
PZ-2	Bulk	40.0-45.0'	CL	25.3	43	22	21	0.15	100.0	78.2	53.7	115.0	15.9	17.8	103.3	2.6E-07

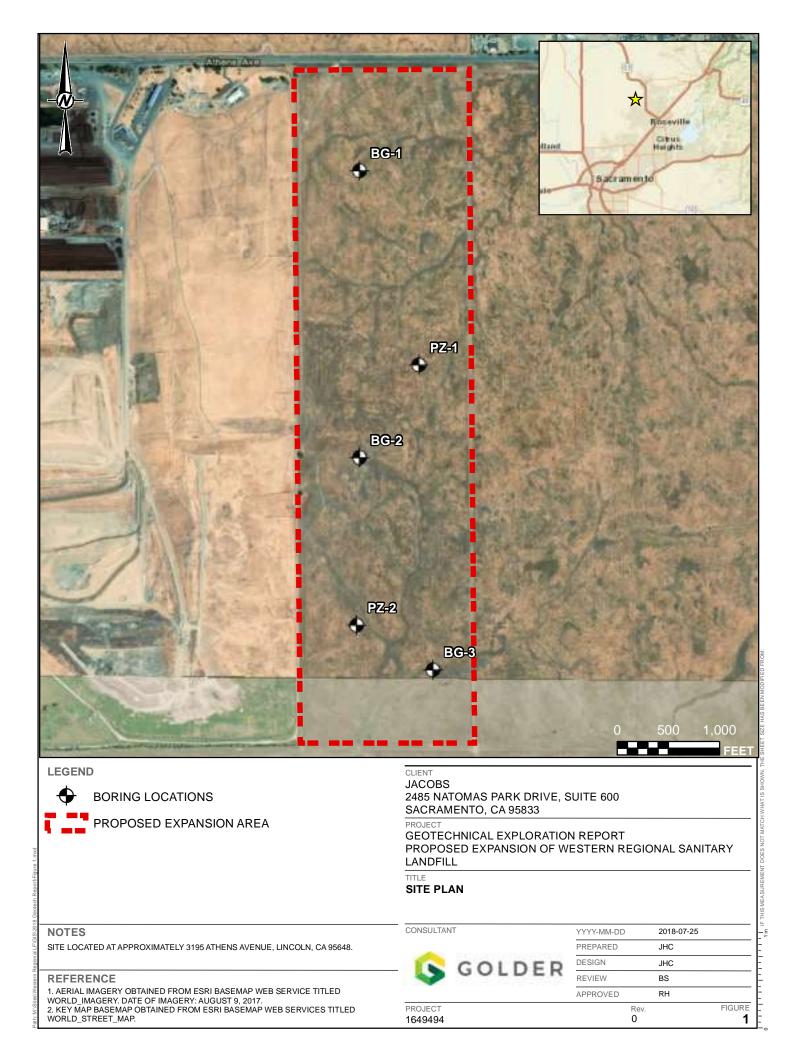
 Table 2

 Summary of Laboratory Test Results - Bulk Samples

ABBREVIATIONS:

LIQUID LIMIT (LL), PLASTIC LIMIT (PL), PLASTICITY INDEX (PI), LIQUIDITY INDEX (LI) SILTY SAND (SM), SILTY CLAY (CL), CLAYEY SAND (SC)

Figures



APPENDIX A

Test Borings Logs

PRC	JEC.	T NO.:	WRSL Expansion Geotechnical Investigatio 1649494 Lincoln, CA	REC	OR	DRILLIN DRIL	NG START	REHOLE September September Not Survey	11, 20 12, 20	17 11:30	(TC	SHEET: 1 of 2 GS ELEV.: 127.0 DC ELEV.: na DATUM: WGS84	
			SOIL PROFILE					SAMPLES		PENETRA	ATION RESISTANCE		ں ب
O DEPTH (ft)	BORING METHOD	0.0	DESCRIPTION	ਛੇ 127.0	nscs	GRAPHIC LOG	SAMPLE TYPE & NUMBER	BLOWS per 6 in ASTM D1586 140 lb hammer 30 inch drop Automatic	REC ATT (in)	20 4 WATER	A CONTENT (%)	NOTES WATER LEVELS	ADDITIONAL LAB TESTING
	-		(CL), CLAY, low plasticity fines, some sand fine to medium grained; light brown; cohesive, w < PL		CL								
<u> 5 </u>		5.0	(SM), silty SAND, sand fine to medium grained, low plasticity fines; gray-brown; non-cohesive, dry to moist	122.0_	 SM		BC 215	5-6-6 12	<u>11</u> 18	12 ■			
10		<u>11.0</u>	(ML), SILT, low plasticity fines, some sand fine to medium grained; light gray; cohesive, w < PL	<u>116.0</u>	— — –		BG-1-10	3-7-11 18	<u>15</u> 18	18			
15	-	<u>15.0</u>	(SM), silty SAND, sand fine to medium grained, low plasticity fines; dark gray; non-cohesive, dry to moist	_1 <u>12</u> .0_	 SM		BG-1-15 BG-1-15	4-7-11 18	<u>15</u> 18	18			
20		20.0	(CL), CLAY, sand fine to medium grained, low plasticity fines; light gray-brown; cohesive, w < PL	_1 <u>07</u> .0			BG-1-20	6-9-15 24	<u>17</u> 18	24 ■			
25	uger.	25.0	(ML), SILT WITH SAND, sand fine to medium grained, low plasticity fines; gray-brown; cohesive, w < PL	_1 <u>02.0</u>			BG-1-25	11-25-31 56	<u>16</u> 18		56		
30	Hollow stem auger.		Becomes light gray brown		ML		BG-1-30	13-27-43 70	<u>17</u> 18		70 ■		
35		<u>35.0</u>	(CL), sandy CLAY, sand fine to medium grained, low plasticity fines; light brown-gray; cohesive, w < PL	<u>92.0</u>			BG-1-35 AS	13-21-33 54	162 <u>18</u> 18		54 ■		
40			Becomes reddish brown					12-27-41 68	<u>14</u> 18		68 ■		
45	-		Becomes gray		CL		BG-145	12-27-34 61	<u>17</u> 18		61		
50							BG-1-50	18-22-33 55	<u>17</u> 18		55		
55		60.0		67.0			AS		102				
DRI	DF		Log continued on next page D.: Cascade Drilling, L.P. R: Tory Salazar G: CME 95		<u> </u>	СН	DGGED: ECKED: IEWED:					Gold	er ates

PRO	JEC	T NO.:	WRSL Expansion Geotechnical Investigatic 1649494 Lincoln, CA	REC	OR	DRIL	LING END:	September September Not Survey	12, 20	G-1 017 11:30 017 08:00	SHEET: 2 of 2 GS ELEV.: 127.0 TOC ELEV.: na DATUM: WGS84	
DEPTH (ft)	BORING METHOD	Depth	SOIL PROFILE DESCRIPTION	Elev	USCS	GRAPHIC LOG		SAMPLES BLOWS per 6 in ASTM D1586 140 lb hammer	REC ATT	WATER CONTENT (70)	E NOTES WATER LEVELS	ADDITIONAL LAB TESTING
60 	-	60.0	(SM), silty SAND, sand fine to coarse grained, subrounded to subangular, low plasticity fines; gray-brown; non-cohesive, moist	67.0			BG-DO 1-00 1-00 1-00 1-00 1-00	30 inch drop Automatic 13-27-31 58	(in) <u>15</u> 18	W _p W		
70			Becomes yellow brown		SM		BG-1-70	15-34-37 71	<u>16</u> 18	71		
80	Hollow stem auger.	80.0	(CL), CLAY WITH SAND, sand fine to medium grained, low plasticity fines; brown; cohesive, w < PL	47.0			BG-1-80	12-20-33 53	<u>18</u> 18	53		
90					CL		BG-1-90	23-35-38 73	<u>18</u> 18	73		
1100 1105 1105 1110 1110		101.5	Becomes reddish brown Bottom of borehole at 101.5 ft. (Target Depth) Backfilled with cement grout.	25.5			BG-1-100		18			
	DF	RILLE	D.: Cascade Drilling, L.P. R: Tory Salazar G: CME 95			СН	DGGED: ECKED: IEWED:				Golder	es

PRO	JEC	T NO.:	WRSL Expansion Geotechnical Investigatio 1649494 Lincoln, CA	REC	OR	DRILL DRI	ING	START: NG END:	September September Not Survey	12, 20 13, 20)17 11:	15	GS E TOC E	HEET: 1 of 2 ELEV.: 127.0 ELEV.: na ATUM: WGS84	
			SOIL PROFILE						SAMPLES		PE	NETRATION RESISTANCE	=		
	BORING METHOD	0.0	DESCRIPTION	ан Ш 127.0	nscs	GRAPHIC	P C C	SAMPLE TYPE & NUMBER	BLOWS per 6 in ASTM D1586 140 lb hammer 30 inch drop Automatic	REC ATT (in)	W _p H	BLOWS / ft 20 40 60 80 VATER CONTENT (%) 0 40 60 80		NOTES WATER LEVELS	
			(CL), CLAY, low plasticity fines, some sand fine to medium grained; light brown; cohesive, w < PL	127.0	CL										
5		5.0	(ML), SILT, sand fine to medium grained, low plasticity fines; light gray; cohesive, w < PL	_1 <u>22.0</u>				D0 BG-2-5	12-8-14 2	<u>15</u> 18		22			
10 -			Becomes brown gray		ML		Σ	DO BG-2-10	5-11-19 30	<u>17</u> 18		30 ■			
15 - -		<u>15.5</u>	(SM), silty SAND, sand fine to medium grained, low plasticity fines; light brown-gray to gray; non-cohesive, dry	_1 <u>11</u> .5	 SM			DO BG-2-15	6-12-16 28	<u>16</u> 18	-	28 ■			
20 -		20.0	(CL), CLAY WITH SAND, sand fine to medium grained, low plasticity fines; light gray to gray; cohesive, w < PL	1 <u>07</u> .0_				AS BG-2-20	3-3-3 6	<u>11</u> 18 42	6				
5		25.0	(ML), sandy SILT, sand fine grained, low plasticity fines; brown-gray mottled red; cohesive, w < PL	_1 <u>02</u> .0_	 ML			BG-2-25	18-50	<u>9</u> 11	-		100		
0	Hollow stem auger	30.0	(CL), CLAY WITH SAND, sand fine to medium grained, low plasticity fines; gray; cohesive, w < PL Becomes gray mottled red	<u>97.0</u>				BG-2-30	7-12-21 33	<u>16</u> 18		33 ■			
5	- - -	35.0	(ML), SILT WITH SAND, sand fine to coarse grained, low plasticity fines; brown-gray mottled red; cohesive, w < PL	92.0				DO BG-2-35	17-22-33 55	<u>18</u> 18	1	55 ■			
0		<u>41.0</u>	(SM), silty SAND, sand fine to medium grained, low plasticity fines; brown-gray; non-cohesive, dry	<u>86</u> .0				DO BG-2-40	11-20-27 47	<u>16</u> 18	1	47 ■			
5		<u>45.0</u>	(CL), CLAY WITH SAND, sand fine grained, low plasticity fines; red-brown; cohesive, w < PL	<u>82.0</u>	CL			DO BG-2-45	10-18-30 48	<u>16</u> 18	1	48 ■			
0		<u>50.0</u>	(SM), silty SAND, sand fine grained, non plastic fines; red-brown; non-cohesive, dry	<u>77</u> .0				DO BG-2-50	12-17-22 39	<u>15</u> 18		39 ■			
i5					SM										
50		60.0		<u>67.0</u>			-								
	DR	RILLE	Log continued on next page D.: Cascade Drilling, L.P. R: Tory Salazar G: CME 95			CH	HEC	GGED: CKED: WED:		1	1	: :		Gold	er

PRC)JEC	T NO.:	WRSL Expansion Geotechnical Investigation 1649494 Lincoln, CA	REC	ORI	DRILLIN DRIL	IG START: LING END:	September September Not Surveye	12, 20 13, 20	17 11:15 G 17 08:15 TO	SHEET: 2 of 2 S ELEV.: 127.0 C ELEV.: na DATUM: WGS84	
			SOIL PROFILE					SAMPLES		■ PENETRATION RESISTANCE		ں ا
0 DEPTH (ft)	BORING METHOD	Depth 0.00	DESCRIPTION	а Ш 67.0	nscs	GRAPHIC LOG	SAMPLE TYPE & NUMBER	BLOWS per 6 in ASTM D1586 140 lb hammer 30 inch drop Automatic	REC ATT (in)	BLOWS / ft 20 40 60 80 WATER CONTENT (%) W _p	NOTES WATER LEVELS	ADDITIONAL LAB TESTING
65	-		(CL), CLAY WITH SAND, sand fine to medium grained, low plasticity fines; red-brown; cohesive, w < PL		CL		BG-2-60	12-24-47 71	<u>18</u> 18			
70	Hollow stem auger.		(SC-SM), silty, clayey SAND, sand fine to coarse grained, subrounded to subangular, low plasticity fines; yellow-brown; non-cohesive, dry	<u>57.0</u>			BG-2-70	12-16-21 37	<u>14</u> 18	37		
80	Hollow s				SC-SM	1	BG-2-80	18-24-31 55	<u>14</u> 18	55		
90	-	92.0	(CL), CLAY WITH SAND, sand fine to medium grained, low plasticity fines; gray-brown; cohesive, w < PL Bottom of borehole at 92.0 ft. (Refusal.)	<u>37.0</u> 35.0			BG-2-90	18-24-31 55	<u>13</u> 18	55		
95			Backfilled with cement grout.									
110												
	DF	RILLE	D.: Cascade Drilling, L.P. R: Tory Salazar G: CME 95			CH)GGED: ECKED: IEWED:				Golde	er ates

PRC	JEC	T NO.:	WRSL Expansion Geotechnical Investigatio 1649494 Lincoln, CA	REC	OR	DRIL	LING END:	September September Not Survey	14, 20	G-3 17 10:15 17 09:50		SHEET: 1 of 2 GS ELEV.: 114.0 DC ELEV.: na DATUM: WGS84	
			SOIL PROFILE					SAMPLES			ATION RESISTANCE		
O DEPTH (ft)	BORING METHOD	0.0	DESCRIPTION	а Ш 114.0	nscs	GRAPHIC LOG	SAMPLE TYPE & NUMBER	BLOWS per 6 in ASTM D1586 140 lb hammer 30 inch drop Automatic	REC ATT (in)	20 WATEI W _P I	BLOWS / ft 40 60 80 R CONTENT (%) 	NOTES WATER LEVELS	ADDITIONAL
 - -		0.0	(CL), CLAY, low plasticity fines, some sand fine to medium grained; light brown; cohesive, w < PL	114.0				Adomate					
5			CLAY WITH SAND, sand fine to medium grained; gray Sandy CLAY, sand fine to medium grained; brown-gray		CL		AS BG-3-5	6-14-20 34	<u>17</u> 18 42	3₄			
10			(CL), CLAY, low plasticity fines; brown-gray; cohesive, w < PL		0		S BG-3-10	6-7-8 15	<u>15</u> 18	15 ■			
15	-				CL		5 AS		42				
-		<u>16.0</u>	(ML), sandy SILT, sand fine to medium grained, low plasticity fines; brown-gray; cohesive, w < PL	98.0	 ML		BG-3-1	7-9-11 20	<u>13</u> 18	20 ■			
<u>20</u> -	-	<u>20.0</u>	(SC), clayey SAND, sand fine to medium grained, low plasticity fines; brown; non-cohesive, dry	<u>94</u> .0	sc		BG-3-20	10-19-31 50	<u>11</u> 18		50 ■		
25		25.0	(CL), CLAY, low plasticity fines, some sand fine to medium grained; brown-gray mottled red; cohesive, w < PL	<u>89.0</u>			DO BG-3-25 AS	14-24-33 57	42 <u>17</u> 18		57 ■		
30	Hollow stem auger		Sandy CLAY, sand fine to medium grained; light brown-gray		CL		BG-3-30	12-21-26 47	<u>17</u> 18		47		
<u>35</u> -			CLAY WITH SAND, sand fine to medium grained; brown mottled red				DO BG-3-35	14-20-26 46	<u>15</u> 18		46 ■		
40	-	40.5	(SC-SM), silty, clayey SAND, sand fine grained, low plasticity fines; red-brown;	73.5			■ D0 BG-3-40	10-24-32 56	<u>15</u> 18		56 ■		
45	-	<u>45.0</u>	CL), CLAY WITH SAND, sand fine to medium grained, low plasticity fines;	69.0	SC-SN		DO AS G-3-45 AS	15-26-29 55	42 <u>18</u> 18		55 ■		
50	-	50.0	brown-gray to light gray; cohesive, w < PL	64.0	CL		B 20				53		
-			(ML), SILT, low plasticity fines; brown-gray to brown; non-cohesive, dry to moist				BG-3-5	10-21-32 53	<u>18</u> 18				
55					ML								
<u>60</u>		<u>60.0</u>		<u>54</u> .0								Â	
	DR	RILLE	D.: Cascade Drilling, L.P. R: Tory Salazar G: CME 95			CH	ECKED: IEWED:					Gold	er ate: G-3

PRC	JEC	T NO.	WRSL Expansion Geotechnical Investigation 1649494 Lincoln, CA	REC	OR	DRILLIN DRIL	NG START: LING END:	September September Not Surveye	13, 20 14, 20	017 10:15	SHEET: 2 of 2 SS ELEV.: 114.0 DC ELEV.: na DATUM: WGS84	
			SOIL PROFILE					SAMPLES		■ PENETRATION RESISTANCE		ں ہے
0 DEPTH (ft)	BORING	0.00	DESCRIPTION	а ЭШ 54.0	NSCS	GRAPHIC LOG	SAMPLE TYPE & NUMBER	BLOWS per 6 in ASTM D1586 140 lb hammer 30 inch drop Automatic	REC ATT (in)	BLOWS / ft 20 40 60 80 WATER CONTENT (%) W _p → W ^W W _i 20 40 50 60 80	NOTES WATER LEVELS	ADDITIONAL LAB TESTING
65	-		(SC), clayey SAND, sand fine to coarse grained, subangular, low plasticity fines; light red-brown; non-cohesive, dry to moist		SC		BG-3-60	9-23-27	<u>10</u> 18			
70 75 	ger.	70.0	(CL), CLAY, sand fine to coarse grained, subrounded to subangular, low plasticity fines, some gravel fine grained, subrounded to subangular; light red-brown; cohesive, w < PL	<u>44.0</u>			BG-3-70	23-50	10	10	0	
80 85 	Hollow stem auger.	80.0	CLAY WITH SAND, sand fine to medium grained, low plasticity fines; dark brown to gray-brown; cohesive, w < PL	<u>34.0</u>			BG-3-80	22-45-50 95	<u>12</u> 17	10	0	
90			Becomes red brown				BG-3-90	17-24-31 55	<u>15</u> 18	55		
		101.5	Bottom of borehole at 101.5 ft. (Target Depth) Backfilled with cement grout.	12.5			BG-3-100	11-12-20 32	15 18	32		
	DF	RILLE	D.: Cascade Drilling, L.P. R: Tory Salazar G: CME 95			СН	DGGED: ECKED: IEWED:				Golder	2002

PRO	JEC.	t no.:	WRSL Expansion Geotechnical Investigation 1649494 Lincoln, CA	REC	COR	DRILLIN DRILL	g start: .ING end:	REHOLE September September Not Survey	15, 20 16, 20	017 11:30	SHEET: 1 of 2 GS ELEV.: 130.0 OC ELEV.: na DATUM: WGS84	
			SOIL PROFILE					SAMPLES		■ PENETRATION RESISTANCE		. (7)
O DEPTH (ft)	BORING METHOD	0.0	DESCRIPTION	ар Ш 130.0	nscs	GRAPHIC LOG	SAMPLE TYPE & NUMBER	BLOWS per 6 in ASTM D1586 140 lb hammer 30 inch drop Automatic	REC ATT (in)	BLOWS / ft <u>20 40 60 80</u> WATER CONTENT (%) W, <u>W</u> , <u>W</u>	NOTES WATER LEVELS	ADDITIONAL LAB TESTING
		0.0	(CL), CLAY, low plasticity fines, some sand fine to medium grained; light brown; cohesive, w < PL	100.0	CL							
<u> 5 </u>	-	5.0	(ML), SILT, low plasticity fines, some sand fine to medium grained; gray; cohesive, w < PL	125.0	— — – ML		P2-1-5	7-14-18	<u>17</u> 18	32		
10	-	<u> </u>	Becomes light gray (SC-SM), silty, clayey SAND, sand fine to medium grained, low plasticity fines; light gray, non-cohesive, dry	1 <u>19</u> .0_			PZ-1-10	7-12-15 27	<u>12</u> 18	27		
 	-	<u>15.0</u>	(CL), CLAY, low plasticity fines, sand fine to medium grained; light gray; cohesive, w < PL	1 <u>15.0</u>			D0 PZ-1-15 AS	7-15-16 31	42 <u>18</u> 18	31		
20	-		Becomes brown gray				DO PZ-1-20	6-12-16 	<u>18</u> 18	28		
25			CLAY WITH SAND; brown				DO PZ-1-25 AS	10-12-16 	162 <u>18</u> 18	28		
30	Hollow stem auger.		Becomes gray brown		CL		PZ-1-30	10-12-15 27	<u>14</u> 18	27		
35			Becomes light gray mottled red				PZ-1-35	8-14-22 36	<u>17</u> 18	36		
40	-		3-inch lens of grayish-brown fine to medium sand Sandy CLAY, sand fine to medium grained; light gray				PZ-1-40	12-14-17 31	<u>18</u> 18	- 31		
45	-	<u>45.0</u>	(SC), clayey SAND, sand fine to medium grained, low plasticity fines; brown; cohesive, w < PL	<u> </u>	sc		PZ-145	12-17-23 40	<u>12</u> 18	- 40 -		
50	-	<u>50.0</u>	(CL), CLAY, low plasticity fines, some sand fine to medium grained; light brown to brown; cohesive, w < PL	<u> 80.0 </u>			PZ-1-50	13-15-19 34	<u>17</u> 18	- 34		
55	-				CL							
	DF	RILLE	Log continued on next page D.: Cascade Drilling, L.P. R: Tory Salazar G: CME 95			CHE	GGED: CKED: EWED:				Gold	er

PRO	JEC	T NO.:	WRSL Expansion Geotechnical Investigation 1649494 Lincoln, CA	REC	OR	DRILLIN DRIL	NG START: LING END:	REHOLE September September Not Surveye	15, 20 16, 20	17 11:30	SHEET: 2 of 2 GS ELEV.: 130.0 OC ELEV.: na DATUM: WGS84	
			SOIL PROFILE					SAMPLES		■ PENETRATION RESISTANCE		10
0 DEPTH (ft)	BORING METHOD	0.09	DESCRIPTION	AB Ele 70.0	NSCS	GRAPHIC LOG	SAMPLE TYPE & NUMBER	BLOWS per 6 in ASTM D1586 140 lb hammer 30 inch drop Automatic	REC ATT (in)	BLOWS / ft <u>20 40 60 80</u> WATER CONTENT (%) W, <u>W</u> 40 60 80 10	NOTES WATER LEVELS	ADDITIONAL LAB TESTING
 - 65 -	-		(CL), CLAY, low plasticity fines, some sand fine to medium grained; light brown to brown; cohesive, w < PL (continued) CLAY WITH SAND, sand fine to medium grained; brown				DO PZ-1-60	<u>50</u> ,	55			
 			Becomes gray		CL		PZ-1-70	22-26-32 58	<u>13</u> 18	58		
80 85 	Hollow stem auger.		(SC), clayey SAND, sand fine to coarse grained, subrounded to subangular, low plasticity fines, some gravel fine grained; red-brown; non-cohesive, moist	50.0	sc		PZ-1-80	44-25-28	<u>15</u> 18	53		
90	-		(CL), CLAY WITH SAND, sand fine to medium grained, low plasticity fines; brown; cohesive, w < PL Becomes light gray	<u>40.0</u>			PZ-1-90	15-18-32 50	<u>11</u> 18	50	94: Hard drilling, taking a long time to drill.	
100 100 105 105 105 110 110			Becomes light brown		CL		PZ-1-100	16-22-28	<u>10</u> 18	50		
110 		111.5	Becomes brown Bottom of borehole at 111.5 ft. (Target Depth) Completed as piezometer. Refer to diagram.	18.5			PZ-1-110	12-16-22 38	7 18	38		
	DF	RILLE).: Cascade Drilling, L.P. R: Tory Salazar G: CME 95			CH	DGGED: ECKED: IEWED:		<u> </u>	·	Golde	r ites

PRO	JEC	T NO.:	: WRSL Expansion Geotechnical Investigatio : 1649494 : Lincoln, CA	REC	COR	DRIL	LING END:	September September Not Survey	14, 20	Z-2 117 11:50 G 117 16:45 TO	SHEET: 1 of 2 S ELEV.: 118.0 C ELEV.: na DATUM: WGS84	
			SOIL PROFILE					SAMPLES		■ PENETRATION RESISTANCE		
0 UET II (ff)	BORING METHOD	0.0	DESCRIPTION	ੇ ਜ਼ 118.0	nscs	GRAPHIC LOG	SAMPLE TYPE & NUMBER	BLOWS per 6 in ASTM D1586 140 lb hammer 30 inch drop Automatic	REC ATT (in)	BLOWS / ft 20 40 60 80 WATER CONTENT (%) W, W, W	NOTES WATER LEVELS	
-		0.0	(CL), CLAY, low plasticity fines, some sand fine to medium grained; light brown; cohesive, w < PL	110.0	CL							
5		5.0	(SC), clayey SAND, sand fine to medium grained, low plasticity fines; light gray to light brown; cohesive, w < PL	1 <u>13.0</u>	sc		P2-5-5	7-9-11 20	<u>13</u> 18	20		
10 - -		10.0	(CL), CLAY, low plasticity fines, some sand fine to medium grained; light gray to gray; cohesive, w < PL	1 <u>08</u> .0_			PZ-2-10	5-9-15 24	<u>18</u> 18	- 24 ■		
<u>15</u> - -			Becomes brown gray mottled red				PZ-2-15	6-7-16 23	<u>18</u> 18	23		
20 -					CL		PZ-2-20	9-12-19 31	<u>18</u> 18	31		
5	uger.		CLAY WITH SAND, sand fine to medium grained; brown-gray mottled red				PZ-2-25	9-12-16 28	<u>18</u> 18	28		
0	Hollow stem auger.	30.0	(ML), SILT WITH SAND, sand fine to medium grained, low plasticity fines; brown-gray mottled red; cohesive, w < PL	<u> 88.0 </u>			PZ-2-30	7-12-13 25	<u>18</u> 18	- 25		
5		35.0 36.0	(SC-SM), silty, clayey SAND, sand fine to coarse grained, subangular, low plasticity fines; brown; non-cohesive, moist (CL), CLAY WITH SAND, sand fine to medium grained, low plasticity fines; light	<u>83.0</u> <u>82.0</u>	SC-SN		PZ-2-35	18-18-20 38	<u>16</u> 18	38		
0 -			gray-brown mottled red; cohesive, w < PL Becomes gray				AS PZ-2-40	12-22-26 48	<u>17</u> 18	48		
5			Becomes light brown to light gray mottled red		CL		PZ-2-45	9-15-27 42	42 <u>17</u> 18	- 42 ■		
0			Becomes light brown				PZ-2-50	13-20-23 43	<u>17</u> 18	- 43 •		
5 - - - - - - - - - - - - - - - - - - -		60.0	Log continued on next page	<u>58.0</u>								
	DR	RILLE	C.: Cascade Drilling, L.P. R: Tory Salazar G: CME 95		1	СН	DGGED: ECKED: IEWED:				Gold	er ate

PRO	JEC	T NO.:	WRSL Expansion Geotechnical Investigatio 1649494 Lincoln, CA	nec	OR	DRIL	LING END:	September September Not Survey	14, 20	17 16:45 TO	SHEET: 2 of 2 S ELEV.: 118.0 C ELEV.: na DATUM: WGS84	
			SOIL PROFILE					SAMPLES		■ PENETRATION RESISTANCE		10
	BORING METHOD		DESCRIPTION	Elev	nscs	GRAPHIC LOG	SAMPLE TYPE & NUMBER	BLOWS per 6 in ASTM D1586 140 lb hammer 30 inch drop	REC ATT (in)	BLOWS / ft <u>20 40 60 80</u> WATER CONTENT (%) W _p <u>W</u> U	NOTES WATER LEVELS	ADDITIONAL LAB TESTING
<u>60</u> - - 65			(SC), clayey SAND, sand fine to medium grained, low plasticity fines; red-brown; cohesive, w < PL	58.0	SC		PZ-2-60	Automatic 12-18-24 42	<u>16</u> 18	20 <u>40</u> 2 60 80 ■		
70			(CL), sandy CLAY, sand fine to medium grained, low plasticity fines; brown; cohesive, w < PL	<u>48.0</u>			PZ-2-70	17-21-34 55	<u>15</u> 18	55 ■		
80	em auger.		CLAY WITH SAND; light brown-gray				PZ-2-80	13-21-36 57	<u>11</u> 18	57		
90	Hollow stem auger.		Becomes brown to dark brown		CL		D0 PZ-2-90	13-27-31 58	<u>18</u> 18	58		
100			Sandy CLAY, sand fine to medium grained; gray-brown				PZ-2-100	17-23-26 49	<u>17</u> 18	49 ■		
<u>110</u>	-	111.5	Becomes brown Bottom of borehole at 111.5 ft. (Target Depth) Completed as piezometer. Refer to diagram.	6.5			PZ-2-110	21-26-32 58	<u>15</u> 18	58		
	DF	RILLE	D.: Cascade Drilling, L.P. R: Tory Salazar G: CME 95			CH	DGGED: ECKED: IEWED:				Gold	er ates

APPENDIX B

Laboratory Test Results - Bag Samples

CH2M/WPWMA PLANNING & PERMITTING/CA SUMMARY OF SOIL DATA

	1		50ēl	Natural						Grain Seze		1						
									Distribucion			Compaction						Addicional
Ssingle	Sample	Sample	Classis	Moisture					W. Flatter	Se Floer 56 F	% Finer	Ma cimem	Optimum Maisture		Unit Weight		Permeability	'T esta
Tdentification	Type	Depch	ficacion	- 76					No. 4	No. 200	.005	Dry Density		Gs	Molstare	Div	(covsec)	Conducted
					۱_۲	P.I.	P.I.	L.I .	Sieve	Sleve	mm	(lb/cufi)	76		76	(Ili/eufe)		(See Notes)
RG-1- 5	Rog	5.0	(SM)	L4.6	-	-	-	•	100.9	48.3	-		-		-	-	-	
BG-1-20	Bag	20.01	CL	25.8	36	22	14	0.2R	100.0	80.3	-			•				-
BC=1-70	Bag	70,01	(5M)	22.3	-	-		•	98.6	37.9	-	-	-	-	-		-	-
BG-2-5	Bog	\$.û*	ML	23.8	39	26	13	-n.1x	700.0	B4.2	28.0		•	·			•	-
BG-2-15	Beg	15.0"	(844)	23.8	-	•	-	-	100.0	12.3		-	-	-	-		-	-
8G-2-35	Bag	35.0'	ML	26.3	31	Zĥ	5	11.03	100.0	76,]	15.0	-	-		-			-
BC-2-50	Beg	511.Ų'	(\$546	19,7	-	-			99.9	42.8		-	-	-	-	-	-	
8G-3-30	Dag	30.01	CL	17.2	м	20	14	-0.21	99,6	60,7	275	-	-		-		-	
86-3-50	Reg	50.01	(ML)	21.6	-	-		-	100.0	76.7	-	-	-	-	-	-	-	-
BG-3-70	Bag	70.0'	CL	14.0	37	21	<u></u> [6	-0.41	93.3	34.3	19.5		-	-	-	-		
PZ-1-5	Rag	.5.0'	P1C	20 •	37	30	7	-1.40	99.9	85.3	19.0	-	-	-	-	-	-	-
PZ-1-40	Bag	40.0'	CL	19.7	43	24	1.4	-U.21	108.0	63.7	33.0	-	-	-	-	-		-
P2-1-30	Hag	79.0'	(80)	[],2	-	-	-	-	91.8	23.2		-	-	-	-	-	-	-
PZ-3-10	Bag	10.01	CL	22.0	35	20	15	0.12	100.0	88.7	24.P	-	-	•	-	-	-	-
PZ-2-30	Bag	30.01	ML.	28.2	44	29	15	-0.03	100.0	78.1	25.0				-	-	-	-

ABBREVIATIONS: LIQUID LIMIT (LL) PLASTIC LIMIT (PL) PLASTICITY INDEX (PI) LIQUIDITY INDEX (LI) SPECIFIC GRAVITY (Gs) MOISTURE (Ms)

NOTES: T - TRIAXIAL TEST

U = UNCONFINED COMPRESSION TEST

- C = CONSOLIDATION TEST
- DS = DIRECT SHEAR TEST
- 0 = ORGANIC CONTENT

Р = pH

CH2M/WPWMA PLANNING & PERMITTING/CA SUMMARY OF SOIL DATA

Sample Identification	Sample Type	Sample Depth	Soll Classi- fication	Natural Moisture	Alcotherg Limits					Grain Size Distribution Vo Finer No. 200		Campa Maximum Dry Density	oyliun Oplémum Meisture	Gs	Unil Weight Moisture Dry		= Permeability (em/sec)	Additional Tests Conducced
					L.L.	P.L.	P.f.	ĿĹ	Sleve	Saeve	mm.	(lb/cult)	%		%	(ib/cult)		(See Notes)
<u> ሃደ-2-60</u>	Heg	60.1P	SC	15.2	30	20	10	-0.12	99.7	38.2	17,5	-	-	-	-		-	-
			1															
													11					
					i													
										-								
																		-

ABBREVIATIONS: LIQUID LIMIT (LL)

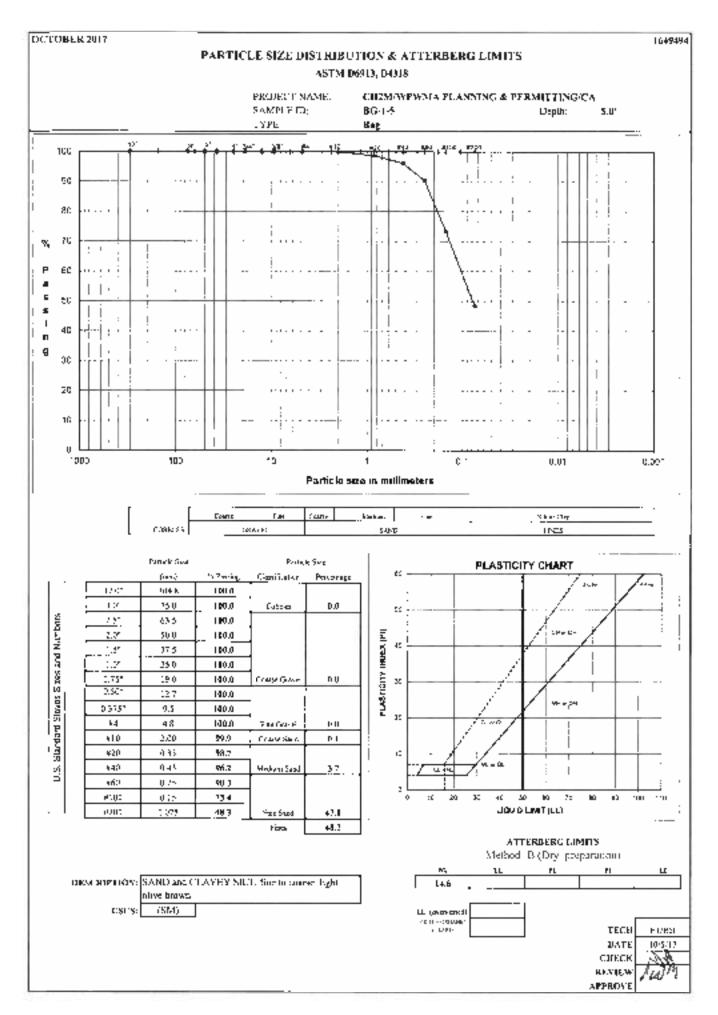
PLASTIC LIMIT (PL) PLASTICITY INDEX (PI) UQUIDITY INDEX (LI) SPECIFIC GRAVITY (Gs) MOISTURE (Mr)

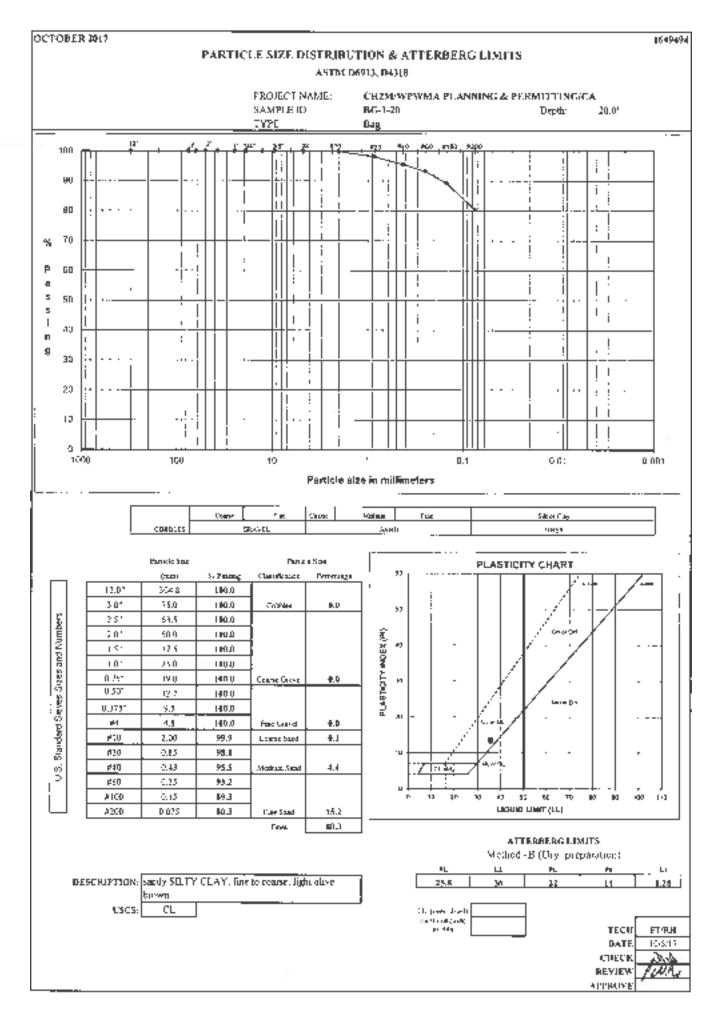
NOTES: T - TRIAXIAL FEST

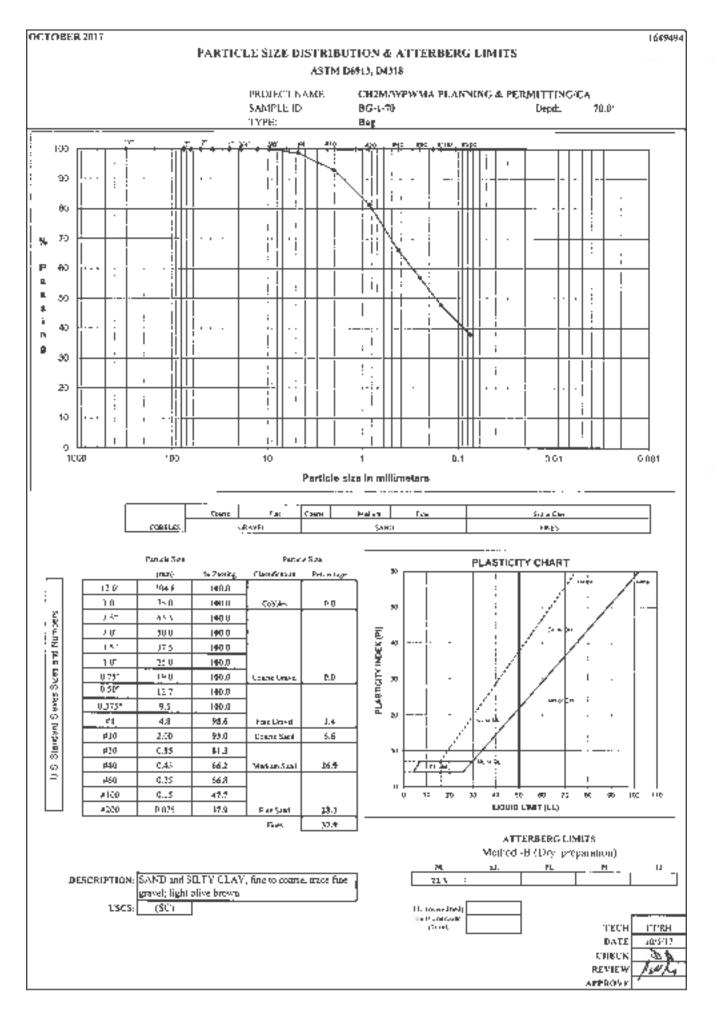
1. = GNCONFINED COMPRESSION TEST

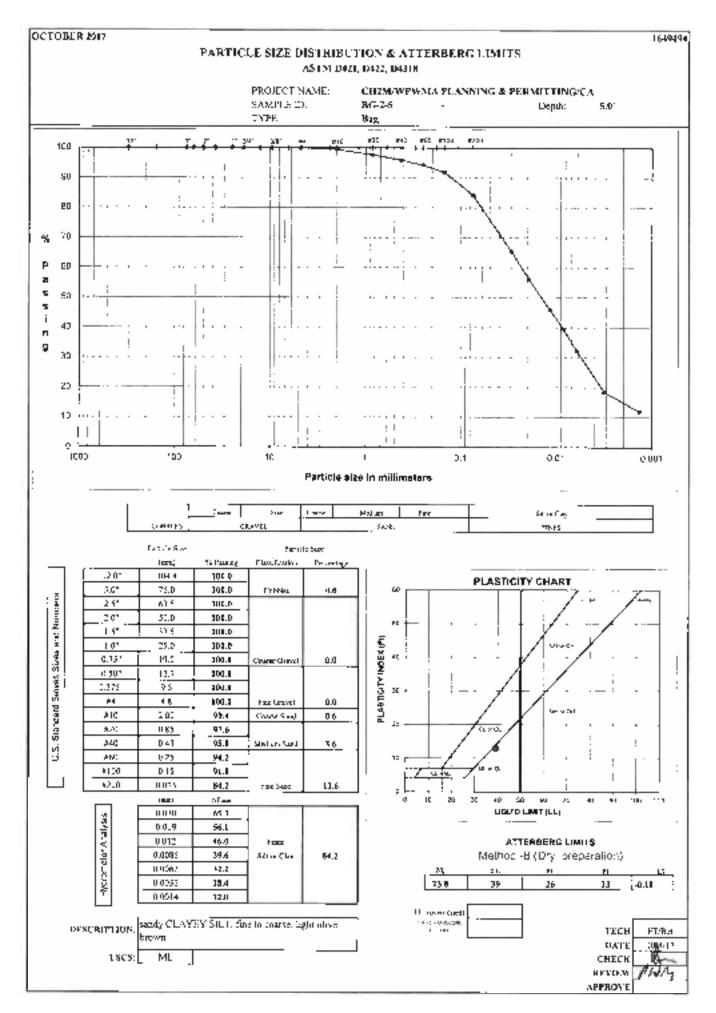
- C = CONSULIDATION TEST
- DS DIRECT SHEAR TEST
- 0 ORGANIC CONTENT

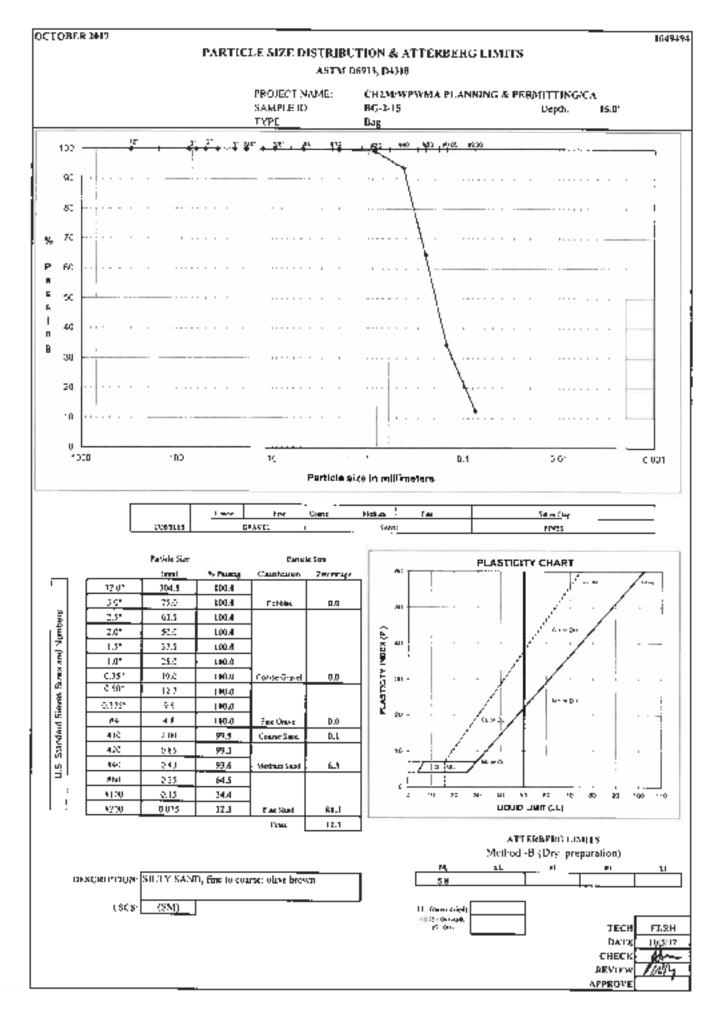
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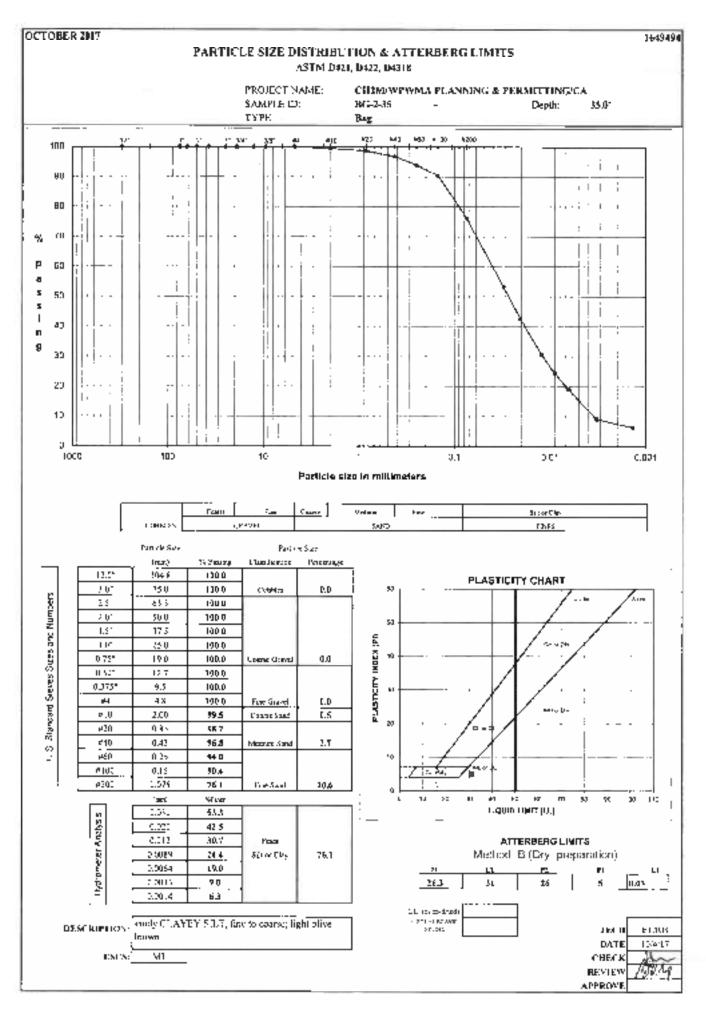


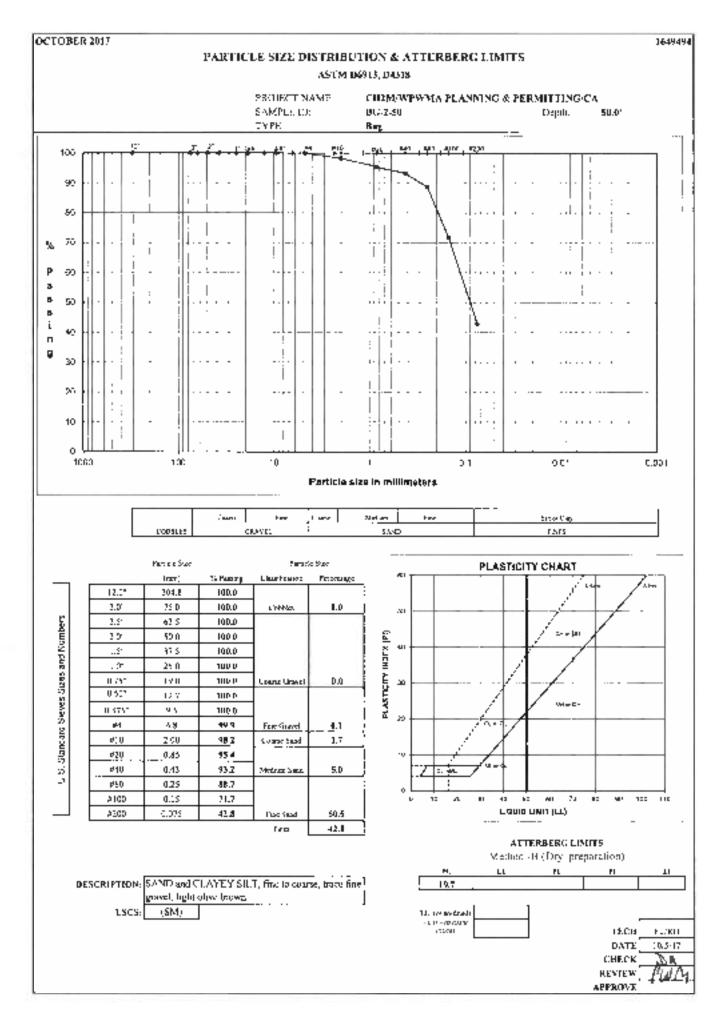


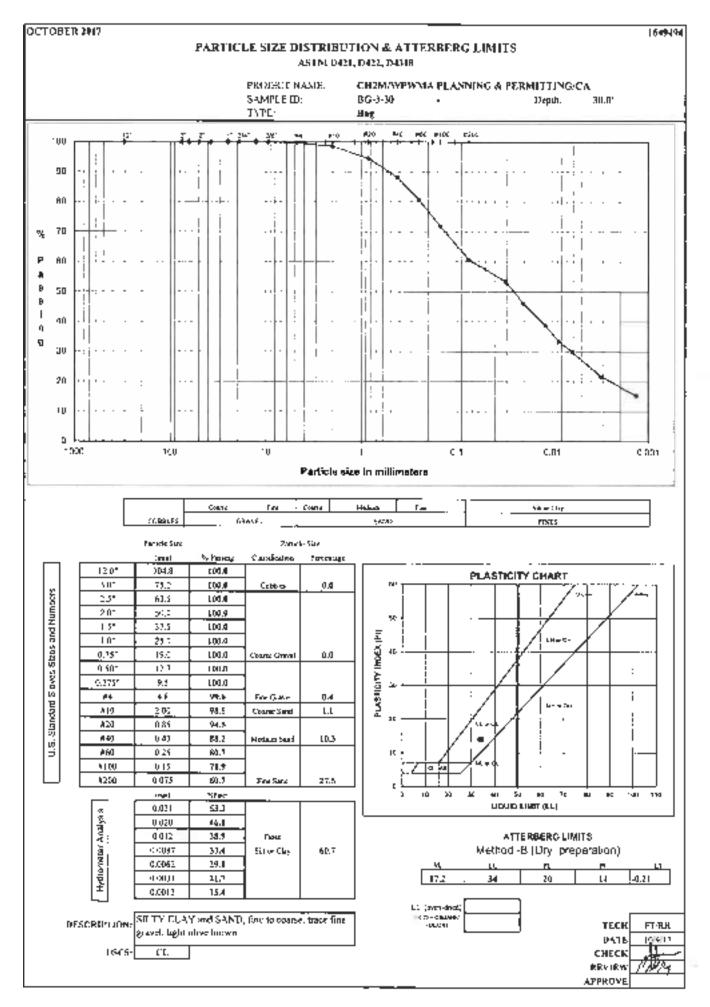


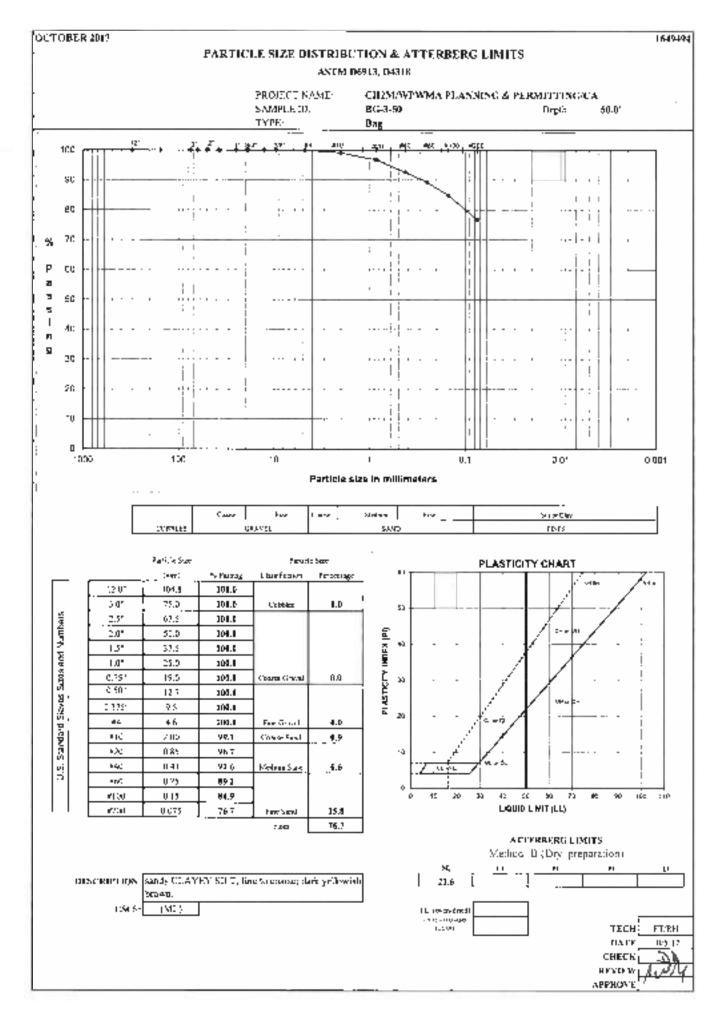


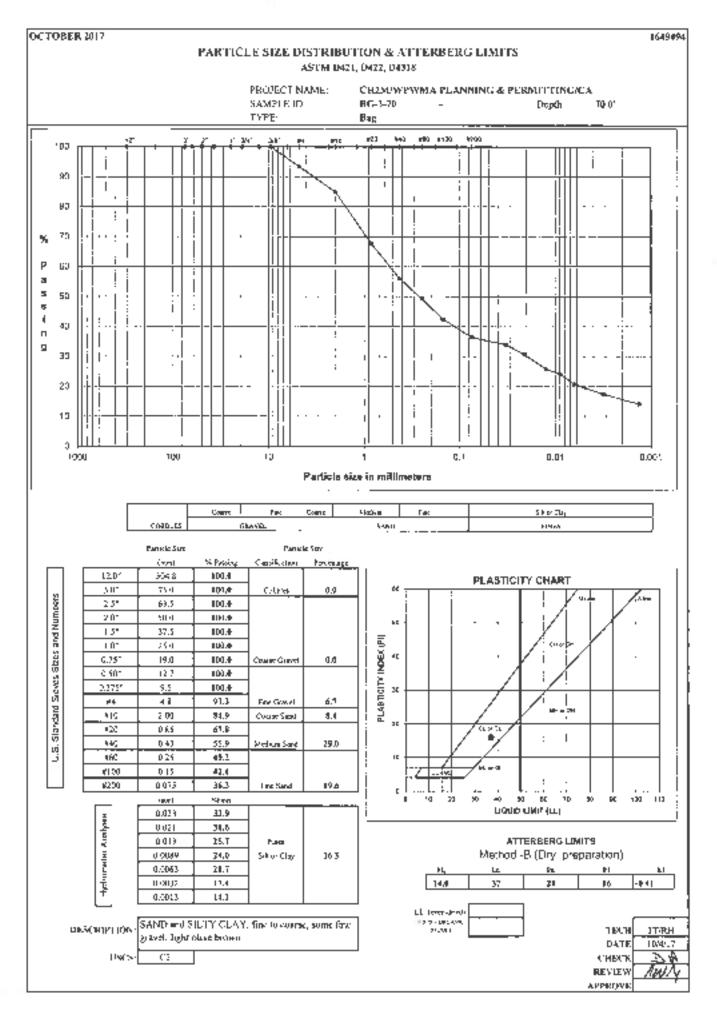
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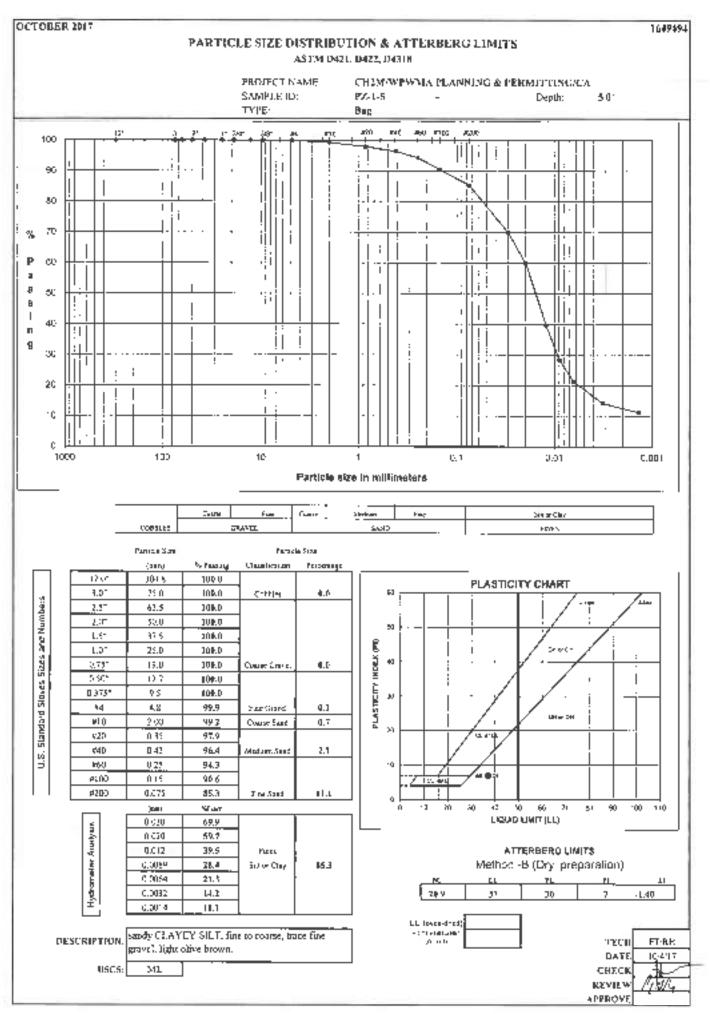




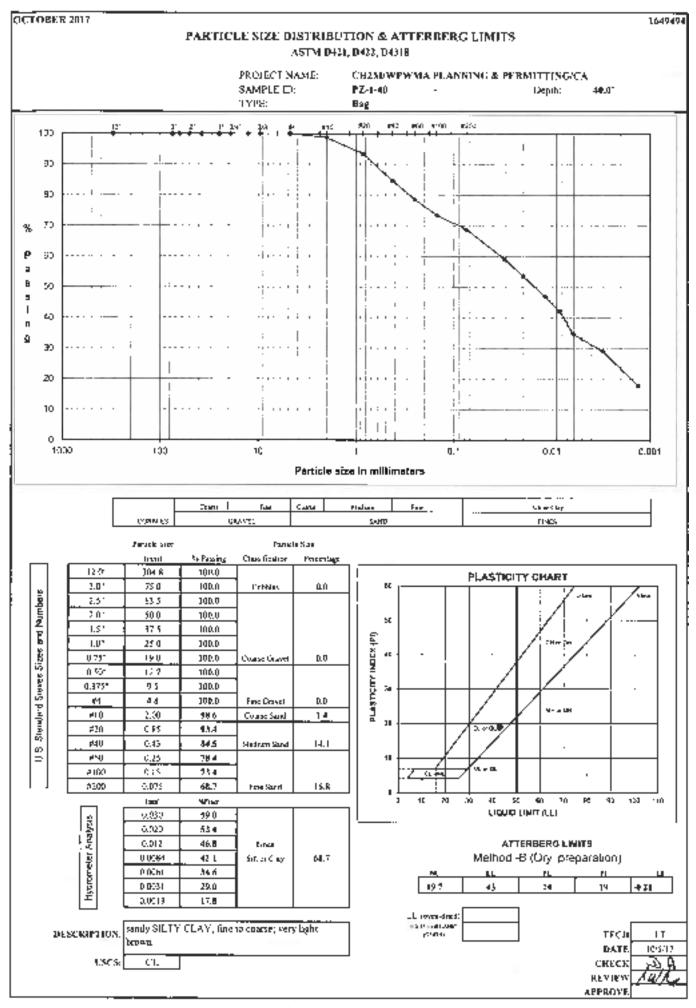




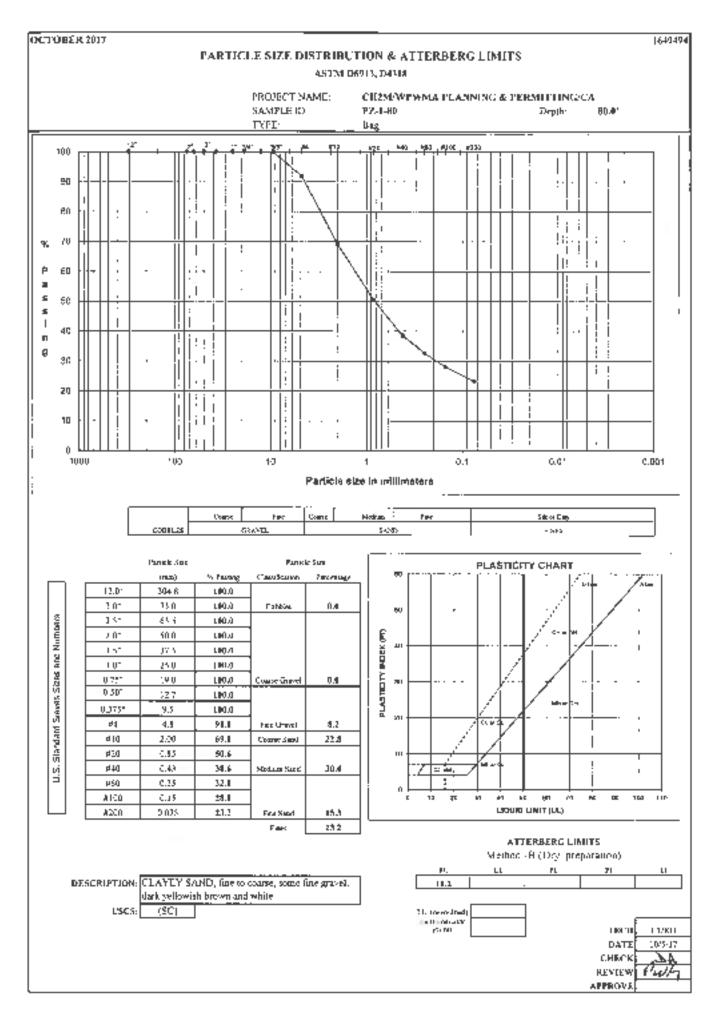


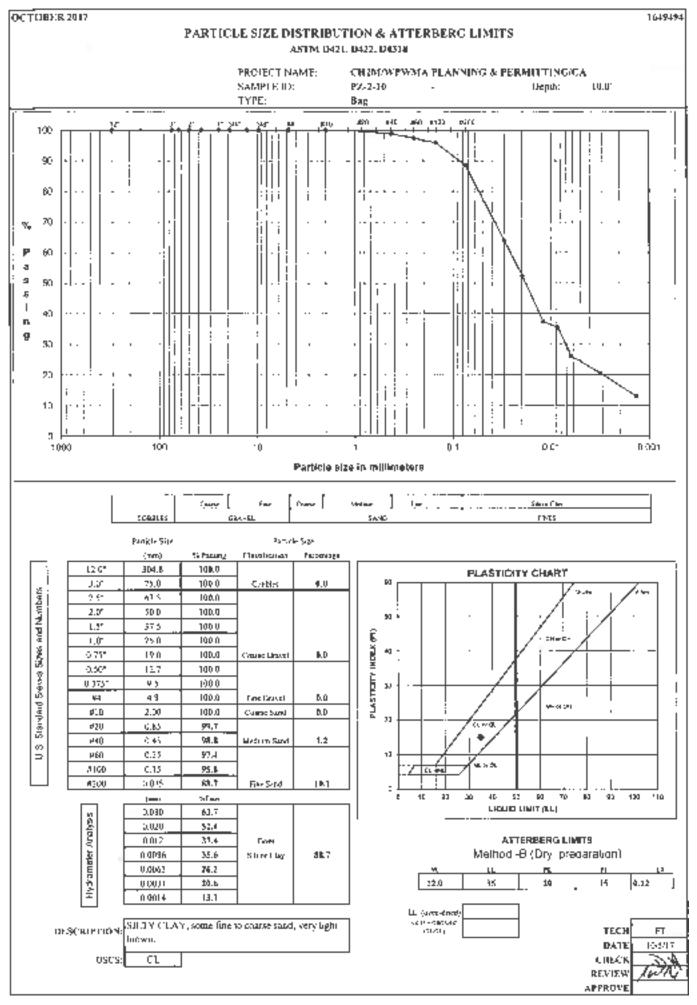


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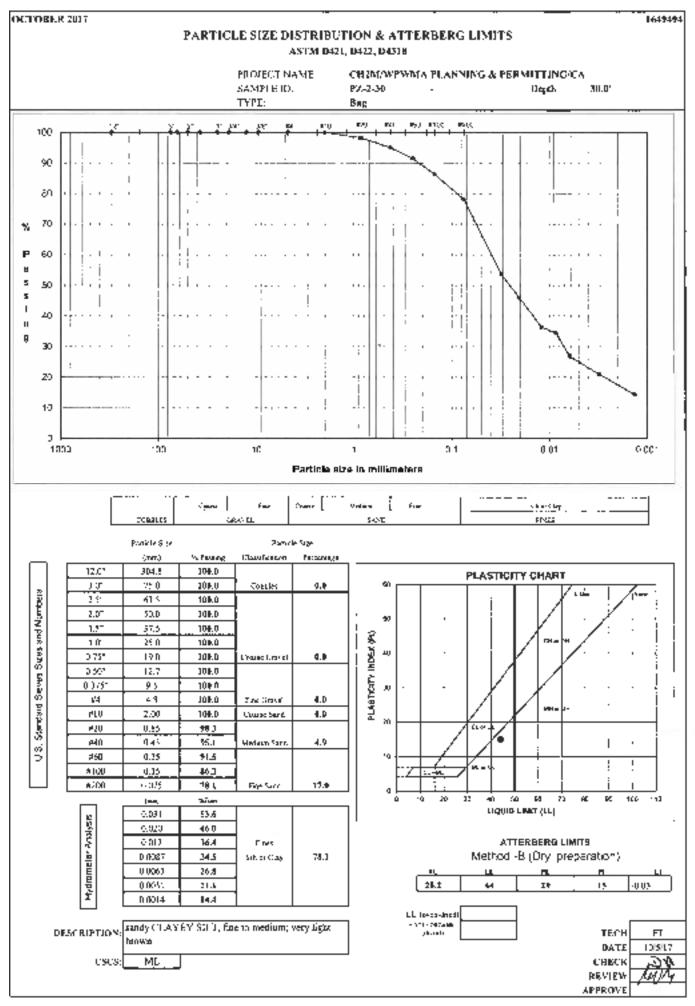


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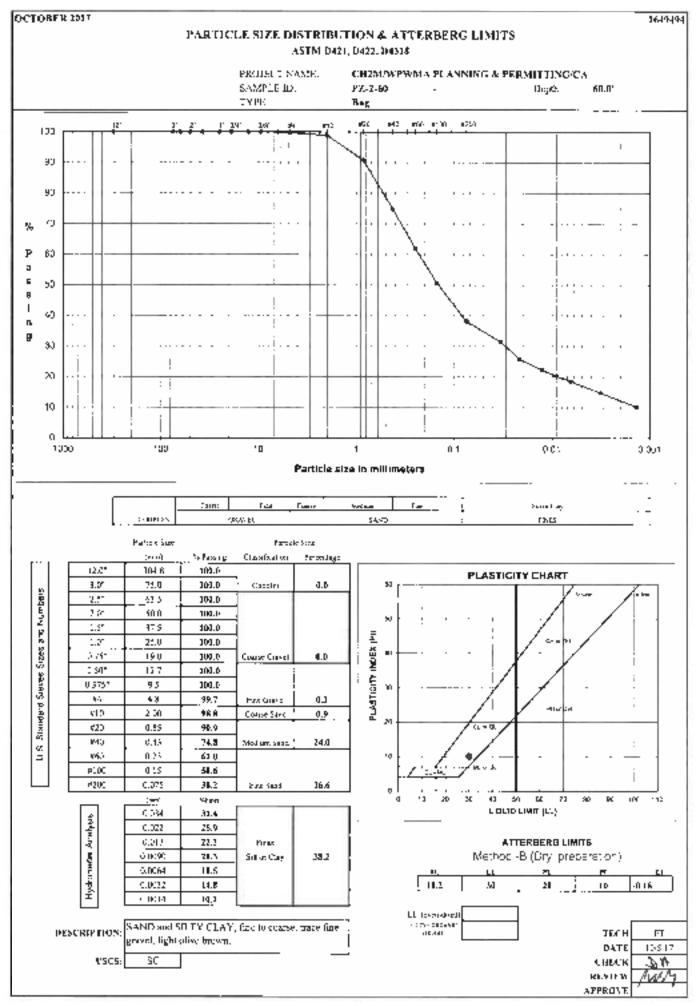




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APPENDIX C

Laboratory Test Results - Bulk Samples

CH2M/WPWMA PLANNING & PERMITTING/CA SUMMARY OF SOIL DATA

				Netwral						Grain Size								
			Soft				rberg		Distribution			Сотра					1	Addisional
Sample	Sample	Sample	Cleasi-	Moisture		Li	imlts		% Finer	% Finer	% Noer	Maximum	Optimum		Unit Weight		Permeability	Tests
Identification	Type	Depth	fication	%					No.4	No. 200	.005	Dry Densily	Molstere	Ga	Molsters	Dry	(moulsys)	Conducted
					ILL.	P.1_	P.I.	L	Sleve	Sleve	0179	(Unica11)	76		%	(ib/cofi)		(See Notes)
RG-1	Ruik	25.0-40.01	a	20.9	41	20	21	0.02	. 100.0	76.3	44.0	109.5	16.2		LĤ.U	98.8	1.5E-07	-
BG-1	Bulk	58.0-60.0'	cı	34.0	35	17	18	0.93	100.0	67.5	34,0	0.411	12.9		-	-	-	-
HC2-2	Bulk	20.0-25.01	CL.	21.2	40	20	20	0.07	100.0	76.8	46.0	114.1	16.7		18.7	103.1	4.71C-00	-
DG-J	Dulk	5.0-16.01	CL.	24.6	43	23	30	0.06	IIIO.#	H4.9	48,5	108.6	17.8	-	20.5	97.A	1.6E-07	-
8643	Bulk	10.5-15-0	a	17.5	37	17	20	0.00	100. 0	69.6	39.5	119.0	13.2	-		-	-	-
BG-1	Dailt	20.0-25.0	sc	10.Û	30	17	в	-0.53	LNN.D	49.7	30.0	126.4	30,3	-	-	-		-
PZ-1	Reik	11.0-15.0"	SC-5M	6.9	19	15	4	-1.16	100.0	0.0	21.0	127.0	10.0	-			-	-
PZ-1	Delk	15.6-30.01	CL	25.2	41	21	20	0.35	1IIII.P	\$5,2	42.6	113.3	17.0	-	18.3	102.8	5.0E-0\$	-
P7-7	Belk	40.0-45.0*	a	25.3	0	22	21	0.12	100.0	78.2	53.7	115.Û	15.7	-	17.H	LII3.3	2.6K-07	-
						[
			12.0															

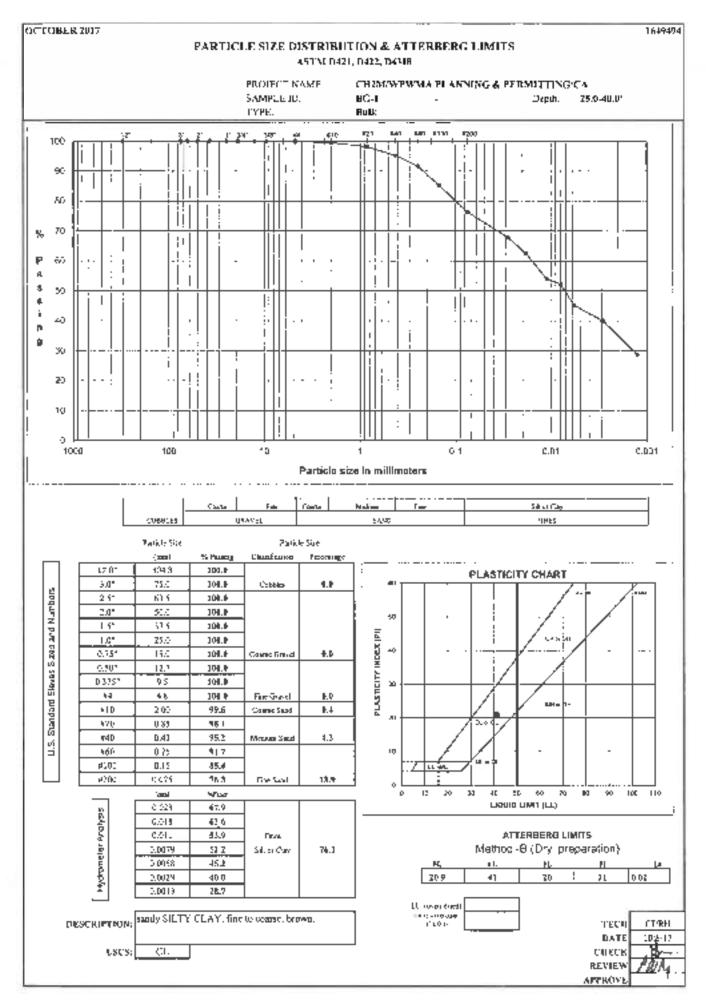
ABBREVIATIONS: LIQUID LIMIT (LL) PLASTIC (JMIT (PL) PLASTICITY INDEX (PI)

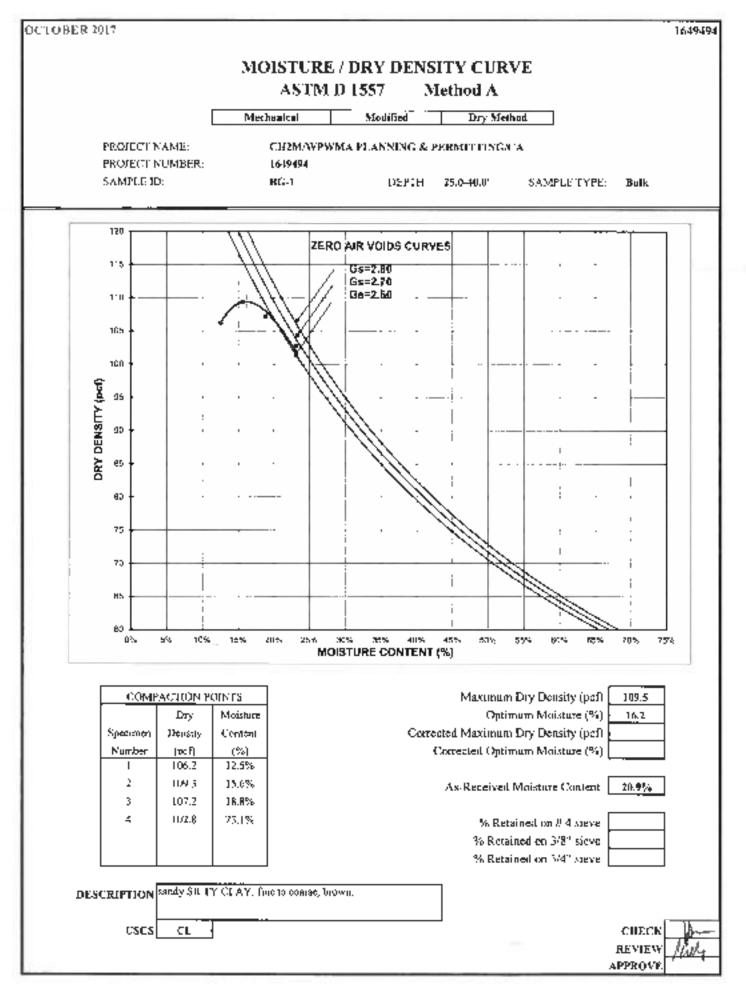
FLASTICITY INDEX (FI) LIQUIDITY INDEX (LI) SPECIFIC GRAVITY (Gr) MOISTURE (Me) NOTES: T ~ TRIAXIAL TEST

U = UNCONFINED COMPRESSION TEST

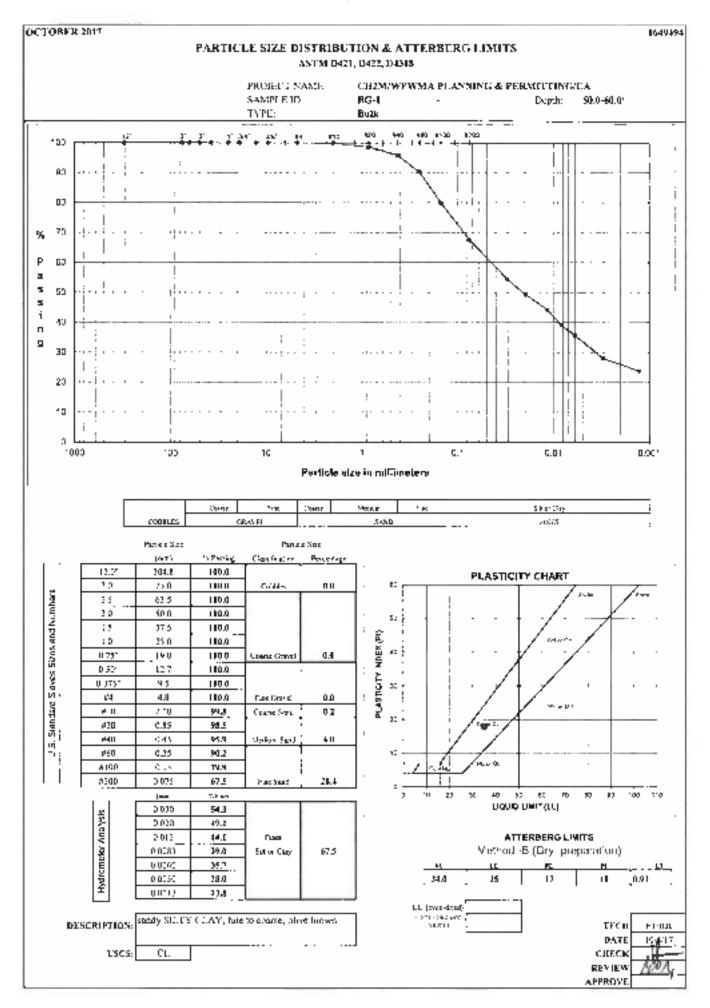
- C CONSOLIDATION TEST
- DS = DIRECT SHEAR TEST
- O = ORGANIC CONTENT:

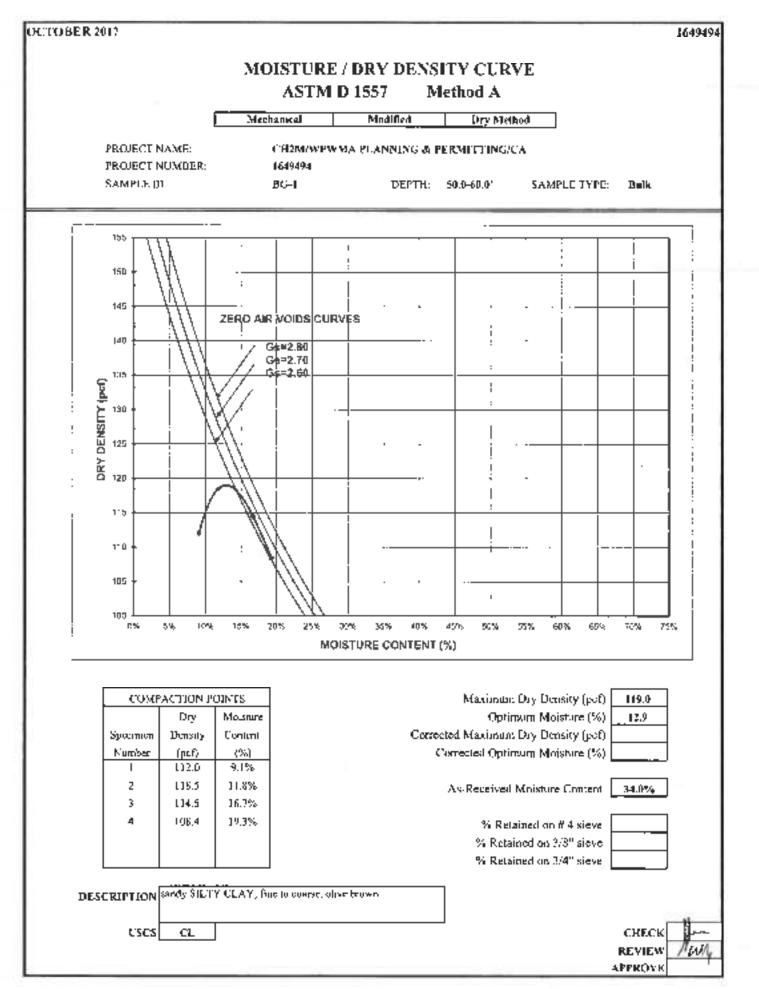
P = pH

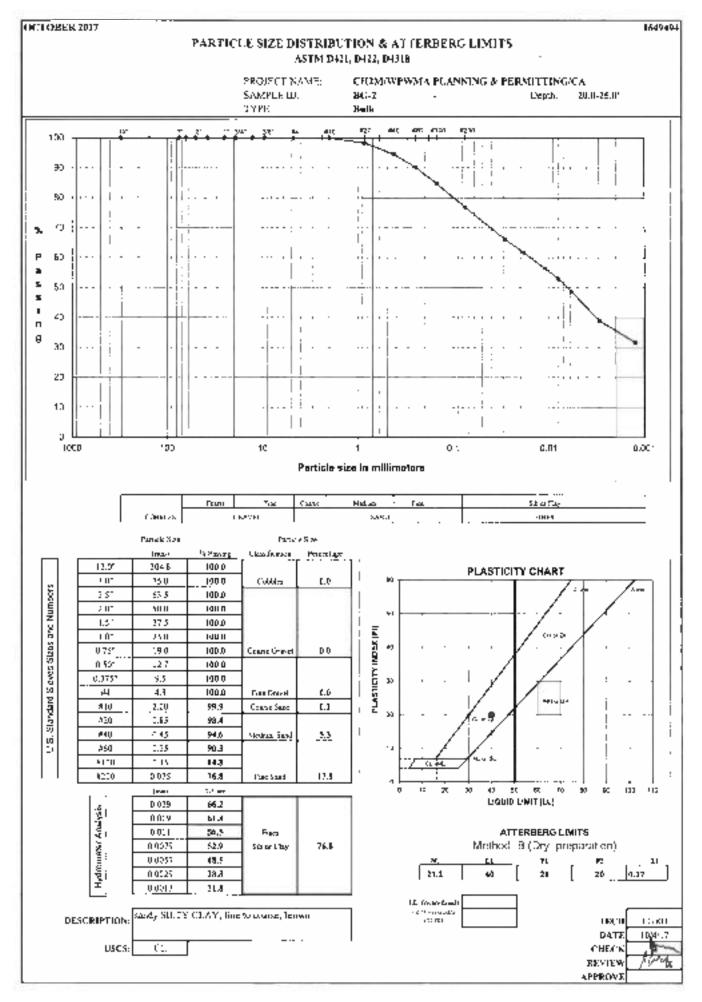


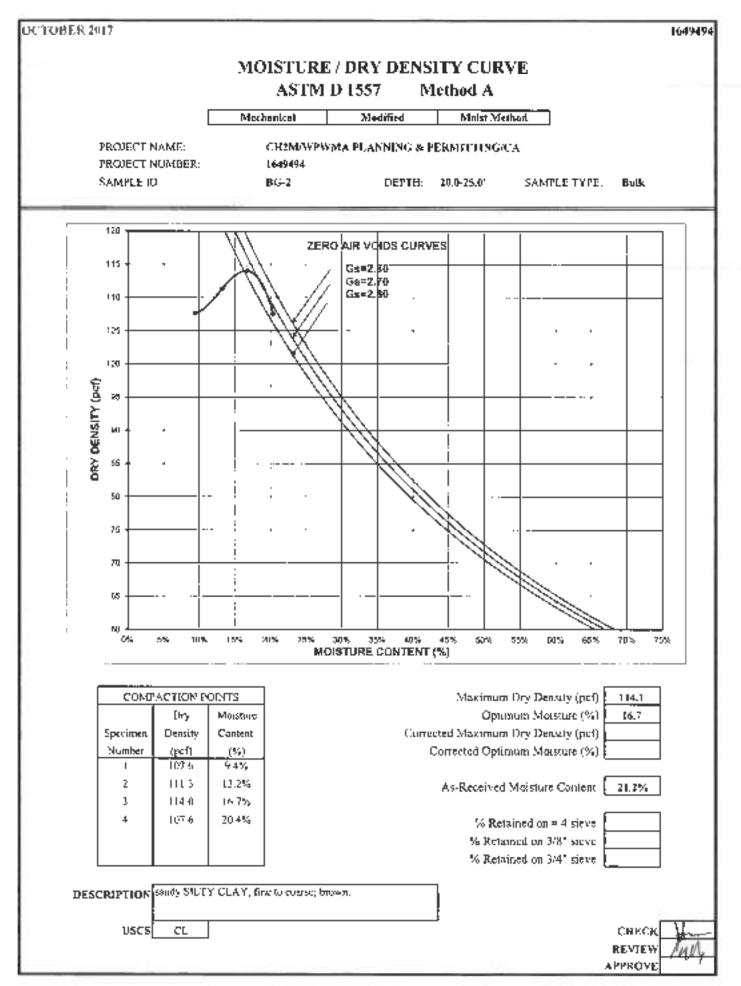


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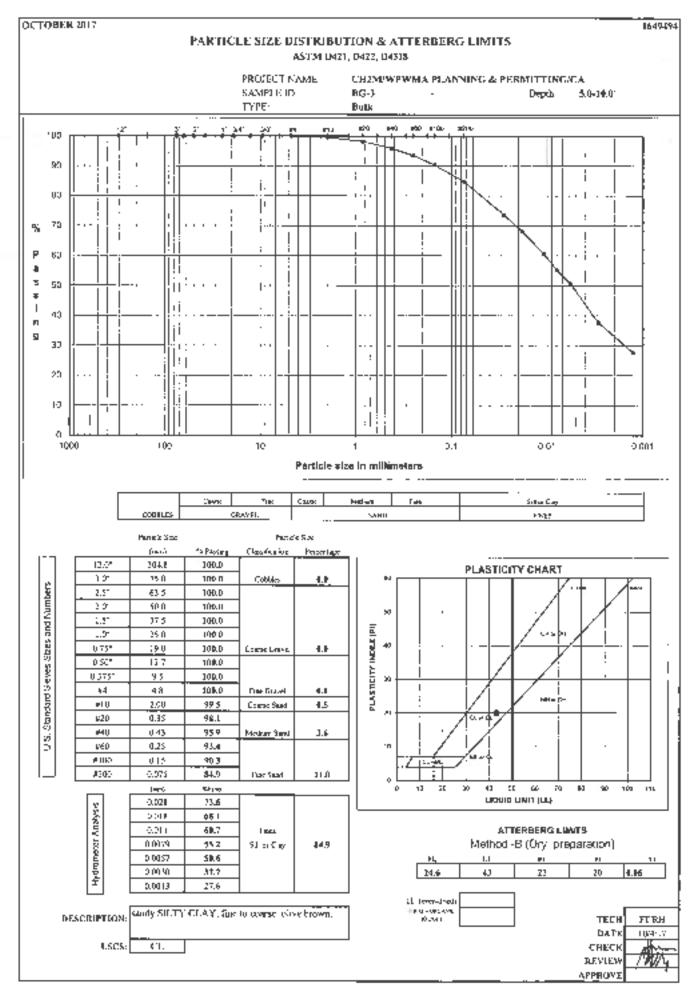




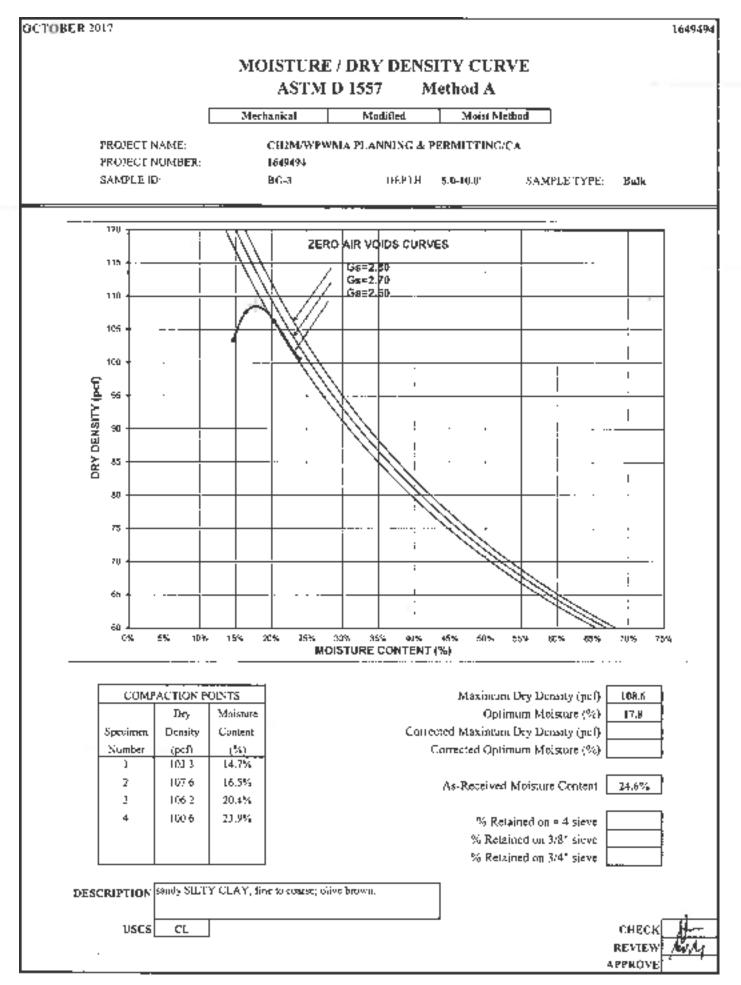




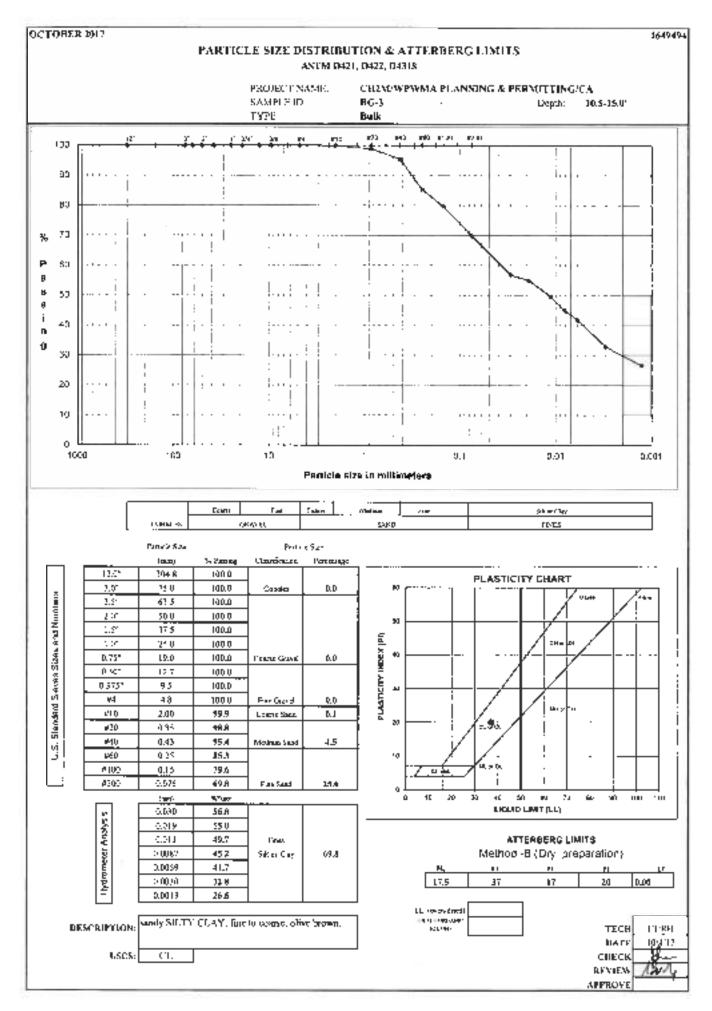
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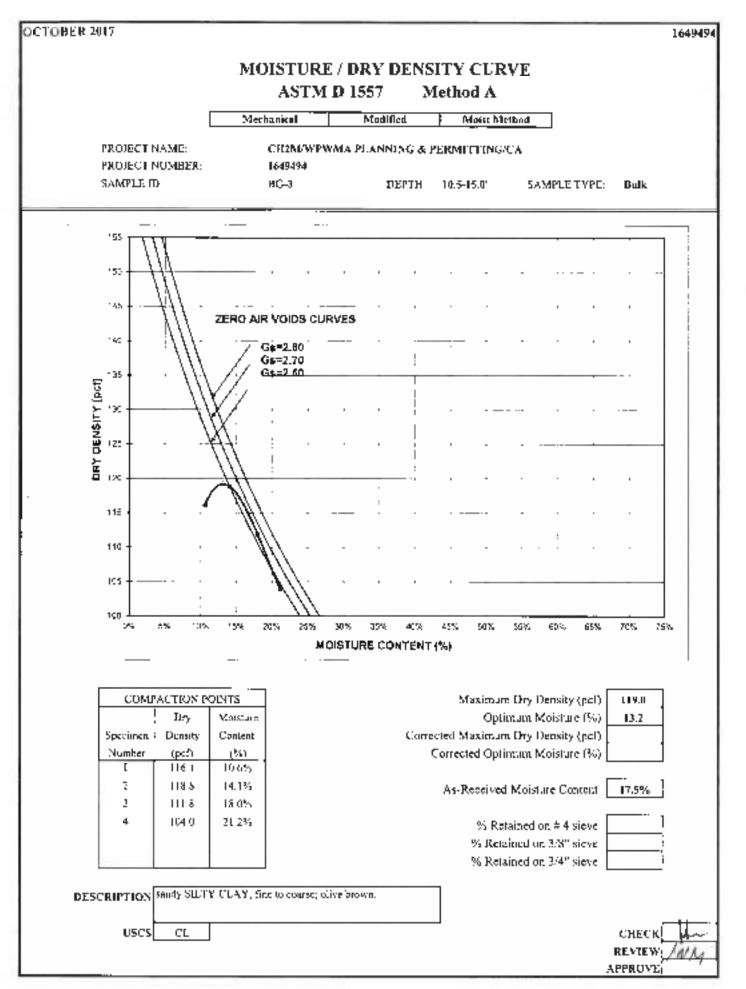


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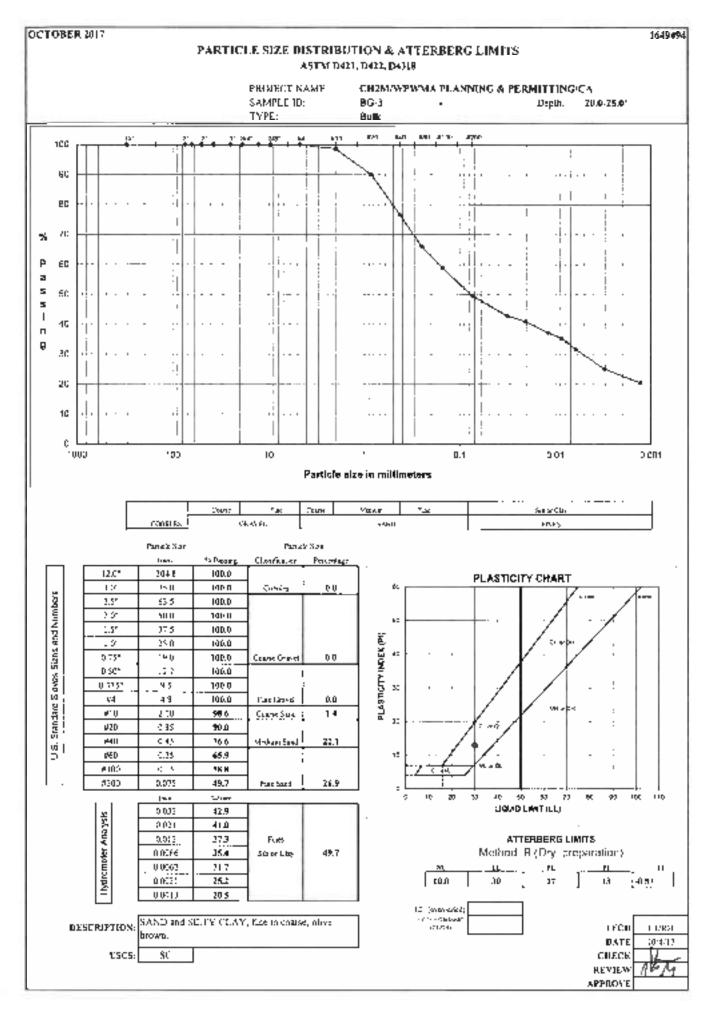


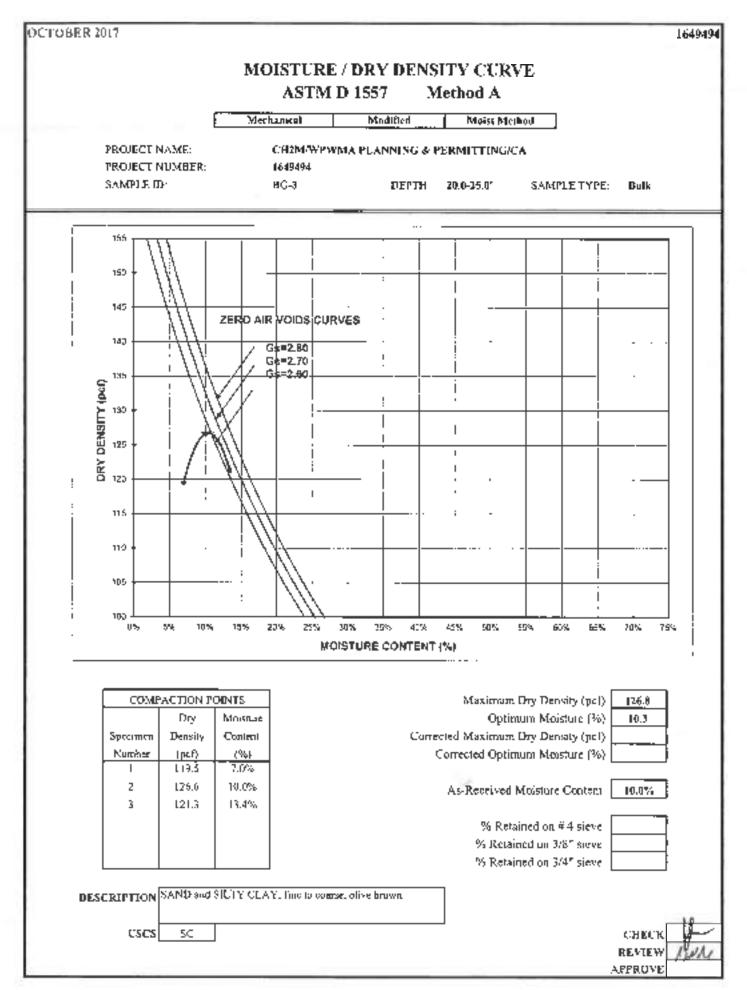
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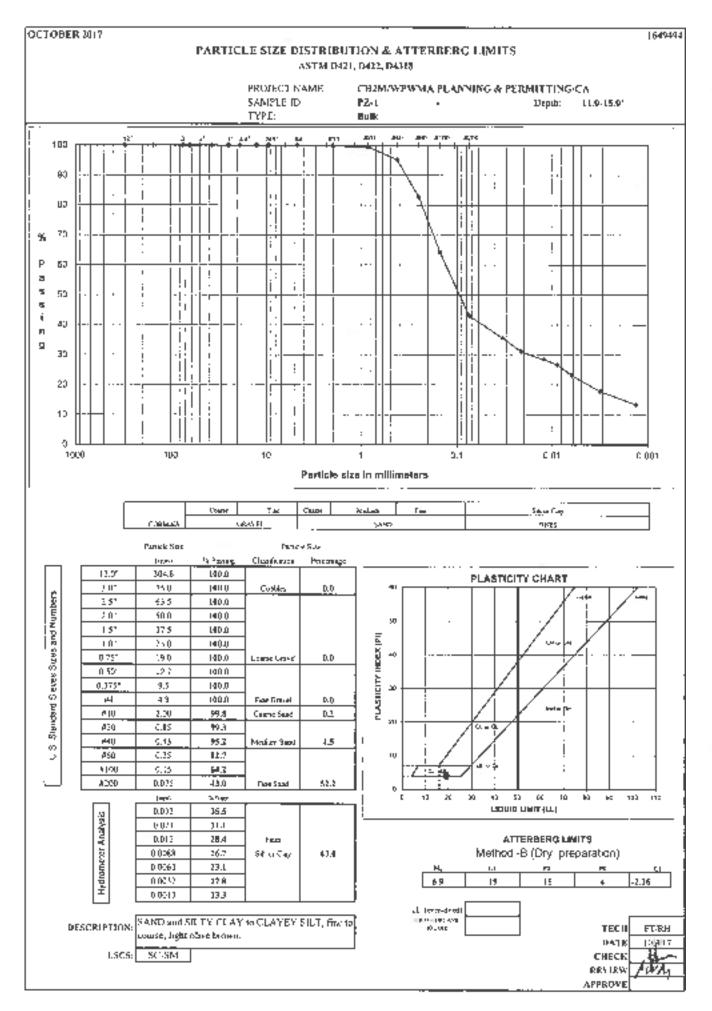


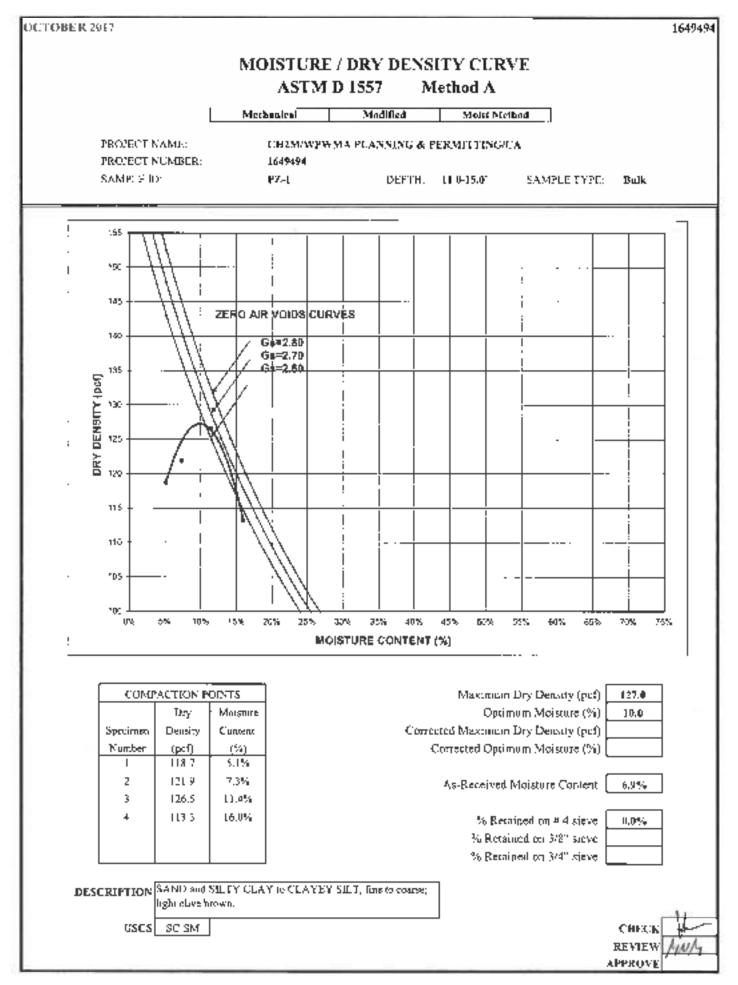
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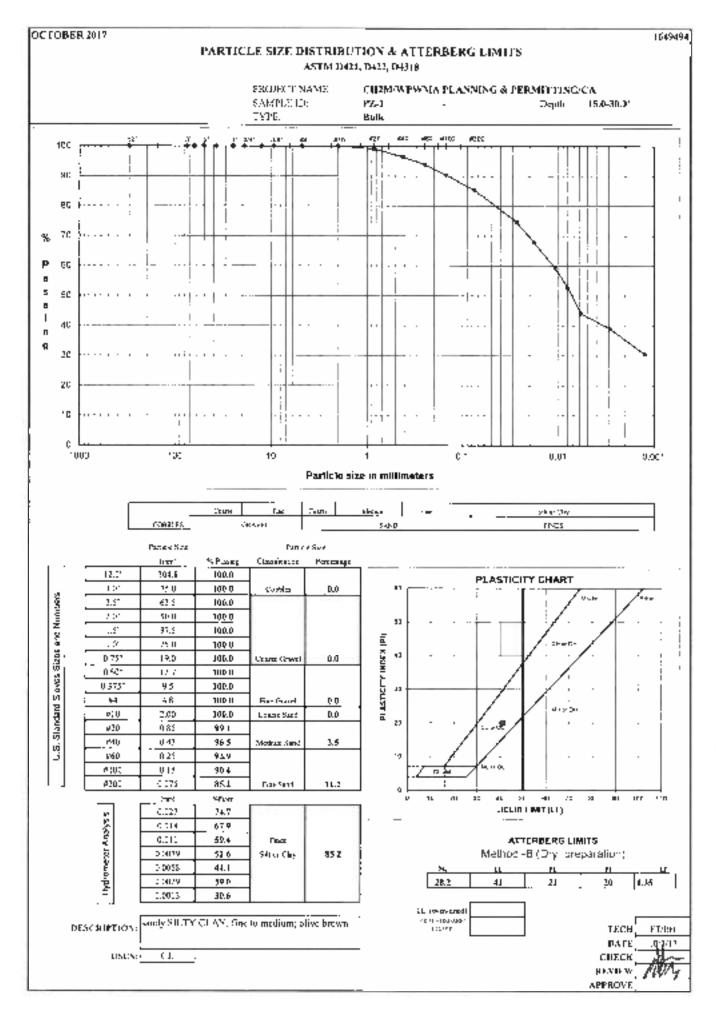


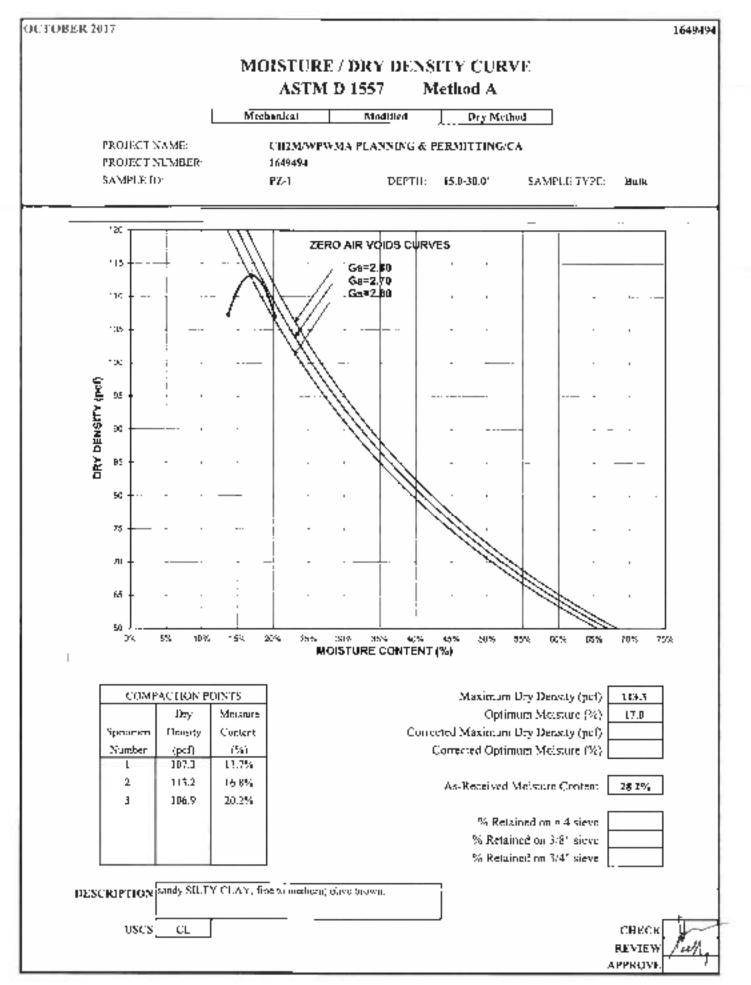
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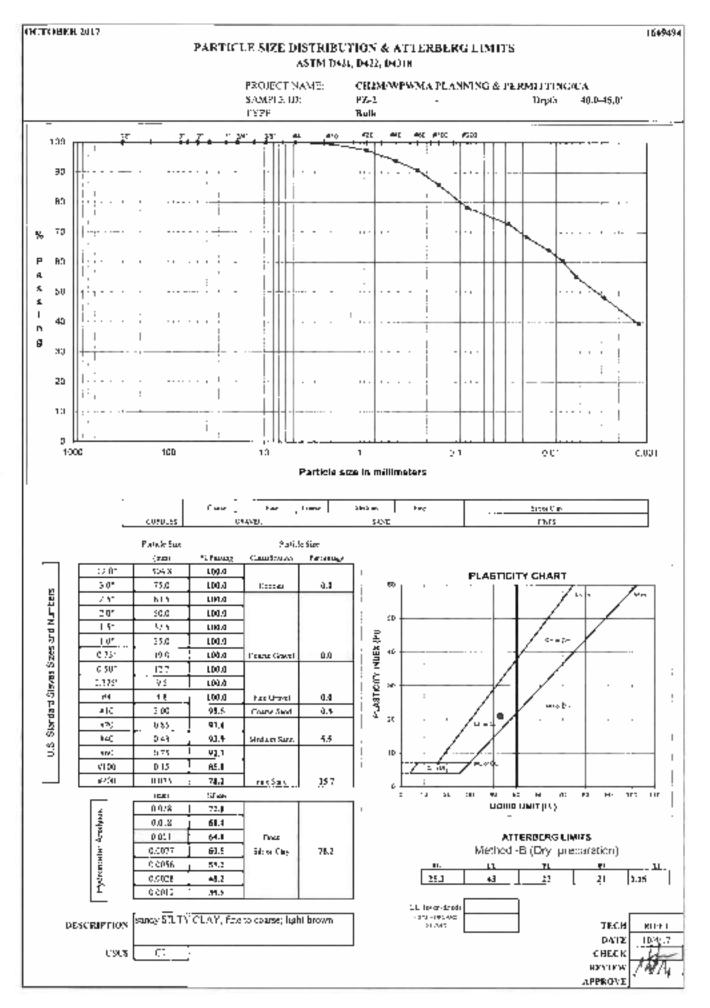


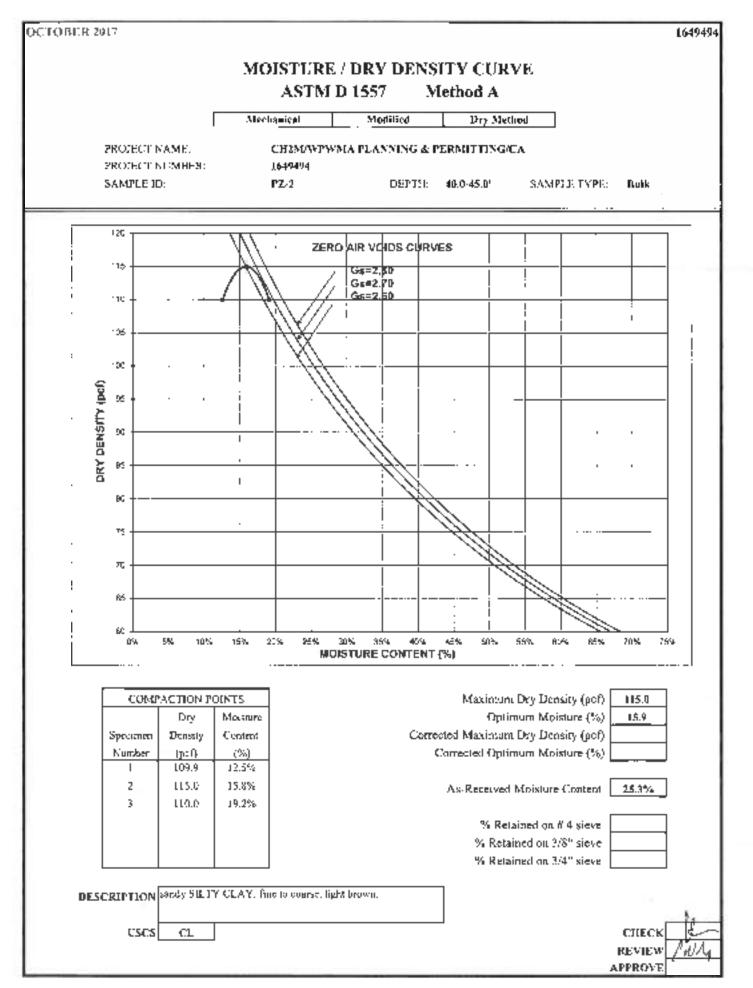
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						FI.EXIB	LE WALL I	PKRMEAR	II.ITY				
							AST'M D	5084					
					و	METHOD	E CONSTAL	NE RATE (OF FLOW				
ROLECTIONS	CH 2M/WP	WMA PLANN	ING A FERM	ITTINGCA		licard d	· · ·] c	OMMENTS			ded to 90.2% at the Maximum Dry	Density and
ROJECT NUMBER	1649494					Now Pump	2			OPIM 11	.9% (using /	US (M D 1557).	
ŜAMFLE ID	H4G-1		25.P	40.0'	Flaw (^o ump Spred	U U						
SAMPLE TYPE	Ú laik				J	Technician	NDM						
						_							
iomple Data, Initial					Sample Da	ta, Final							
leight, inches	2.994	B-Value, f	4.97		Height, inc	hes	3.066					Sample	Sample
lianseter, inches	2,791	Cell Pres.	10.0		Diameter, i	ches	2.807		WATER C	ONTENTS		Enielal	Final
ren. cm ³	39.44	Bot. Pres.	- 8 91.0	ł	Area, cm ²		39.92		W) 508 & 1	Fare, i	5	561.17	620.09
'olume, cm ²	299.95	Top Pres.	80.0		Valume, en	n'	310.92		Wi Soil & 1	Fàre, 1	e .	475.08	485.56
law, g	561.17	Tol. B.P.	\$0.0		Man, g		609.66		Wi Tare		E .	0.00	10.67
feislare Content, %	18.12	Head, mare	146.31		Moistary C	•	28.33		W1 Maketur		*	86.09	134.53
ry Density, pef	98.83	Head, min.	146.31		- Day Denvil Volume Sol		95.35		W1 Dry Sal		R.	475.03	#74.89
pec. Gravity (assumed		Mex. Grad.	18.79				175.99		Water Con-	len1	%	88.3 2%	28.13%
folume Solids, cm ³	175.95	Min. Cred.	18.79		Volume Vo		134.97						
/slume Vaids. cm ²	124.00	-			Void Relia		0.77						
/aid Ratio	0.70	-			Saturation.	. 26	99.7%	I	DESCRIPT		Ine 10 CONTSC		
alutration, %	69.4%								Isonoy ALCI	I CLAT, I	ine to contac	; Morris.	
	Lines France		1.126-04			uses	<u>ς</u> ι.	1					
	Hew Fum	p mare				0.5L N	ξι.	•					
•			-										
		IIM	FUNCTE	INS, SECO	NDS			dF]
DATE	DAY	HOUR	MIN	TEMP	da 🕹	dr.acc	dť	dt,ace	Reading	Head	Gradient	Permeability	
				<i>0</i> 5	(mvin)	(mim)	(sec)	(sec)	(psi)	(1=1)	ļ!	(em/sec)	
HI/LIM AT	7 434024	R	IÐ	20.0	•	n	0	0	2.08	146.31	18.79	1.3£107	
10/16/1		к	15	20.0	5	5	. ANN	30N	2.08	146.38	1879	1 SE-07	
10/16/3		к	20	20.0	5	In	.ALU	600	2.08	146.31	18 79	1 SE-07	
10/16/1	7 43024	s	25	20.0	5	15	300	9NQ	2.0B	1+631	1879	1 5E-07 *	
10.1951.		4	39	20.0	- 3	20	JOO	1200	2.08	166.31	18.79	1.5E-07 *	
10/16/3	· ·	8	35	20-0	5	25	300	1500	2.08	166.)(18,79	1.5E-07 F	
	r 434024		44		5	30	300	1900	2.68]
TRANS	CRIBED FRO	WORIGIN/	AL DATA S	HERTS					PBI	RMEADILI	TY REPOR	TED AS ** 1.5E-07 cm/sec **	_
													DATE 191
													CHECK 📑
													APPROVE

							FLEXIB	SUE WALL F		ILITY					
						,	метнорі	ASTM D R. CONSTAL		OF FLOW					
NROUT CT TT			MA PLANN			-							ded to 90.4% of the Max		
"ROLECT NO		1649494	4 MA 8145 XI	Ing & reach	II I LINGA.A	-	Board #	. ·	, u	UMPIENTS			060 00 90.4% 00 006 012X1 ASTM D (1537).	IIILUM DIS	, Deuten and
SAMPLE ID	IN 55.8	BC-2		10-0	-25.01	-	- Flow Puesp Ратр Speed								
SAMPLE TYP		Dulk	_	200	-020										
	L						Technician				L				
Somple Data, I	Initial					Sample Da	ira, Final								
Height, Inches		3.005	B-Value, F	89,0	1	Height, Inc.	-	LUK-					5ample		Sample
Diameter, inch		2.790	Cell Pres.	90.4	1	Diameter.		2.821		WATER C	ONTENDS		Initiat		Final
Aren, cm ¹		39.44	BOL PYES	HD.0	1	Area, can ^a		40.32		Wissial			590.37		636.54
Volume, cm ³		301.05	Lop Pres.	HOUG	1	Volume, ep	"'	315,87		Wt Soil & 1			497.52		506.13
Mars, g		596.37	Tan B.M.	MOLO	1	Mass, g		628.34		Wt Tarc		- R	U.DU		K.78
Molsture Cont	rp4, %	18 66	llead, max	175.15]	Maissure D	Connemi, W.	26.29		Wi Meister	re Last	6	92.85		130.75
Dep Density, p	el i	103-12	Head, min.	175.15	1	Day Deaste	y, pet	9 H.ZK		Wi Dry Soi		8	497.52		e97_15
Spec. Gravity ((Instance)	2 700	Max. Gred.	22.36	1	Volume So	dids. cm'	184.27		Weter Con	d eren 1	%	18.66%		26.29%
Volume Solids,	. C	144.27	Mis. Gred.	22_36	!	Volume Vo	vids, com ²	131.61							
Volume Voids,	ca ¹	116.79			-	Void Ratio									
- stame teast								0.71							
Vold Ratio		0.63				Seturation,		0.7 99.4%		DESCRIPT	TION				
												fine 46 conroc	; hnome		
Vold Ratio		e.63										fine (p conroc	2; hearts		
Vold Ratio		e.63	Refe	◆ 26ED5]cm ³ /360							rine 46 conroc	r; heore		
Vold Ratio		0.63 79.5%	Refe	4 26E-05]cm ³ /sec		. %	99.4%				fine (p conroc	r; hnome		
Vold Ratio		0.63 79.5%			-	Séterntion	. %	99.4%	dP			fine (6 conroc	r; hnomn		
Vold Ratio	DATE	0.63 79.5%		+ 26E-05 5 FUNCTIO M32N	-	Séterntion	. %	99.4%		sendy SH-1		fine (D conroc]
old Ratio		0.63 79.9% Flore Pomp	TI M	E FUNCTIO	ONS, SECO	Néteration, NDS	. % vscs	99.4% (1.	dF dijate (src)				r; hrown Permeability jem/sec)]
old Ratio		0.63 79.9% Flore Pomp	TI M	E FUNCTIO	ONS, SECO	Setaration, NDS dt	USCS	99.4%	dijate	Reading	Itead		Permeability		
old Ratio	DATE	e.63 79.5% Flow Pump DAY	TANT JANTA	E FUNCTIO	ONS, SECO TRMP (10)	Nos di (win)	. % USCS 	99.4%	di _t arc (sec)	Reading Ipsit	fiead	Gradlent	Permeability (em/sec)		
old Ratio	DATE 10/16/17	e.63 79,5% Flow Pump DAY 43024	TAULT MICHOREL M	E FUNCTIO MIN 50	0N5, SECO TRMP (70) 200	NDS dtj (win) 0	. % USCS dt.arc (min) 0	99.4% <u>CL</u> de (err) f	di,arc (sec) 0	Reading 2.49	(itead (cm) (75 to	Gradlent ; 23.36	Permeability emisec) 4.7E-08		
old Ratio	DATE 10/16/17 10/16/17	e.63 79.5% Flow Pump DAY 43024 43024	TAILT JALIADEL H H	5 FUNCTIO M32N 50 55	0NS, SECO TEMP (1) 20.0 20.0	Nos dły (win) 0 5	. % USCS (ILarc (min) 0 S	99.4% CL.	di,acc (sec) 0 300	Reading 4psit 2.40 2.49	(itead (cm) (75 15	Cradlent : 23 36 31 36	Permeability jemiset) 4.7E-08 4.7E-08		
old Ratio	DATE 10/16/17 10/16/17 10/16/17	e.63 79.5% Flow Promp DAY 43024 43024	TAUT Jacia del M A P Q Q	B FUNCTIO MJPN 50 55 0	0N5. SECO TEMP (1) 200 200 200	Nos dł (win) 0 5 5 5	. % USCS (ILarc (min) 0 5 10	99.4% CL.	di,arc (sec) 0 300 A00	Reading 4poit 2.49 2.49 2.49	(itead (cm) 175 15 175 15 175 15	Cradlent : 23 J6 21 J6 21 J6 21 J6	Permeability [em/sec] 4.7E-08 4.7E-08 4.7E-08 4.7E-08	-	
old Ratio	DATE 10/16/17 10/16/17 10/16/17 10/16/17	e.63 79.5% Fiers Pump DAY 43024 43024 43024	1407 Jacid Del M 9 9 9	5 FUNCITI M32N 50 55 0 5	0N5. SECO TEMP 00 200 200 200 200	NDS dłi (win) 0 5 5 5	. % USCS (It,art (min) 0 5 10 15	99.4%	di,acc (sec) 0 300 600 900	Reading 4pril 2.49 2.49 2.49 2.49	(Tead (tead (cm) 175 15 175 15 175 15 175 15	Cradlent ; 23 36 21 36 21 36 22 36	Permeability (em/sec) 4.7E-08 4.7E-08 4.7E-08 4.7E-08		
old Ratio	DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	e.63 79.5% Flow Primp DAY 43024 43024 43024 43024 43024	1400 Jacka net 9 9 9 9	5 FUNCITI M32N 50 55 0 5 10	2005, SECO TRMP (1) 20.0 20.0 20.0 20.0 20.0 20.0 20.0	NDS dt (win) 0 5 5 5 5 5	, % USCS (It,arc (mim) 0 5 80 85 20	99.4% CL. d((err) 0 300 300 300 300	di,arcc (sec) 0 300 600 900 1200	Reading (pri) 2.49 2.49 2.49 2.49 2.49 2.49	fiead (cm) 175 15 175 15 175 15 175 15 175 15	Gradlent ; 23 36 21 36 21 36 22 36 22 36	Permeability (cm/sec) 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08	٠	
Yold Ratio	DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	e.63 79.5% Flow Pump DAY 43024 43024 43024 43024 43024 43024 43024 43024 43024	1400 Jacka Pec 9 9 9 9 9 9 9	5 FUNCTI M32N 50 55 0 5 10 15 20	ONS. SECO TRMP (1) 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	NDS dt (win) 0 5 5 5 5 5 5	, % USCS (Larc (min) 0 5 80 85 20 25	99.4% CL. de (err) n 300 300 300	di,arcc (sec) 0 300 A00 900 1206 1500	Reading (prit) 2.49 2.49 2.49 2.49 2.49 2.49 2.49 2.49	(Tead (tread (tread (tread) 175-15 175-15 175-15 175-15 175-15 175-15 175-15 175-15 175-15	Gradlent (22.36 21.36 22.36 22.36 22.36	Permeability [emiset) 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08	•	
Yold Ratio	DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	e.63 79.5% Flow Pump DAY 43024 43024 43024 43024 43024 43024 43024 43024 43024	1400 Jacka Prec M 9 9 9 9 9 9 9 9 9 9 9	5 FUNCTI M32N 50 55 0 5 10 15 20	ONS. SECO TRMP (1) 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	NDS dt (win) 0 5 5 5 5 5 5	, % USCS (Larc (min) 0 5 80 85 20 25	99.4% CL. de (err) n 300 300 300	di,arcc (sec) 0 300 A00 900 1206 1500	Reading (prit) 2.49 2.49 2.49 2.49 2.49 2.49 2.49 2.49	(Tead (tread (tread (tread) 175-15 175-15 175-15 175-15 175-15 175-15 175-15 175-15 175-15	Gradlent : 23 36 21 36 21 36 22 36 22 36 22 36 22 36	Permeability [emisec) 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08	•	
Yold Ratio	DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	e.63 79.5% Flow Pump DAY 43024 43024 43024 43024 43024 43024 43024 43024 43024	1400 Jacka Prec M 9 9 9 9 9 9 9 9 9 9 9	5 FUNCTI M32N 50 55 0 5 10 15 20	ONS. SECO TRMP (1) 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	NDS dt (win) 0 5 5 5 5 5 5	, % USCS (Larc (min) 0 5 80 85 20 25	99.4% CL. de (err) n 300 300 300	di,arcc (sec) 0 300 A00 900 1206 1500	Reading (prit) 2.49 2.49 2.49 2.49 2.49 2.49 2.49 2.49	(Tead (tread (tread (tread) 175-15 175-15 175-15 175-15 175-15 175-15 175-15 175-15 175-15	Gradlent : 23 36 21 36 21 36 22 36 22 36 22 36 22 36	Permeability [emisec) 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08	•	
Fold Ratio	DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	e.63 79.5% Flow Pump DAY 43024 43024 43024 43024 43024 43024 43024 43024 43024	1400 Jacka Prec M 9 9 9 9 9 9 9 9 9 9 9	5 FUNCTI M32N 50 55 0 5 10 15 20	ONS. SECO TRMP (1) 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	NDS dt (win) 0 5 5 5 5 5 5	, % USCS (Larc (min) 0 5 80 85 20 25	99.4% CL. de (err) n 300 300 300	di,arcc (sec) 0 300 A00 900 1206 1500	Reading (prit) 2.49 2.49 2.49 2.49 2.49 2.49 2.49 2.49	(Tead (tread (tread (tread) 175-15 175-15 175-15 175-15 175-15 175-15 175-15 175-15 175-15	Gradlent : 23 36 21 36 21 36 22 36 22 36 22 36 22 36	Permeability [emisec) 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08 4.7E-08	•	

						PLEX18	ALE WALL I AST'N D		11.1T¥							
					,	иктиор г	L CONSTAL	-	DK FLOW							
PROJECT TITLE	CH2M/WP	WMA PLANNI	NG & PERM	ITTING/CA		House of P	6	<	OMMENTS	Դեւ թուն	e was remuli	Not to 89,6% of t	l h e Maximu	ım Dry I	ensity and	
PROJECT NUMBER	1649494				1	Plow hump	2	1		OPTM + 2	7% (using/	ASTM D 1557).				
SAMPLE ID	BG-3		5,0-	CQ.04	Pione J	'ump Spred	н	1								
SAMPLE TYPE	Halk]	Technician	SDM]								
Sample Deta, Initial		1		1 I	Sample De			1							_	
Height, inches		B-Valwe, (0.99	1	Eleight, Inc		3.070					Sample			Sample	
Diameter, inclus	1 790	Cell Press	990		Deameter, I	nchei	2.816		WATER C			Initial		r	Final	
Aces, cin² Volume, cm²	39.44	Bol. Pres.	N0 (4		Area, cm ¹	,	40.38		We Seel & 1	•	₽.	565.71			619.87	
	300.05	Top Pres.	.80.11 10.0		Voleme, en	n	313.32		Wr Seel & 1	ore, 1	6	449.51			477.92	
Mass. g Mainture Contant Is	565.71	Tot. B.P. Head, max	30.0	1	Masa, g		610.8		Wi Three		R	0.00			K.58	
Moistore Content, % Dry Density, pvf	20.49	llead, main.	135.05		Molstere C Dry Deesity	-	30.16		W) Moista W) Dry Sai		2	96.20 469.51			161.25 669.34	
Spor- Gravity (assumed)		Max. Grad.	17.32		Volume Se		170.73		Weier Cont		e %	20.49%			30 10%	
Volume Sulids, em ¹	120.73	Min. Gred.	(7.32		Volume Ve		102.59	1			~	2010/04				
Volume Volet, em	129.92		1024	1	Void Ratio		0.84									
Yeid Ratio	0.76	1			Seturation.		99 1%		DESCRIPT	TION						
		-			·····						-	; olive brown.				
Saturation, %	74.0%								(MARU) SILI	T CLAT, I	ine (o coarse	, onte orown.				
Saturation, %	74.0%								SILI	T CLAT, I	ine (o coarse	, on e oro-n.				
Saturation, %	74.0% Flex Pump	p Kale	1. t2E-04	cm ¹ /see		USCS	<i>e</i> 1.	I	SANU) SILI	I CLAT, I	ine lo coarse	, 01110010-31.				
Saturation, %		p Kate	1.12E-04	cm ¹ /see		USCS	eı.			T CLAT, I	ine (o coarse	, 0112010-31.				_
Saduradion. %						USCS	ei.			T CLAT, I	ine (o coarse	, , , , , , , , , , , , , , , , , , , ,				-
	Flow Pum	ТІМІ	B FUNCTIO	INS, SECO				dF	 							
Saturation. %	Flow Pum			XNS, SECO TEMP	dij	ilt,ere		dijare	Reading	llord	Crodwnc	l'erm	neability			
DATE	Flew Pum	TIMI	B FUNCTIO MIN	NNS, SECO TEMP CO	dij _ (rttān)	(h,arr (min)	da (arr)	di,acc (cer)	Reading (prii)	Hoad (rm)	Gradienc	l'erm (cn	n/sec)			
DATE 10:1617	Flew Pump DAY 7 43024	TIMI 314140.R 10	B FUNCTIO MIN U	ONS, SECO TEMP (CC) 20.0	d4 _ (rttān) •	(huart (min) Q	d4 (arr) 0	di,ate (cer) N	Reading Levit	Hisadi (rue) (35.05	Gradwine	l'erm jen jé	n/sec) \$E-07			
DATE 10/16/17 10/16/17	Flew Pum)	TIM 101108	B FUNCTIO MIN U S	0N5, SECO TEMP CO 200 200	di((rtiān) 5	ilt.arc (min) 0 5	da (ærr) 0 300	di,acc (orr) N 300	Reading (pril) 1.92 1.92	Heard (799) 135,05 135,05	Croduenc 17.32 17.12	i'erm icn 1 d 1 d	n/sec) 6E-07 6E-07			
DATE 10:1617	Flew Pum) DAY 43024 43024 3034	TIMI 3141408 10	B FUNCTIO MIN U	ONS, SECO TEMP (CC) 20.0	d4 _ (rttān) •	(huart (min) Q	d4 (arr) 0	di,ate (cer) N	Reading Levit	Hisadi (7)=) 135,46 135,46 135,46	Croduenc 17.32 17.12 17.12	l'erm icn 1 6 1 6 1.6	n/sec) \$E-07 \$E-07 \$E-07	+		-
DATE 10/16/17 10/16/17 10/16/17 10/16/17	Flew Pump DAY 43024 43024 43024 43024	TIMI JINPUR 10 10 10 10	B FUNCTIO MIN U S IN 15	2009 2009 2009 2009 2009 2009 2009	d¥ (rttān) ● 5 5 5	iltuure (min) G S IU IS	d4 (arr) 3041 3040 3040	di,acc (carr) N 30A AIRO 90A	Reading (pril) 1.02 1.02 1.02 1.02 1.02	Head (rm) 135.46 135.46 135.46 135.46	Crodwent 17.32 17.32 17.32	l'erm ier 16 16 1.6 1.6	n/sec) \$E-07 \$E-07 \$E-07 \$E-07 \$E-07	•		-
DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	Flerr Pump DAY 43024 43024 43024 43024 43024 43024	TIMI JINPUR 10 10 10 10 10	U B FUNCTIO MIN U S IV 15 15 20	0NS, SECO TEMP CO 200 200 200 200 200 200 200 200 200 20	da (ntsin) € 5 5 5	(h,arc (min) 0 5 10 15 20	d4 (arr) 0 300 300 300	di,acc (eer) 0 300 610 900 1200	Reading (grit) 1.92 1.92 1.92 1.92 1.92	Head (rm) 135.46 135.46 135.46 135.66 135.66 135.05	Crodwent 17.32 17.32 17.32 17.32 17.32	l'erm jen 1 6 1 6 1 6 1 6	n/sec) \$E-07 \$E-07 \$E-07 \$E-07 \$E-07	I		
DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	Flew Pum)	ТІМІ ІІІНЧUВ. 10 10 10 10 10	U B FUNCTIK MIN U S 10 15 10 25	0NS, SECO TEMP (°C) 20.0 20.0 20.0 20.0 20.0 20.0 20.0	di (rttān) • 5 5 5 5 5	(h,art (min) 0 5 10 05 20 25	d4 (#**) 0 300 300 300 300	di,acc (aer) N 300 AIR 900 L200 I 500	Reading (prii) 1.02 1.02 1.02 1.92 1.92 1.92	Head (rm) (35.46 (35.46 (35.46 (35.46 (35.06 (35.05 (35.05))	Crodwent 17.32 17.32 17.32 17.32 17.32	l'erm jen 1 6 1 6 1 6 1 6 1 6 1 6 1 6	n/sec) \$E-07 \$E-07 \$E-07 \$E-07 \$E-07 \$E-07 \$E-07	•		
DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	Flew Pump DAY 43024 43024 43024 43024 43024 43024 43024 43024 43024	TIM JINPUR 10 10 10 10 10 10	U B FUNCTIK MIN 5 10 15 10 25 30	0NS, SECO TEMP (°C) 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	da (ntsin) € 5 5 5	(h,arc (min) 0 5 10 15 20	d4 (arr) 0 300 300 300	di,acc (eer) 0 300 610 900 1200	Reading (pril) 1.92 1.92 1.92 1.92 1.92 1.93 1.93	Hisadi (rum) (35.05 (35.05 (35.05 (35.05 (35.05) (35.05) (35.05)	Croduenc 17.32 17.32 17.32 17.32 17.32 17.32 17.32	l'erm jen j 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6	n/sec) 6E-07 6E-07 6E-07 6E-07 6E-07 6E-07 6E-07			
DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	Flew Pump DAY 43024 43024 43024 43024 43024 43024 43024 43024 43024	ТІМІ ІІІНЧUВ. 10 10 10 10 10	U B FUNCTIK MIN 5 10 15 10 25 30	0NS, SECO TEMP (°C) 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	di((rttān) • 5 5 5 5 5	(h,art (min) 0 5 10 05 20 25	d4 (mr) 300 300 300 300	di,acc (aer) N 300 AIR 900 L200 I 500	Reading (pril) 1.92 1.92 1.92 1.92 1.92 1.93 1.93	Hisadi (rum) (35.05 (35.05 (35.05 (35.05 (35.05) (35.05) (35.05)	Crodwent 17.32 17.32 17.32 17.32 17.32	l'erm jen j 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6	n/sec) \$E-07 \$E-07 \$E-07 \$E-07 \$E-07 \$E-07 \$E-07		DATE	
DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	Flew Pump DAY 43024 43024 43024 43024 43024 43024 43024 43024 43024	TIM JINPUR 10 10 10 10 10 10	U B FUNCTIK MIN 5 10 15 10 25 30	0NS, SECO TEMP (°C) 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	di((rttān) • 5 5 5 5 5	(h,art (min) 0 5 10 05 20 25	d4 (mr) 300 300 300 300	di,acc (aer) N 300 AIR 900 L200 I 500	Reading (pril) 1.92 1.92 1.92 1.92 1.92 1.93 1.93	Hisadi (rum) (35.05 (35.05 (35.05 (35.05 (35.05) (35.05) (35.05)	Croduenc 17.32 17.32 17.32 17.32 17.32 17.32 17.32	l'erm jen j 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6	n/sec) 6E-07 6E-07 6E-07 6E-07 6E-07 6E-07 6E-07		DATE	· • • •
DATE 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17	Flew Pump DAY 43024 43024 43024 43024 43024 43024 43024 43024 43024	TIM JINPUR 10 10 10 10 10 10	U B FUNCTIK MIN 5 10 15 10 25 30	0NS, SECO TEMP (°C) 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	di((rttān) • 5 5 5 5 5	(h,art (min) 0 5 10 05 20 25	d4 (mr) 300 300 300 300	di,acc (aer) N 300 AIR 900 L200 I 500	Reading (pril) 1.92 1.92 1.92 1.92 1.92 1.93 1.93	Hisadi (rum) (35.05 (35.05 (35.05 (35.05 (35.05) (35.05) (35.05)	Croduenc 17.32 17.32 17.32 17.32 17.32 17.32 17.32	l'erm jen j 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6	n/sec) 6E-07 6E-07 6E-07 6E-07 6E-07 6E-07 6E-07		DATE CHECK REVIEW	

						FLEXIB	ANTALI. ANTALI		ILITY				
					,	HETHOD I	N CONSTA		OPTLOW				
PROUDOT TITLE	CHIMONE	WMA PLANN	INC & PEON	and the second	1	Board A		2		The sumpl	evens remaid	ed to 90.8% of the Maximum Dr.	s Demistrand
PROJECT NUMBER	1649494	-1212 1124 - 21			-	Flow Fump		ſ	OMIND.(10			έτα ο 1557).	,,
SAMPLY, ID	PZ-1		150	-30.0'	-	'amp Speed	<u> </u>	1					
SAMPLE TYPE	ltulk				1	Technician		1					
Sample Data, Indial					15 I D								
Height, inches	3.060	0-Value, f	1.00	1	Sample Dg		3.051	1				K1 -	
Disanter, inches	2,790	Cell Pres.	90.0	1	Height, inc.		3.051 2.816	1		ONTENDO		Sample Locial	Nample
Area, cm ¹	39.44	Rut. Pres.	90.0 R0 0	1	Diameter, i Area, cm ¹			1	WATER C		r	Initial	Final
Valence em ¹	300.55	- I · · · · · · · · · · · · · · · · · ·	R# 0		Volume, cm [.]	.,	40.38	1	Wr Neil & 1	•	5	585.57	639.55
Mass, g	585.57	Top Pres.	KAP II KADUG-	1		1	311.39	1	Wr Seil &	1 STE, 1	e	495.15	503-43
Moisture Content, %	18.26	litead. max.	164.60	1	Mave, g		622.35	1	Wi Tare Wi Moestus		£	0.00	F#-8
Dry Dewily, pef	10.20	itead, min.	164.60	1	Maisture () Dry Density		25.68	1			• •	90.42	127.12
Spec. Gravity (assumed)		Max. Cred.	21.24	1	Volume So		183.34	{	Wi Dry Soi Water Con		с %	495.15 L8.25%	25.67%
Volumer Solids, em ¹	1\$3.39	Min Gred.	21.24	Į.	Volume Vo				water con	1001	⁷⁶ [10.1074	2009.00
Yolume Veids, cm	117.16	NUM STRO	41.44	1	Vold Ratio		0.75						
Void Runta	0.64	-					0.70						
Seturation. 🎋	77.2%	-			Sateration.	70	99.3%1	1	DESCRIPT Iconda SIL 1		ine an modius	m; alise hrawn.	
Senare Han. /	77.2.96												
	Flow Pure	n filmin	4.26K-05	landera		uses	ςι.	1					
		h irreic	4.20805	lent viee		046.5		1				_	
				<u> </u>								<u> </u>	
		TIM	B PUNCTIO	INS, SECO	NDS			dP					7
DATE	DAY	HOUR	MIN	TEMP	dH	delace	d¢	di,acc	Reading	Kead	Gradient	Permutility	
				<u>(0)</u>	(min)	(mim)	(sec)	(sec)	(pa)	(cos)		(coniuse)	
101617	43024	10	45	20.0	•	0	(n	0	2.34	164.60	ZI.24	5.UE-08	
10/17/17	43024	10	50	20.0	5	5	.300	300	2.34	164 60	21.24	3.0£-0¥	
10/16/17	43024	10	55	20.0	5	10	300	600	2.34	J 6 4.60	21.24	5.ÛE-08	
101617	43024	11	D	20.0		15	300	900	2.,4	364.60	21.24	5.0E-08 *	
ព្រក្រស់ព្រះ	43024	11	5	26.0	5	20	300	1200	2.14	164.60	21,24	5.0E-#8 *	1
101617	43024	11	10	200		25	300	1500	2.34	164.60	20.24	5.0E-68 *	1
10/16/17	43024	11	15	200	. 1	30	300	1860	214	164.60	21.24	5.0E-08 *	
	CRIBED FRO	DM ORIGIN/	AL DATA 5	HERTS					PBI	RMEARULI	TY REPORT	ED AS ** 5.0E-08 emilee **	
TRANS													DATE IN(I
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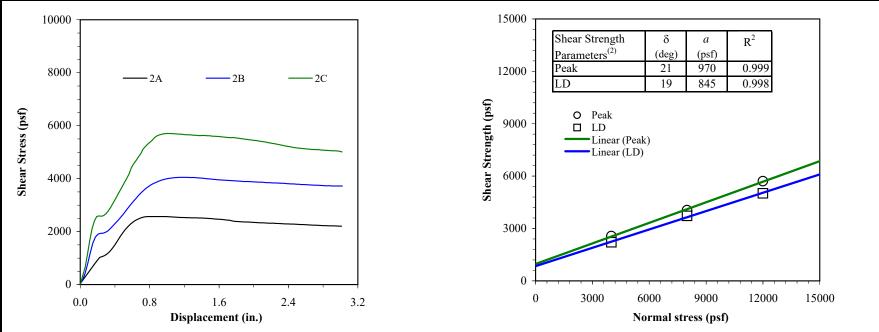
APPENDIX D

Laboratory Test Result - Clay/GCL Interface Shear

GOLDER ASSOCIATES INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Upper Shear Box: Clay soil (PZ-1) compacted to approximately 88% of max modified Proctor dry density at OMC + 3% (γ_{dmax} = 113.3 pcf, OMC = 17%) / Bentomat DN GCL with black NWGT side up

Lower Shear Box: Bedding sand compacted tight under dry conditions

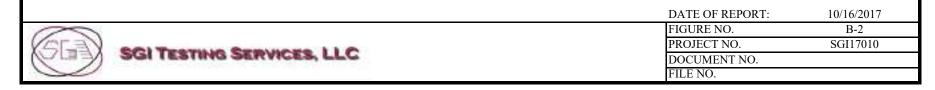


Test	Shear	Normal	Shear	Soal	king				Cor	nsolidatio	on			G	CL	Shear S	Strength	Failure
No.	Box Size	Stress	Rate	Stress	Time				Stress (psf)			Time	ω	ω_{f}	τ_{P}	τ_{LD}	Mode
	(in. x in.)	(psf)	(in./min)	(psf)	(hour)	1	2	3	4	5	6	7	(hour)	(%)	(%)	(psf)	(psf)	
2A	12 x 12	4000	0.04	4000	48										69.6	2568	2207	(1)
2B	12 x 12	8000	0.04	8000	48										60.1	4051	3721	(1)
2C	12 x 12	12000	0.04	12000	48										58.8	5706	5009	(1)

NOTES:

(1) Shear failure occurred at the interface between the clay (PZ-1) and black NWGT side of GCL.

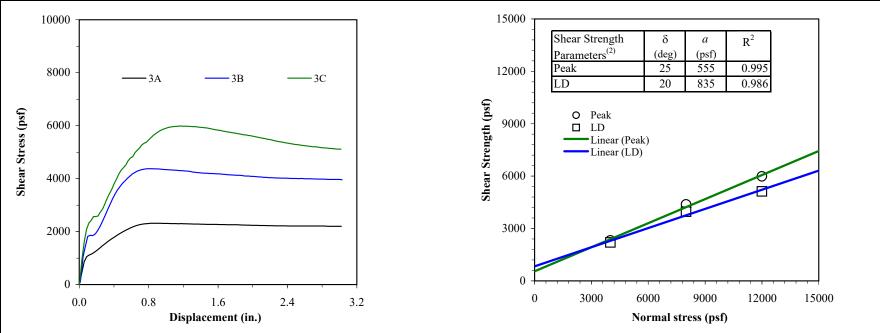
(2) The reported friction angle (δ) and adhesion (a) were determined from a best-fit line drawn through the test data. Caution should be exercised in using δ and a for applications involving normal stresses outside the range of the stresses covered by the test series. The large-displacement shear strength (τ_{LD}) was calculated using the shear force measured at the end of the test.



GOLDER ASSOCIATES INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Upper Shear Box: Clay soil (BG-1) compacted to approximately 88% of max modified Proctor dry density at OMC + 3% (γ_{dmax} = 109.5 pcf, OMC = 16.2%) / Bentomat DN GCL with black NWGT side up

Lower Shear Box: Bedding sand compacted tight under dry conditions

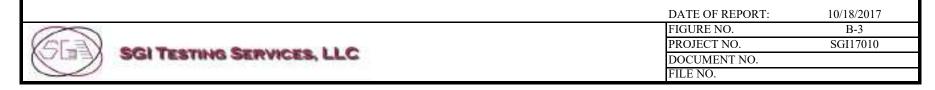


Test	Shear	Normal	Shear	Soal	king				Cor	nsolidatio	on			G	CL	Shear S	Strength	Failure
No.	Box Size	Stress	Rate	Stress	Time				Stress (psf)			Time	ω_{i}	ω_{f}	τ_{P}	τ_{LD}	Mode
	(in. x in.)	(psf)	(in./min)	(psf)	(hour)	1	2	3	4	5	6	7	(hour)	(%)	(%)	(psf)	(psf)	
3A	12 x 12	4000	0.04	4000	48										68.3	2315	2197	(1)
3B	12 x 12	8000	0.04	8000	48										65.0	4377	3960	(1)
3C	12 x 12	12000	0.04	12000	48										60.5	5988	5120	(1)

NOTES:

(1) Shear failure occurred at the interface between the clay (BG-1) and black NWGT side of GCL.

(2) The reported friction angle (δ) and adhesion (a) were determined from a best-fit line drawn through the test data. Caution should be exercised in using δ and a for applications involving normal stresses outside the range of the stresses covered by the test series. The large-displacement shear strength (τ_{LD}) was calculated using the shear force measured at the end of the test.



Appendix 2F Adjacency Study

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Memorandum

2485 Natomas Park Drive, Suite 600 Sacramento, CA 95833-2937 United States T +1.916.920.0212 www.jacobs.com

Subject	Adjacency Study for the Western Placer Waste Management Authority Master Planning Project, Placer County, California
Attention	Western Placer Waste Management Authority
From	Joshua Mooneyham/CH2M, Katie Chapman/CH2M, and Lyndsey Lopez/CH2M
Date	February 6, 2019
Copies to	Project File

1. Introduction

This technical memorandum summarizes the findings of the Adjacency Study that was completed as part of the Western Placer Waste Management Authority (WPWMA) master planning project (project). The majority of this information was developed in July 2017.

The Adjacency Study included site visits and interviews performed by CH2M (now Jacobs Engineering Group Inc.) and its subcontractors Golder Associates and Integrated Waste Management Consultants, LLC, collectively referred to as the CH2M Team, on June 26 and 27, 2017. The objectives of the Adjacency Study were as follows:

- Review existing, related operational activities, to gain insight into how these operations may be impacted by the addition and modification of project elements associated with this master planning project.
- Assess the need for adjacency of related site elements.
- Identify locations that may be beneficial to reserve for future operations growth around specific project elements.

Additionally, the team noted areas of congestion and where site circulation and traffic interfaces appeared to pose safety concerns.

2. Project Description

WPWMA's existing facility is located at 3033 Fiddyment Road, Roseville, California 95747, and generally consists of the Western Regional Sanitary Landfill (landfill), a Materials Recovery Facility (MRF), a composting operation, a construction and demolition (C&D) processing area, a household hazardous waste (HHW) collection and storage area, a public tipping area, and a recyclable materials buyback facilities (buyback) area. These operations are conducted on the existing 320-acre active site. In addition to this site, the WPWMA owns the properties east (160 acres) and west (480 acres) of the site. Figure 1 shows the relative location and size of the existing active site and the two properties (eastern and western) adjacent to the active facility. Fiddyment Road runs between the active site and the western expansion parcel. Athens Road borders the northern portion of the active site. There are no public roads between the eastern property and the active site.



Adjacency Study for the Western Placer Waste Management Authority Master Planning Project, Placer County, California

The WPWMA is in the process of developing a master plan to define facility modifications and enhancements to the WPWMA facility. The modifications and enhancements are necessary to provide long-term waste management solutions, develop opportunities for innovation and local industrial growth, maintain affordable rates, and comply with expanding regulations.

3. Adjacency Considerations

The CH2M Team conducted site visits on June 26 and 27, 2017. During those site visits, the CH2M Team met with WPWMA and Nortech (the site operator) staff, and toured portions of the site to gain additional insight into the existing operations at WPWMA's current facilities. While onsite, members of the CH2M Team observed the operations at the critical elements that had been identified for this project. Critical elements identified were the compost area, public/HHW/recyclable buyback area (public area), C&D area, and landfill. The CH2M Team observed each elements' operational adjacency considerations, functionality, access requirements,

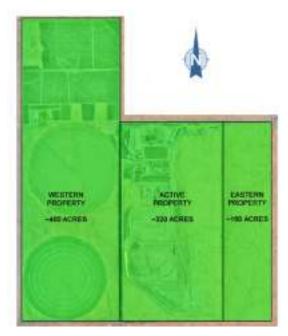


Figure 1. WPWMA Facility and Adjacent Properties

and future expansion needs. CH2M used the information gathered on the site visits during conceptual development of the Plan Concepts that were prepared as part of Phase I of this project. The following sections summarize the main adjacency considerations for each project critical element.

3.1 Critical Elements

3.1.1 Compost Area

The existing compost area is composed of two main areas: the north and south areas (Figures 2 and 3, respectively). The north area encompasses the north composting pond, north compost pad, and north compost windrows. The south area encompasses the south composting pond, south compost pad, south compost windrows, and the curing and screening area. The north and south compost areas are separated from one another by the C&D, green and wood waste tipping pad, and the processing area in the middle as shown on Figure 2. The compost area is further divided and constrained by site roadways, the

maintenance area, equipment storage, and permitted landfill area (to the south of the southern compost windrows). The current divided configuration and layout results in operational inefficiency attributable to double handling of materials and extra time spent driving operation equipment back and forth between the areas. These existing features and current configuration significantly limit expansion options for the area.

Without master planning efforts or changes to the compost processing technology (e.g., switching from space-intensive windrows to aerated static piles), the existing compost area will not be able to expand or grow in response to anticipated regional growth and additional organics that will require composting as a result of Senate Bill (SB) 1383.



Figure 2. WPWMA Compost Aerial

Adjacency Study for the Western Placer Waste Management Authority Master Planning Project, Placer County, California

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Figure 3. Existing Composting Area

The layout and space of the site impact more than just the capacity and operational efficiency. The proximity of adjacent roadways, as well as the mixed traffic streams entering and exiting the area, pose potential safety concerns. For example, the north windrows are located so close to the road that when the windrow turner is operating, it can throw material at traffic on adjacent roads (Figure 4). Multiple types of traffic enter and exit the compost area and even cross at several locations (Figure 5). Types of traffic streams include self-haul green waste, hauler green waste, commercial account green waste, Nortech operations (moving green waste from the Z-wall at the Public Tipping Area), and members of the public picking up finished compost. There is currently no separation of public, commercial, or operational traffic in this area. In addition, the grinding area is too small for an operation of this size, contains blind turns for traffic due to compost pile heights, and results in multiple points of crossing traffic. The existing traffic flow creates safety concerns and is not conducive to optimal operations.



Figure 4. Proximity of Windrows to Incoming and Outgoing Traffic



Figure 5. Mixing Traffic Streams near C&D and Compost Areas

In addition to the processing of materials, the compost area also creates a marketable product. Currently customers must purchase compost at a separate area (the buyback building), then drive to the compost area to pick up the purchased compost.



The CH2M Team recommends that the following attributes be considered for the future compost area:

- Adequate space, capacity, and processing technology to address existing and future processing needs
- Seasonal peaking, product storage requirements versus market cycle
- Fully combined (nonseparated) operations with additional surrounding space to adapt to future growth
- Adequate space to address odor management needs
- Infrastructure for separate traffic streams with minimal cross points
- · Design to minimize double handling of materials and compost products
- Convenient location for compost sales and loading, with protection against windblown contaminants
- Construction to include staged development to coincide with other site redevelopment and increase in organics diversion resulting from implementation of SB 1383

The ultimate configuration of the new compost area will depend on its location, the processing technology, and the other elements that are located around it. The primary adjacency consideration is placing this somewhere that has adequate space for capacity, separation of public from commercial traffic, and future adaptability. The following site operating components are also well suited for adjacent placement near the compost area:

- Dropoff areas for C&D, green waste, food waste, and wood-waste (as long as the commercial and public areas are separated sufficiently to promote safety).
- Compatible manufacturing (e.g., biomass) and other pilot technologies that use similar feedstocks or byproducts (e.g., overs).
- Loading and purchasing of final product: small-scale purchases could be located before the scalehouse, and both incoming green waste and outgoing final commercial product sales need to be weighed before the scale-house. The traffic should be separate for public and commercial where cost effective.

3.1.2 Public Area

As shown on Figure 6, the existing public area is primarily composed of an L-shaped building that accepts HHW, e-waste, and recyclables buyback from the public, and a partially covered Z-wall where the public can drop off a variety of self-haul materials. Self-haul customers (selfhaulers) enter the facility to drop off the following types of materials at the Z-wall tipping area: appliances, tires, selfhaul C&D, and self-haul municipal solid waste (MSW). The following material streams exit the area:

- C&D is transported to the C&D processing area.
- Appliances and tires are transported to the MRF.
- MSW is transported to either the MRF or the landfill.

Customers enter this multipurpose area by going through the staffed public area gatehouse and then proceeding to the area(s) of interest. There is only one lane entering the site and one lane existing the site. The single-lane inlet and exit are used by self-haulers, employees of the



Figure 6. Public Tipping/HHW/Buyback

HHW/buyback area, and facility operations traffic that moves the drop-boxes in and transports the collected materials out (as noted in the bulleted list above).



The HHW/buyback area is located on the northern corner of the cul-de-sac (see L-shaped building on Figures 6 and 7). Customers bring their recyclable buyback materials here to get weighed, and then receive a redemption ticket for compensation at the payout building. Customers also bring HHW and e-waste, which is unloaded, categorized, and stored here temporarily. This area also has an employee parking lot and a product and payout building (for compost purchase and buyback redemption).





Figure 7. HHW/Buyback Dropoff Area

The Z-wall has multiple elevated dropoff slots for customers to back into and unload their materials over a guardrail and into drop boxes that are located below the dropoff slots on a lower elevation (Figure 8). Drop boxes are brought into and out of the area by operations staff. Two staffed public area gatehouses are located south of the L-shaped building. These gatehouses are used to collect disposal tipping fees from selfhaulers based on yardage estimates. However, based on the current space limitations, selfhauler customers with a dump-trailer or larger trailer are instead being redirected to the commercial scale and the MRF tipping floor for unloading because their vehicle, with the trailer, is too long to allow continued traffic flow during unloading.



Figure 8. Z-wall, Public Tipping Area

Only limited queuing space is available between the gatehouse and the Z-wall unloading area. Not enough unloading spots currently are available to handle peak flows. Sometimes lines stretch from the public gatehouse to Athens Avenue, as reported by facility staff.

Another pinch point that adds to the traffic congestion in this area is the confluence of the entrance/exit to the HHW and buyback area and the entrance/exit of the Z-wall area. Customers coming into the HHW/buyback area from the entrance must cross traffic exiting from the Z-wall area.

The current parking for employees does not allow for safe access to public, buyback, and HHW areas, and there is no safe way to remove and set aside reusable materials and items that need to be separated for other reasons.



The CH2M Team recommends that the following attributes be considered for the future public area:

- Adequate space (for both unloading and queueing) and capacity to address existing and future needs as well as additional surrounding space to adapt to future growth
- Switching from a Z-wall to a flat tipping pad that utilizes a design separating the operator from the public and provides greater flexibility for changes in waste stream and facility function
- Separate traffic streams with minimal cross points
- Design that minimizes double handling of materials
- Minimizing the frequency of internal transfers of materials received and bulked at this location by including space to store daily quantities of C&D, MSW, wood waste, appliances, tires, and recyclables, as applicable
- Adequate employee parking
- Underground power supplies
- Design flexibility so that different waste streams can be handled through the year based on seasonal needs
- Area for a reuse store to provide a safe way for the operator to salvage and market materials for reuse

The ultimate configuration of the public area will depend on its location, the chosen configuration, and the other elements that are located around it. There are advantages to putting the public area near the MRF since a large portion of the material that is received there goes to the MRF. It is also advantageous to place the public area near the other areas that are frequented by self-haulers (such as the compost area or C&D area).

3.1.3 C&D Area

The existing C&D area is located between the north and south compost pads and adjacent to the green and wood waste tipping pad (Figure 9). The C&D area consists of a covered tipping building and processing line.

Material enters this area from the following sources primarily:

- C&D from the public area/Z-wall
- Self-haul C&D (that was not directed to the Z-wall)

C&D from the public area/Z-wall is transported by operations staff. The remainder of incoming C&D is delivered by a mix of franchise and self-haulers. Some are account haulers, and some are not. Most self-haulers



Figure 9. C&D Area

have a pickup truck and/or trailer. Self-haulers enter the site and then back up into either the open C&D area and green waste dropoff area or the C&D tipping building to unload their materials (Figure 10). The experience level of drivers of these vehicles varies as much as the range of customer and material types that are received in the area. Those with less experience driving these types of vehicles and backing them up in tight spaces cause safety and traffic flow concerns at times.

Adjacency Study for the Western Placer Waste Management Authority Master Planning Project, Placer County, California

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Figure 10. C&D and Green Waste Dropoff Area and C&D Tipping Building

The processing line consists of equipment that was repurposed from the MRF building and was not specifically designed for C&D processing (Figure 11). The processing line is not sufficient both in throughput and condition to process either current or future levels of C&D quantities. The existing space for C&D processing, materials staging and storage, and materials dropoff are insufficient and therefore potentially unsafe. Stockpiles block the line of sight for customers and workers, and the queuing for the time to untarp and unload trucks can be lengthy. In addition, this area has unsafe traffic conditions as described earlier in this memorandum for the C&D



Figure 11. C&D Processing Line and Tipping Building

and Compost areas. The public needs a separate location to unload while commercial customers use the tipping area.

Historically, waste streams change throughout the year and over time. At the time of the site visits, 40 percent of C&D was going to landfill, and 60 percent was going into the MRF. The C&D area is receiving more stump, treated wood waste, and preengineered materials that must be sorted and ultimately disposed of in the landfill.

The CH2M Team recommends that the following attributes be considered for the future C&D area:

- Adequate space (for queuing, unloading, processing, and stockpiles)
- Updated processing line technology under a cover with sufficient capacity and functionality to address existing and future processing quantities as well as the types of materials received currently and anticipated in the future; a processing line that can be expanded and adjusted for waste stream needs is preferred
- A processing line with surrounding space to adapt to future needs
- Separate traffic streams with minimal cross points

The ultimate configuration of the C&D area will depend on its location, the chosen configuration, and the other elements that are located around it. It would be advantageous to locate the C&D area near the areas where products from this area are going (e.g., landfill or future pilot technology, or potential third-party compatible manufacturing process).



3.1.4 Landfill

The landfill footprint takes up most of the existing site, as shown on Figure 12. The permitted landfill capacity is currently 292 acres. Of this number, 62 acres have unlined modules (i.e., Modules 1, 2, 10, and 11). The landfill is open Monday through Friday, but the operator occasionally has to operate on the weekend. The following incoming waste streams are weighed (inbound and outbound) at either the commercial scale and scale-house or at the scale south of the public area (sludge and larger commercial accounts going to landfill), and sent directly to the landfill:

- Direct-haul C&D treated wood
- Direct-haul C&D
- Direct-haul commercial food waste and wet MSW loads
- Direct-haul sludge and mixed inerts

Additionally, the landfill receives waste from internal transports originating at other areas in the facility, as follows:

- MSW from the public area/Z-wall
- Residue from the C&D area
- Residue from the compost area
- Residue from the MRF building

In addition to the active and closed portions of the landfill, important ancillary systems are part of the overall landfill area. The stormwater, landfill gas, and leachate collections systems spread throughout the area. Equipment that is used within the landfill is maintained at the onsite maintenance building near the MRF building.

The CH2M Team recommends that the following attributes be considered for the future landfill area:

- Options for mitigating the longterm risk associated with the unlined modules
- Optimal placement and layout of new landfill modules to maximize air space and operational efficiency



Figure 12. Landfill Modules

• Separate dedicated access route

The ultimate configuration of the future landfill will depend on its location and placement in relation to the existing landfill modules. The landfill will need to be placed near an inbound/outbound scale(s) and maintenance facility.

3.2 Other Elements

During the Adjacency Study site visits, the CH2M Team spent most of its time at the critical elements discussed in previous sections. However, additional observations were made at four other locations

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throughout the site—the maintenance area, entrance and scales, administration building and parking area, and recyclable materials storage area. The following sections present observations and recommendations for those locations.

3.2.1 Maintenance Area

The maintenance area is located south of the MRF building, and it consists of a building where maintenance is performed and an outdoor storage and staging area where equipment sits while waiting on parts delivery and installation (Figure 13). The maintenance area currently serves the MRF and compost and landfill equipment. The current configuration and placement does not support expansion of this building, which will be needed to accommodate future site needs.

The CH2M Team recommends that the following attributes be considered for the future maintenance area:

- Maintenance facilities located near fuel areas and employee parking lots, and conveniently located near the operations that they support
- Access to the maintenance building for internal users only, and separated from external site user traffic access



Figure 13. Maintenance Building with Storage

• Additional space for spare parts, inoperable vehicles waiting on parts, various delivery, and repair, as well as for busy times both during and after hours of operation (e.g., traffic separation and lighting)

3.2.2 Entrance/Scales

All traffic (i.e., haulers, account/other commercial, and self-haulers) enters and exits the site at one location. A commercial scale and scale-house are used for inbound and outbound loads. This scale is generally used for haulers and other commercial accounts (everything commercial is weighed) and larger public/self-haul loads that need to be weighed. There is also a public area gatehouse where self-haulers who are directed to the public area pay disposal fees based on yardage estimates. The other main scale, which is south of the public area, is used for sludge and other larger commercial accounts going to landfill; the main scale is not used for self-haul or public-related materials. A smaller scale in the buyback area is used to weigh buyback materials for customer reimbursement. An axel scale south of the MRF is only used to make sure that road weights are appropriate, and is not used to weigh commodities.



The current one entrance/commercial-scale configuration reduces customer confusion about where to enter the site and reduces the number of employees that are needed to run the entrance/ scale area (Figure 14). However, the current location and configuration of the scale are not flexible or adaptable enough for peak traffic needs, and do not currently separate commercial and selfhaul traffic.

The CH2M Team recommends that the following attributes be considered for the future entrance/ scale area(s):

- Adequate placement and configuration to optimize the overall facility layout
- Adequate space to accommodate peak flow and queuing needs and to adjust to other needs



Figure 14. Commercial Scale

- Areas for separate commercial and self-haul traffic
- Technology upgrades such as radio-frequency identification (RFID) for known customer accounts and vehicles, card key/debit card type payment systems, and fast track-type systems
- Resources for minimal redundancy, if separate entrances are needed for the existing site and western property based on ultimate planned use (for example, if there will be no public uses in one of the areas, perhaps have an account or debit type system only on that site)

3.2.3 Administration Building/Parking

The current administration building is attached to the MRF building with a parking lot adjacent to the building. The building and parking lot will need to be expanded to support future growth, and may not be sufficient for current staff and parking needs in some situations.

The CH2M Team recommends that the following attribute be considered for the administration area:

• Adequate building and parking space for growth

3.2.4 Recyclable Materials Storage Area

Recovered and baled recyclable materials currently are stored in multiple places around the site. There is inadequate storage, and no covered location for materials.

The CH2M Team recommends that the following attributes be considered for the future recyclable materials storage area:

- Adequate space to accommodate existing and future capacity, ideally in one location near a WPWMA operated scale for quick sales or general area of the facility
- Adequate space to accommodate fluctuations in the market (resulting in more storage for longer periods)
- Covered storage area

4. Summary

The CH2M Team made a number of observations during the June 26 and 27, 2017, Adjacency Study site visits that will be valuable when considering future site layouts and configurations. Overall, the CH2M Team recommends that future site modifications include changes that will provide adequate capacity,

Adjacency Study for the Western Placer Waste Management Authority Master Planning Project, Placer County, California



flexibility, separate traffic streams, and improved traffic flow. Specific recommendations are discussed by project element in this memorandum and are summarized in Table 1.

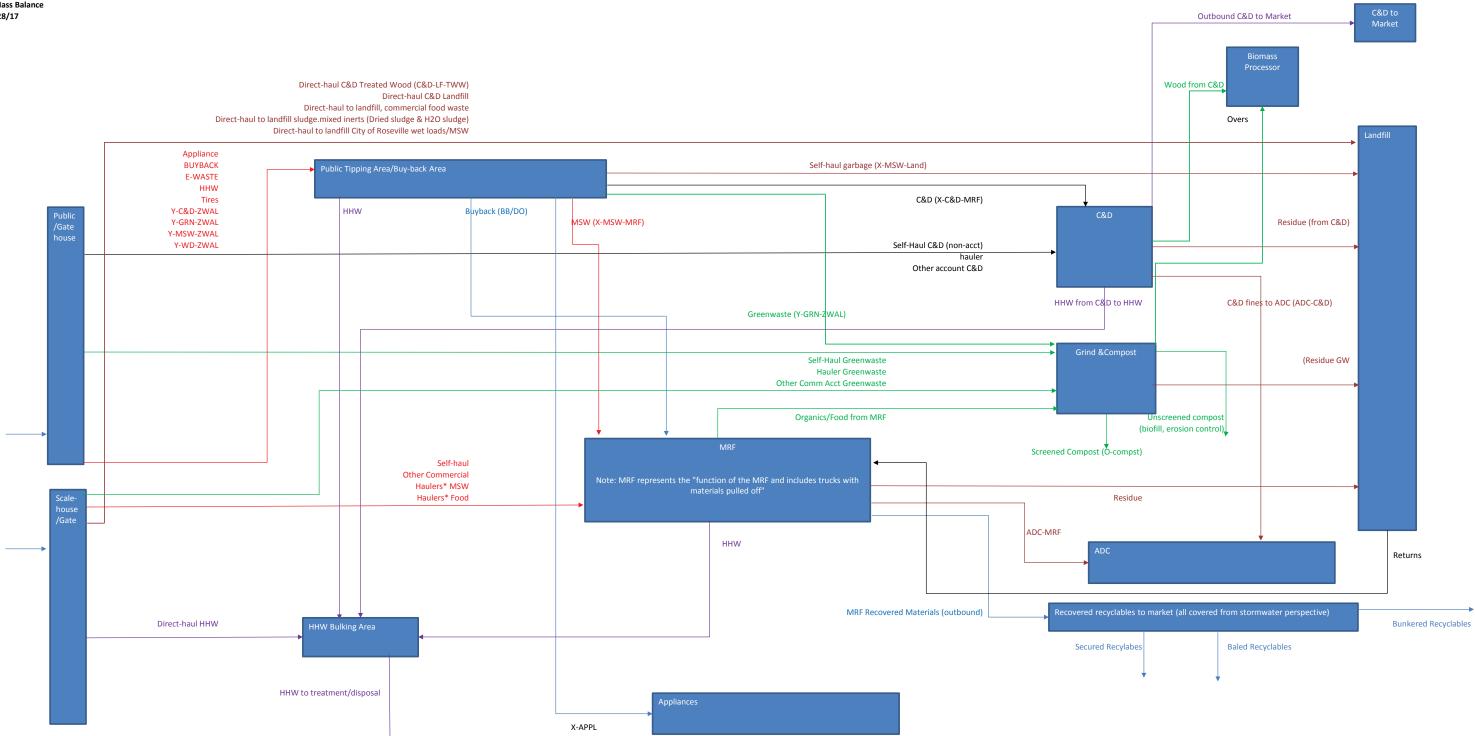
Table 1. Adjacency Recommendations

Adjacency Study for the Western Placer Waste Management Authority Master Planning Project, Placer County, California

Project Element	Primary Adjacency Considerations	Other Adjacency Considerations
Critical Elements		
Compost Area	 Locate proximate to loading and purchase area for final product, which aligns with public tipping area Develop infrastructure for separate traffic flow 	If across Fiddyment Road from landfill and C&D areas, include sufficient storage for materials bulking and transport at acceptable frequency
Public Area	 Locate proximate to compost area for loading and purchase of finished compost Locate proximate to entrance Develop infrastructure for separate traffic flow 	If across Fiddyment Road from landfill and MRF areas, include sufficient storage for materials bulking and transport at acceptable frequency
C&D Area	Locate proximate to landfill for residuals disposal	Could benefit from being proximate to the compatible manufacturing and pilot technology area, if applicable
Landfill	 Separate traffic flow from public users and other elements Consolidate landfill operations on one side of Fiddyment Road for ease of haul and operations and avoid need for duplicate landfill infrastructure (for example, landfill gas flare, monitoring network) 	 If landfill operations are on both sides of Fiddyment Road at the same time, duplicate operations and components may be required
Other Elements		
Maintenance Area	 Locate proximate to all critical elements, may need one on each side of Fiddyment Road Separate from public and operations traffic to the degree possible Must be accessible from landfill as well and by landfill compactor 	
Entrance/Scales	 Separate traffic streams for function, safety, and to ease site congestion Separate entrance on West Property, will vary depending on the elements on that property Include adequate queuing for public users 	 Incorporate prepayment and electronic payment methods Incorporate RFID and other methods to scan and auto-bill for loads Separate public and account traffic and possibly entrances
Administration Building/Parking	 Locate adjacent to existing building and parking 	
Recyclable Materials Storage Area	Locate near MRF and scales	

Appendix 2G Mass Flow Diagram

Direct-haul C&D Treated Wood (C&D-LF-TWW) Direct-haul C&D Landfill Direct-haul to landfill, commercial food waste Direct-haul to landfill City of Roseville wet loads/MSW



*Haulers: Roseville, Recolgy, and Lincoln

Appendix 2H 2016/2017 Tonnage and Vehicle Count Data File from Eric Oddo emailed 8/23/17

Self Haul

Wood

Source	Material	Total Transactions	Unique Transactions	Vehicle Count
Hauler	Appliance	1.29	0.05	1.29
Hauler	C&D	18.80	18.80	9.40
Hauler	E Waste	1.00	0.25	1.00
Hauler	Foodwaste	6.15	6.15	3.07
Hauler	Green	40.25	40.25	20.13
Hauler	HHW	1.90	1.88	1.15
Hauler	Inbound	19.55	19.55	9.78
Hauler	Inert	4.32	4.32	2.16
Hauler	MSW	160.41	160.41	80.21
Hauler	S&MI	12.47	12.47	6.23
Hauler	Tires	1.04	0.00	1.04
Hauler	Wood	3.29	3.29	1.64
Nortech	ADC	16.86	16.86	8.43
Nortech	C&D	14.12	14.12	7.06
Nortech	Inbound	6.00	6.00	3.00
Nortech	Internal	25.28	25.28	12.64
Nortech	MSW	25.19	25.19	12.60
Nortech	Outbound	35.99	35.99	17.99
Nortech	Residue	95.72	95.72	47.86
Nortech	Return	2.00	2.00	1.00
Nortech	Wood	9.33	9.33	4.67
Other Commercial	**000	9.55	9.55	4.07
Account	Appliance	2.37	0.84	2.37
Other Commercial	Appliance	2.37	0.64	2.57
Account	Buyback	3.14	0.03	3.14
Other Commercial	BUYDACK	5.14	0.05	5.14
Account	C&D	42.91	42.88	22.59
Other Commercial	CaD	42.91	42.88	22.55
	E 14/2 - 1-2	2.60	0.02	2.60
Account Other Commercial	E Waste	2.60	0.02	2.60
	C	20.24	20.20	42.00
Account Other Commercial	Green	20.31	20.20	12.08
		2.00	0.42	2.66
Account	HHW	3.68	0.43	3.68
Other Commercial				
Account	Inbound	3.07	3.07	1.54
Other Commercial				
Account	Inert	10.18	10.13	5.51
Other Commercial				
Account	MSW	14.04	13.98	9.48
Other Commercial				
Account	Outbound	22.29	22.29	11.14
Other Commercial				
Account	S&MI	8.55	8.55	4.27
Other Commercial				
Account	Tires	1.53	0.27	1.47
Other Commercial				
Account	Wood	2.51	2.44	1.47
Self Haul	Appliance	24.79	8.04	24.79
Self Haul	Buyback	102.67	76.22	102.67
Self Haul	C&D	173.60	172.87	125.31
Self Haul	E Waste	34.89	10.86	34.89
Self Haul	Green	67.59	65.75	61.62
Self Haul	HHW	61.72	44.14	61.69
Self Haul	Inbound	6.59	6.59	3.29
Self Haul	Inert	36.48	35.36	31.14
Self Haul	MSW	211.16	209.91	192.88
Self Haul	Outbound	2.00	2.00	1.00
Self Haul	S&MI	2.00	2.00	1.00
Self Haul	Tires	4.73	0.75	4.61
		4.75	0.75	4.03

Source	Material	Total Transactions	Unique Transactions	Vehicle Count
Hauler	Appliance	1.31	0.05	1.31
Hauler	C&D	22.48	22.48	11.24
Hauler	E Waste	1.00	0.25	1.00
Hauler	Foodwaste	6.65	6.65	3.33
Hauler	Green	43.56	43.56	21.78
Hauler	HHW	1.89	1.87	1.15
Hauler	Inbound	23.03	23.03	11.52
Hauler	Inert	4.41	4.41	2.21
Hauler	MSW	213.60	213.60	106.80
Hauler	S&MI	12.47	12.47	6.23
Hauler	Tires	1.04	0.00	1.04
Hauler	Wood	3.11	3.11	1.55
Nortech	ADC	17.20	17.20	8.60
Nortech	C&D	12.51	12.51	6.25
Nortech	Inbound	6.00	6.00	3.00
Nortech	Internal	23.08	23.08	11.54
Nortech	MSW	19.44	19.44	9.72
Nortech	Outbound	39.50	39.50	19.75
Nortech	Residue	100.06	100.06	50.03
Nortech	Return	2.00	2.00	1.00
Nortech	Wood	9.33	9.33	4.67
Other Commercial				
Account	Appliance	2.32	0.83	2.32
Other Commercial				
Account	Buyback	2.96	0.04	2.96
Other Commercial				
Account	C&D	54.35	54.31	28.39
Other Commercial		51.55	5 1151	20.00
Account	E Waste	2.50	0.03	2.50
Other Commercial	L Waste	2.50	0.05	2.50
Account	Green	23.92	23.81	13.75
Other Commercial	Green	25.52	25.01	15.75
Account	ннw	3.95	0.47	3.95
Other Commercial	111100	5.55	0.47	3.33
Account	Inbound	3.07	3.07	1.53
Other Commercial	Inbound	5.07	5.07	1.55
Account	In out	11.10	11 13	5.99
Other Commercial	Inert	11.16	11.12	5.99
Account	MSW	15.91	15.84	10.48
	IVISVV	15.91	15.84	10.48
Other Commercial	O ultra d	22.04	22.64	44.20
Account	Outbound	22.61	22.61	11.30
Other Commercial				
Account	S&MI	8.57	8.57	4.28
Other Commercial				
Account	Tires	1.56	0.24	1.51
Other Commercial				
Account	Wood	2.62	2.58	1.47
Self Haul	Appliance	20.58	7.16	20.58
Self Haul	Buyback	86.24	67.28	86.24
Self Haul	C&D	177.42	176.59	124.16
Self Haul	E Waste	29.13	10.01	29.13
Self Haul	Green	56.17	54.61	49.61
Self Haul	HHW	56.50	32.91	56.46
Self Haul	Inbound	7.09	7.09	3.54
Self Haul	Inert	36.87	35.85	30.13
Self Haul	MSW	166.90	165.53	150.64
Self Haul	Outbound	2.00	2.00	1.00
Self Haul	S&MI	2.00	2.00	1.00
Self Haul	Tires	3.95	0.68	3.83
Self Haul	Wood	9.33	8.98	7.84

Weekends

Source	Material	Total Transactions	Unique Transactions	Vehicle Count
Hauler	Appliance	1.18	0.00	1.18
Hauler	C&D	3.65	3.65	1.83
Hauler	E Waste	0	0	
Hauler	Foodwaste	4.88	4.88	2.44
Hauler	Green	2.70	2.70	1.35
Hauler	HHW	2.00	2.00	1.00
Hauler	Inbound	10.29	10.29	5.14
Hauler	Inert	2.44	2.44	1.22
Hauler	MSW	25.63	25.63	12.82
Hauler	S&MI			
Hauler	Tires	1.00	0.00	1.00
Hauler	Wood	8.00	8.00	4.00
Nortech	ADC	7.11	7.11	3.5
Nortech	C&D	18.20	18.20	9.10
Nortech	Inbound			
Nortech	Internal	30.86	30.86	15.43
Nortech	MSW	39.86	39.86	19.93
Nortech	Outbound	5.24	5.24	2.62
Nortech	Residue	36.32	36.32	18.10
Nortech	Return	0	0	(
Nortech	Wood	0	0	(
Other Commercial				
Account	Appliance	2.64	0.84	2.64
Other Commercial	PP			
Account	Buyback	3.58	0.00	3.58
Other Commercial				
Account	C&D	10.59	10.58	6.22
Other Commercial		10.00	10.50	0.21
Account	E Waste	3.00	0.00	3.00
Other Commercial	L Waste	5.00	0.00	5.00
Account	Green	7.58	7.45	6.10
Other Commercial	Green	7.56	7.43	0.10
Account	ннѡ	1.43	0.14	1.43
Other Commercial		1.45	0.14	1.43
	Inhound	2.00	2.00	1.5
Account	Inbound	3.09	3.09	1.55
Other Commercial	1	2.05	2.74	2.20
Account	Inert	3.85	3.74	2.38
Other Commercial				
Account	MSW	7.92	7.92	6.22
Other Commercial				
Account	Outbound	20.20	20.20	10.10
Other Commercial				
Account	S&MI	6.00	6.00	3.00
Other Commercial				
Account	Tires	1.40	0.40	1.33
Other Commercial				
Account	Wood	1.82	1.59	1.4
Self Haul	Appliance	35.46	10.27	35.4
Self Haul	Buyback	144.15	98.78	144.1
Self Haul	C&D	163.92	163.43	128.2
Self Haul	E Waste	49.42	13.01	49.43
Self Haul	Green	96.53	93.98	92.0
Self Haul	HHW	74.97	72.68	74.9
Self Haul	Inbound	2.00	2.00	1.0
Self Haul	Inert	35.50	34.10	33.7
Self Haul	MSW	323.34	322.37	299.9
Self Haul	Outbound	0	0	
Self Haul	S&MI	0	0	(
Self Haul	Tires	6.58	0.93	6.4
	Wood	13.13	12.50	12.48

Total transactions: This number represents the total number of transactions conducted by the scalehouse attendants. It includes two (2) transactions for every weighed customer (gross and tare weights), one (1) transaction for non-weighed products and extra counts for multiple items on a single ticket.

Unique transactions: Probably a better representation of traffic loading at the scalehouse. Includes two (2) transactions for every weighed customer but excludes extra counts for multiple material items on a single ticket.

9.16

Vehicle count: Actual vehicle count hitting the scalehouse. All customers are counted as one (1) count regardless of whether or not they are weighed.

9.98

10.41

Self haul: While not exactly representative of the customer loading that goes to the public area (as some of these customers are weighed), it is a good approximation for the customer loading that would be anticipated at a new public area.

Weekdays

All Days

Peak Day

Friday June 30, 2017

Source	Material	Total Transactions	Unique Transactions	Vehicle Count
Hauler	Appliance	1.00	0.00	1.00
Hauler	C&D	38.00	38.00	19.00
Hauler	E Waste	0	0	0
Hauler	Foodwaste	8.00	8.00	4.00
Hauler	Green	40.00	40.00	20.00
Hauler	HHW	0	0	0
Hauler	Inbound	16.00	16.00	8.00
Hauler	Inert	6.00	6.00	3.00
Hauler	MSW	242.00	242.00	121.00
Hauler	S&MI	12.00	12.00	6.00
Hauler	Tires	0	12.00	0.00
Hauler	Wood	2.00	2.00	1.00
Nortech	ADC			
		12.00	12.00	6.00
Nortech	C&D	26.00	26.00	13.00
Nortech	Inbound	0	0	0
Nortech	Internal	30.00	30.00	15.00
Nortech	MSW	34.00	34.00	17.00
Nortech	Outbound	40.00	40.00	20.00
Nortech	Residue	106.00	106.00	53.00
Nortech	Return	0	0	0
Nortech	Wood	0	0	0
Other Commercial				
Account	Appliance	13.00	6.00	13.00
Other Commercial				
Account	Buyback	13.00	0.00	13.00
Other Commercial				
Account	C&D	96.00	96.00	68.00
Other Commercial				
Account	E Waste	12.00	0.00	12.00
Other Commercial	L WUSIC	12.00	0.00	12.00
Account	Green	43.00	43.00	33.00
Other Commercial	Green	45.00	45.00	55.00
Account	ннѡ	29.00	0.00	29.00
Other Commercial		29.00	0.00	29.00
Account	Inbound	0	0	0
	bhuodhi	0	U	0
Other Commercial				
Account	Inert	28.00	28.00	15.00
Other Commercial				
Account	MSW	119.00	119.00	115.00
Other Commercial				
Account	Outbound	4.00	4.00	2.00
Other Commercial				
Account	S&MI	10.00	10.00	5.00
Other Commercial				
Account	Tires	4.00	1.00	4.00
Other Commercial				
Account	Wood	1.00	1.00	1.00
Self Haul	Appliance	28.00	10.00	28.00
Self Haul	Buyback	106.00	83.00	106.00
Self Haul	C&D	262.00	262.00	179.00
Self Haul	E Waste	44.00	19.00	44.00
Self Haul	Green	69.00	68.00	62.00
Self Haul	HHW	90.00	57.00	90.00
Self Haul	Inbound	0	0	0
Self Haul	Inert	43.00	42.00	35.00
Self Haul	MSW	257.00	256.00	224.00
Self Haul	Outbound	237.00	230.00	0
Self Haul	S&MI	0	0	0
Self Haul	Tires	10.00	4.00	10.00
Self Haul	Wood	10.00	10.00	8.00

All Days				Weekdays				Weekends				Peak Day	Saturday May 27, 2017		
Material	Tonnage	Unit type	Vehicle Count	Material	Tonnage	Unit type	Vehicle Count	Material	Tonnage	Unit type	Vehicle Count	Material	Tonnage	Unit type	Vehicle Count
Appliance	32.4	С	26.05	Appliance	28.1	C	22.03	Appliance	43.2	C	36.22	Appliance	66.0	C	53.00
BB/DO Recyclables	2.2	W	2.73	BB/DO Recyclables	2.2	W	2.34	BB/DO Recyclables	2.4	W	3.57	BB/DO Recyclables	1.2	W	4.00
BUYBACK	103.2	С	103.23	BUYBACK	86.8	C	86.77	BUYBACK	144.8	C	144.81	BUYBACK	236.0	С	236.00
E-WASTE	46.0	С	35.49	E-WASTE	41.8	C	29.78	E-WASTE	56.5	C	49.88	E-WASTE	58.0	C	53.00
HHW	62.5	С	62.43	HHW	57.5	C	57.46	HHW	75.1	C	75.07	HHW	113.0	С	113.00
Tires	14.7	С	4.83	Tires	12.9	C	4.12	Tires	18.8	C	6.54	Tires	89.0	C	16.00
X-APPL.	3.2	W	1.18	X-APPL.	2.9	W	1.06	X-APPL.	4.1	W	1.48	X-APPL.	0.0	W	0.00
X-C&D-MRF	26.2	W	7.06	X-C&D-MRF	24.8	W	6.25	X-C&D-MRF	29.9	W	9.10	X-C&D-MRF	49.6	W	13.00
X-MSW-LAND	1.6	W	1.44	X-MSW-LAND	1.6	W	1.38	X-MSW-LAND	2.1	W	2.00	X-MSW-LAND	65.4	W	28.00
X-MSW-MRF	30.0	W	11.68	X-MSW-MRF	23.7	W	8.57	X-MSW-MRF	46.1	W	19.62	X-MSW-MRF	0.0	W	0.00
Y-C&D-ZWAL	109.9	V	79.67	Y-C&D-ZWAL	102.9	V	73.60	Y-C&D-ZWAL	127.6	V	95.12	Y-C&D-ZWAL	210.3	V	156.00
Y-GRN-ZWAL	87.4	V	59.13	Y-GRN-ZWAL	71.3	V	46.57	Y-GRN-ZWAL	128.2	V	90.93	Y-GRN-ZWAL	218.5	V	156.00
Y-MSW-ZWAL	247.3	V	179.65	Y-MSW-ZWAL	192.4	V	139.91	Y-MSW-ZWAL	386.0	V	279.98	Y-MSW-ZWAL	587.8	V	408.00
Y-WD-ZWAL	12.5	V	8.14	Y-WD-ZWAL	10.3	V	6.55	Y-WD-ZWAL	18.0	V	12.13	Y-WD-ZWAL	43.3	V	35.00
total out	63.3	1 Total ZWAL	326.58	total out	55	.04 Total ZWAL	266.64	total out	84.6	2 Total ZWAL	478.16	total out	116.15 T	otal ZWAL	755.00
		Total buyback/HHW	232.04			Total buyback/HHW	200.16			Total buyback/HHW	312.52			otal buyback/HHW	471.00
		Total vehicle in	558.63			Total vehicle in	466.80			Total vehicle in	790.68			otal vehicle in	1,226.00
												Note: Based on BV Report a	nd Aerial, assuming zwal has 1		,

Conversion Factors: Green - 328 lb/cy; Wood 528 lbs/cy.

Code descriptions		Flow Diagram
c v w	number of individual units cubic yards tons	
Appliance BUYBACK E-WASTE HHW BB/DO Recyclables	refridgerated and non-refridgerated appliances residential recyclable buyback and drop off electronic wastes and CRTs residentially and commercially generated HHW Recyclable materials collected and buyback and sent to MRF for baling	Appliance BUYBACK E-WASTE HHW Tires
Tires X-APPL. X-C&D-MRF X-MSW-LAND	Car and truck tires Appliances (both refrigerated and non-refrigerated) C&D sent to MRF for processing MSW sent to landfill	Y-C&D-ZWAL Y-GRN-ZWAL Y-MSW-ZWAL Y-WD-ZWAL
X-MSW-MRF Y-C&D-ZWAL Y-GRN-ZWAL Y-MSW-ZWAL	MSW sent to MRF for processing C&D Greenwaste MSW	

Y-WD-ZWAL Woodwaste

Note: peak day based on peak traffic loading, not accepted tonnage

All Days

Weekdays

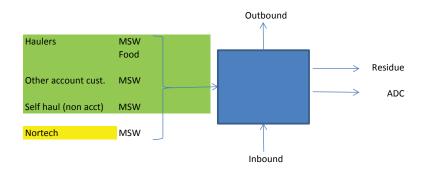
Weekends

Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count
	Inbound	16.44	11.03		Inbound	20.66	13.10		Inbound	5.41	5.64		Inbound	30.05	9.00
	Outbound	102.05	9.59		Outbound	137.21	12.34		Outbound	12.23	2.55		Outbound	66.73	7.00
	Residue	651.01	40.23		Residue	677.59	41.94		Residue	287.22	16.84		Residue	648.29	29.00
	ADC-MRF	95.47	1.33		ADC-MRF	97.19	6.57		ADC-MRF	47.07	3.33	1	ADC-MRF	64.99	5.00
	X-MSW-MRF	29.98	11.68		X-MSW-MRF	23.66	8.57		X-MSW-MRF	46.09	19.62		X-MSW-MRF	6.02	3.00
Hauler	FOOD-MRF	11.01	1.33	Hauler	FOOD-MRF	11.51	1.30	Hauler	FOOD-MRF	10.15	1.38	Hauler	FOOD-MRF	0.00	0.00
Hauler	MSW-MRF	607.08	77.34	Hauler	MSW-MRF	809.52	102.96	Hauler	MSW-MRF	94.09	12.43	Hauler	MSW-MRF	1,036.38	113.00
Other Commercial				Other Commercial				Other Commercial				Other Commercial			
Account	MSW-MRF	6.64	3.78	Account	MSW-MRF	7.77	4.27	Account	MSW-MRF	2.30	1.91	Account	MSW-MRF	14.40	4.00
Self Haul	MSW-MRF	11.66	17.89	Self Haul	MSW-MRF	10.66	15.74	Self Haul	MSW-MRF	14.17	23.33	Self Haul	MSW-MRF	3.26	5.00

Code descriptions

Flow Diagram

Inbound source seperated recyclables
Recovered commodities directed to outside
markets or other portions of the facility
(e.g. cardboard, metals, inerts and wood waste)
Unrecovered product sent for landfilling
MRF fines used as ADC at the WRSL
MSW received from the public and transported to the MRF
Wet/sloppy MSW with a decent amount of recyclables
MSW directed to the MRF
Recology, City of Roseville, City of Lincoln



Peak Day

Tuesday January 10, 2017

Note: peak day based on peak MSW acceptance

All Days	l Days			Weekdays				Weekends				Peak Day	ay Wednesday October 12, 2016		
Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count
Hauler	C&D MRF	30.93	5.40	Hauler	C&D MRF	34.77	6.24	Hauler	C&D MRF	13.95	1.71	Hauler	C&D MRF	53.91	9.00
Other Commercial				Other Commercial				Other Commercial				Other Commercial			
Account	C&D MRF	29.37	13.10	Account	C&D MRF	36.19	16.28	Account	C&D MRF	9.44	3.82	Account	C&D MRF	58.32	25.00
Self Haul	C&D MRF	48.37	40.93	Self Haul	C&D MRF	53.40	43.95	Self Haul	C&D MRF	35.62	33.27	Self Haul	C&D MRF	98.81	59.00
Nortech	ADC-C&D	37.23	2.40	Nortech	ADC-C&D	37.27	2.40	Nortech	ADC-C&D	26.90	2.00	Nortech	ADC-C&D	33.41	2.00
Nortech	Outbound	11.03	1.96	Nortech	Outbound	11.21	2.00	Nortech	Outbound	8.32	1.21	Nortech	Outbound	5.26	1.00
Nortech	Residue	88.08	7.72	Nortech	Residue	91.07	7.95	Nortech	Residue	17.91	2.27	Nortech	Residue	93.83	8.00
Nortech	X-C&D-MRF	26.24	7.06	Nortech	X-C&D-MRF	24.80	6.25	Nortech	X-C&D-MRF	29.89	9.10	Nortech	X-C&D-MRF	19.26	4.00
	Into C&D line	134.90	66.49		Into C&D line	149.16	72.72		Into C&D line	88.91	47.90		Into C&D line	230.30	97.00
	Outboud	11.03	1.96		Outboud	11.21	2.00		Outboud	8.32	1.21		Outboud	5.26	1.00
	Residue	88.08	7.72		Residue	91.07	7.95		Residue	17.91	2.27		Residue	93.83	8.00
	ADC	37.23	2.40		ADC	37.27	2.40		ADC	26.90	2.00		ADC	33.41	2.00

Code descriptions

Flow Diagram



Note: peak day based on peak C&D acceptance

All Days				Weekdays				Weekends				Peak Day	Wednesday February 1, 2017		
Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count
Hauler	C&D LANDFL	32.34	5.33	Hauler	C&D LANDFL	32.33	5.34	Hauler	C&D LANDFL	35.70	3.00	Hauler	C&D LANDFL	54.82	11.00
Hauler	C&D-LF-TWW	5.18	1.13	Hauler	C&D-LF-TWW	5.18	1.13	Hauler	C&D-LF-TWW	0.00	0.00	Hauler	C&D-LF-TWW	0.00	0.00
Hauler	DRIED SLDG	5.66	1.00	Hauler	DRIED SLDG	5.66	1.00	Hauler	DRIED SLDG	0.00	0.00	Hauler	DRIED SLDG	0.00	0.00
Hauler	FOOD WASTE	24.16	2.61	Hauler	FOOD WASTE	24.37	2.63	Hauler	FOOD WASTE	18.45	2.11	Hauler	FOOD WASTE	21.97	3.00
Hauler	H20 SLUDGE	19.21	1.97	Hauler	H20 SLUDGE	19.21	1.97	Hauler	H20 SLUDGE	0.00	0.00	Hauler	H20 SLUDGE	0.00	0.00
Hauler	MSW-LAND	22.02	3.76	Hauler	MSW-LAND	22.35	3.82	Hauler	MSW-LAND	4.81	1.00	Hauler	MSW-LAND	413.14	40.00
Hauler	SLUDGE	59.80	5.72	Hauler	SLUDGE	59.80	5.72	Hauler	SLUDGE	0.00	0.00	Hauler	SLUDGE	71.78	7.00
Nortech	ADC-C&D	37.23	2.40	Nortech	ADC-C&D	37.27	2.40	Nortech	ADC-C&D	26.90	2.00	Nortech	ADC-C&D	0.00	0.00
Nortech	ADC-MRF	95.47	6.45	Nortech	ADC-MRF	97.19	6.57	Nortech	ADC-MRF	47.07	3.33	Nortech	ADC-MRF	141.03	9.00
Nortech	Residue	760.77	49.41	Nortech	Residue	768.93	50.03	Nortech	Residue	495.62	29.25	Nortech	Residue	1,043.04	73.00
Nortech	Returns	1.83	1.00	Nortech	Returns	1.83	1.00	Nortech	Returns	0.00	0.00	Nortech	Returns	0.00	0.00
Nortech	ROAD TRASH	0.18	1.10	Nortech	ROAD TRASH	0.18	1.10	Nortech	ROAD TRASH	0.00	0.00	Nortech	ROAD TRASH	0.00	0.00
Nortech	X-MSW-LAND	1.59	1.41	Nortech	X-MSW-LAND	1.57	1.38	Nortech	X-MSW-LAND	2.34	2.40	Nortech	X-MSW-LAND	0.00	0.00
Other Commercial				Other Commercial				Other Commercial				Other Commercial			
Account	C&D LANDFL	37.18	9.49	Account	C&D LANDFL	37.47	9.57	Account	C&D LANDFL	11.83	2.33	Account	C&D LANDFL	53.30	12.00
Other Commercial				Other Commercial				Other Commercial				Other Commercial			
Account	C&D-LF-TWW	9.83	1.19	Account	C&D-LF-TWW	9.83	1.19	Account	C&D-LF-TWW	0.00	0.00	Account	C&D-LF-TWW	0.00	0.00
Other Commercial				Other Commercial				Other Commercial				Other Commercial			
Account	MSW-LAND	6.06	2.23	Account	MSW-LAND	6.06	2.23	Account	MSW-LAND	0.00	0.00	Account	MSW-LAND	11.61	4.00
Other Commercial				Other Commercial				Other Commercial				Other Commercial			
Account	SLUDGE	30.26	2.39	Account	SLUDGE	30.26	2.39	Account	SLUDGE	0.00	0.00	Account	SLUDGE	0.00	0.00
Self Haul	C&D LANDFL	22.32	9.26	Self Haul	C&D LANDFL	22.58	9.36	Self Haul	C&D LANDFL	11.14	5.00	Self Haul	C&D LANDFL	0.00	0.00
Self Haul	C&D-LF-TWW	4.51	1.40	Self Haul	C&D-LF-TWW	4.51	1.40	Self Haul	C&D-LF-TWW	0.00	0.00	Self Haul	C&D-LF-TWW	34.44	19.00
Self Haul	MSW-LAND	3.47	1.85	Self Haul	MSW-LAND	3.47	1.85	Self Haul	MSW-LAND	0.00	0.00	Self Haul	MSW-LAND	5.56	10.00

Returns

ADC

Direct haul, sludge, and road trash to landfill (total)

Note: peak day based on peak disposal quantities (e.g. does not include ADCs)

The landfill is not currently operated on the weekends. However, in some situations the WPWMA (Nortech) has had to operate the landfill on the weekends. The above numbers

reflect the average of the nine (9) days in FY 2016/17 that the landfill was operated.

Construction and demolotion debris sent directly to the landfill Treated wood waste sent directly the landfill Dried wastewater treatement plant sludge - used as an ADC Commercial food waste (sloppy MSW) loads sent directly to the landfill Water treatment plant sludge. Haulers Municipal solid waste send directly to the landfill Wastewater treatment plant sludge ADC generated at the MRF C&D processing area Other account cust. ADC generated at the MRF from MSW Residue from the MSW and C&D operations Self haul (non acct) Recyclable materials consolodated at the landfill and returned to the MRF Road side litter pick up material Nortech MSW delivered to the public tipping area and subsequently hauled to the landfill.

Recology, City of Roseville, City of Lincoln

Flow Diagram



υ	une	public	ribbing	area	anu	subsequ	Jen

282.16

Haulers

Code descriptions

C&D LANDFL

C&D-LF-TWW

DRIED SLDG

FOOD WASTE H20 SLUDGE

MSW-LAND

SLUDGE

ADC-C&D

ADC-MRF

Residue

Returns

ROAD TRASH

X-MSW-LAND

Wednesday February 1, 2017

All Days				Weekdays				Wee	ekends					Peak Day	Saturday May 13, 2017		
Source	Material	Tonnage	Vehicle Count	Source	Material	Tonnage	Vehicle Count		Source	Material	Tonnage	Vehicle Count		Source	Material	Tonnage	Vehicle Count
Hauler	FOOD-MRF	11.22	1.00	Hauler	FOOD-MRF	11.22	1.00	11.216735 Haul	ler	FOOD-MRF	0.00	0.00		Hauler	FOOD-MRF	0.00	0.00
Hauler	GREEN WST.	94.80	13.64	Hauler	GREEN WST.	102.14	14.73	6.9351457 Haul	ler	GREEN WST.	11.49	1.35	8.52709677	4 Hauler	GREEN WST.	42.15	2.00
Nortech	INT-COMP	266.62	12.53	Nortech	INT-COMP	187.60	8.68	Nort	tech	INT-COMP	669.87	32.17		Nortech	INT-COMP	0.00	0.00
Nortech	O-COMPST	82.33	3.74	Nortech	O-COMPST	84.24	3.83	Nort	tech	O-COMPST	62.51	2.76		Nortech	O-COMPST	0.00	0.00
Nortech	OVERS	60.76	2.60	Nortech	OVERS	58.47	2.52	Nort	tech	OVERS	71.84	3.00		Nortech	OVERS	0.00	0.00
Nortech	RESIDUE GW	6.30	1.28	Nortech	RESIDUE GW	6.30	1.28	Nort	tech	RESIDUE GW	0.00	0.00		Nortech	RESIDUE GW	0.00	0.00
Other Commercial				Other Commercial				Othe	er Commercial					Other Commercial			
Account	GREEN WST.	56.09	14.88	Account	GREEN WST.	65.50	17.11	3.8288645 Acco	ount	GREEN WST.	2.69	2.24	1.20242718	4 Account	GREEN WST.	0.41	1.00
Other Commercial				Other Commercial				Othe	er Commercial					Other Commercial			
Account	O-COMPST	30.17	1.41	Account	O-COMPST	28.18	1.35	Acco	ount	O-COMPST	38.36	1.67		Account	O-COMPST	46.84	2.00
Other Commercial				Other Commercial				Othe	er Commercial					Other Commercial			
Account	Y-GRN-ZWAL	8.19	4.41	Account	Y-GRN-ZWAL	7.55	3.94	1.9130553 Acco	ount	Y-GRN-ZWAL	10.97	6.43	1.70734870	3 Account	Y-GRN-ZWAL	4.00	3.00
Self Haul	GREEN WST.	5.55	6.29	Self Haul	GREEN WST.	5.90	6.75	0.8746091 Self I	Haul	GREEN WST.	4.58	5.02	0.91186147	2 Self Haul	GREEN WST.	6.76	6.00
Self Haul	Y-GRN-ZWAL	80.93	55.64	Self Haul	Y-GRN-ZWAL	64.56	43.04	1.5001291 Self I	Haul	Y-GRN-ZWAL	122.41	87.56	1.39792659	9 Self Haul	Y-GRN-ZWAL	240.50	176.00
	into processing/gring	245.56	94.86		into processing/gring	245.65	188			into processing/gring	152.14	102.60			into processing/gring	293.82	188.00
	into compost area	277.83	13.53		into compost area	198.82	9.68			into compost area	669.87	32.17			into compost area	0.00	0.00
	Finished compost	123.71	6.15		Finished compost	123.64	6.18			Finished compost	100.86	4.43			Finished compost	46.84	2.00
Code descriptions					Flow Diagram												

FOOD-MRF	Source seperated commercial food waste delivered by the City of Roseville and blended with greenwaste
	as part of ASP pilot study
GREEN WST.	Green waste received - measured by the ton
INT-COMP	Ground greenwaste transported to and placed on the compost pad
O-COMPST	Finished and marketed compost
OVERS	Woody fraction from compost, screened out at end of the composting
RESIDUE GW	process. Typically sent out as biomass but sometimes used on-site for erosion control purposes.
Y-GRN-ZWAL	Green waste received - measured by the cubic yard. CF: 328 lb/cy



Haulers Recology, City of Roseville, City of Lincoln

Appendix 2I Phase I Stakeholder Engagement

Stakeholder Engagement

Following the December 2017 Western Placer Waste Management Authority (WPWMA) Board meeting, WPWMA staff and the Jacobs team conducted a variety of stakeholder engagement to solicit feedback on the Plan concepts. The attached table summarizes the engagement activities. Through those activities, WPWMA staff met with the following stakeholders:

Elected Officials, Boards, Councils

- Placer County Board of Supervisors
- Roseville City Council
- Rocklin City Council
- Lincoln City Council
- Pioneer Energy

Community and Business Groups

- Rocklin Chamber of Commerce Government Relations Committee
- Lincoln Chamber of Commerce
- Placer County Associations of Realtors
- North State Building Industry Association

Environmental Groups

- Sierra Club
- Audubon Society

Large Landowners

- Placer Ranch, Inc.
- United Auburn Indian Community
- AKT Development Corp.
- Placer Athens Limited Partnership

Regulators

- Placer County Air Pollution Control
 District
- CalRecycle
- Regional Water Quality Control Board

General Public

 Residents from the Blue Oaks, Westpark, Fiddyment Farms, and Amoruso neighborhoods were engaged as part of the annual community meeting to discuss odors.

2018 Stakeholder Engagement Activities

	February	March	April	May	June	July	August	September	October	November	December
WPWMA Board (2nd Thurs)			Project Update: General 4/12		Project Update: Stakeholder Engagement 6/14	Project Update: Engagement & Evaluation Process 7/12		Project Update: MODA Criterion Approval 9/13	Project Update: Concept Preview 85% Level 10/11		Recommendation to Move into CEQA 12/13
Member Agencies	Meeting for Member Agency Executives 2/26			Member Agency BOS / Council Presentations: 5/2 Roseville 5/8 Rocklin 5/22 County 5/22 Lincoln	Project Update to Member Agency Executives (Email)				Project Update to Member Agency Executives (Email)		
Advisory Committee (2nd Thurs)	Meeting 2/15	Meeting 3/15	Meeting 4/12	Meeting 5/10	Meeting 6/14	Meeting 7/12	Meeting 8/28	Meeting 9/19	Meeting 10/11	Meeting 11/8	Meeting 12/13
Regulators								9/21 APCD 9/27 LEA/CalRecycle	10/15 Water Board	Project Update (Email)	
Adjacent Landowners							8/2 Placer Ranch 8/22 Placer Athens (Kwan)	9/10 Email Update 9/26 AKT	Project Update (Email)	Project Update (Email)	
United Auburn Indian Community							8/6 UAIC	9/10 Email Update	Project Update (Email)	Project Update (Email)	
Developers, Chambers, SWLTF, Comm., Environ. Grps								9/5 Roc Chamber 9/18 Linc Chamber 9/18 PCAR 9/19 BIA 9/24 Pioneer	10/26 Ros Chamber	11/1 SWLTF & Project Update (Email)	TBD Placer Joint Chambers
Adjacent Neighborhood Groups								Engage HOA & Neighborhood Association Leaders	10/23 Annuəl Odor Workshop	Project Update (Email)	
Project Progress		ion of No-Project Alt ation of Growth Esti		Concept Ref	inement	MODA Development		n & Evaluation of nt Feedback	Concept Finalization		

Renewable Placer: Waste Action Plan



Proactively meeting the infrastructure needs of western Placer County areas through responsible solid waste management.

CONSEQUENCES OF INACTION



California is aggressively expanding regulations to reduce materials going to landfills



Required organics diversion from landfills by 2025



Western Placer County on pace to outgrow existing solid waste facilities due to increasing population



Expected population increase in Placer County and its cities by 2050



China and other international recyclers are closing their doors, destabilizing markets and impacting solid waste facility capacities across the US, including Placer County.



The WPWMA's composting and recycling facilities will not be able to accept additional waste within



Placer County jurisdictions could be forced to:

OR



build additional solid waste facilities



transport waste to other landfills outside the county or state Which will require significant time and resources and could result in:

Higher rates passed to customers through garbage bills

Loss of local control over rates and services provided to solid waste customers



Without modification, WPWMA's existing facilities lack capacity necessary to meet regulatory and regional growth demands. Failure to address waste management infrastructure needs now will lead to significant cost implications for western Placer County jurisdictions, residents and businesses in the near future.



The WPWMA is planning **now** to ensure that western Placer County is well positioned to meet the needs of residents and businesses into the future while complying with regulations, supporting planned regional growth, and creating opportunity for innovation.



Increase facility recycling and landfill diversion



Create opportunities for industrial innovation and economic growth



Provide capacity to support current and future population and development



Provide a safeguard for future generations by maintaining local control and stable rates

Ensure compliance with expanding regulations



Enhance operational compatibility with current and future neighboring land uses

The project concepts represent possible facility configurations to meet the project goals. The concepts focus on the four critical facility functions, including:

Landfill Provide capacity to accommodate regional growth, maintain control of costs, disposal methods

Composting Process additional materials to meet regulations; minimize associated odors

Construction & Demolition

Increase operating capacity, efficiency, and material diversion: maintain competitive rates

Public Drop-off Maintain safety and convenience; reduce

traffic congestion

PROJECT CONCEPTS

Visit WPWMA.com for project conceptual layouts

PROCES



Engage a wide range of stakeholders and interested parties for input on project concepts



Evaluate facility needs in a transparent process by conducting studies to support project decisions



Implement

selected project concept based on informed WPWMA **Board** decision



Stay informed

WPWMA.COM

Appendix 2J Plan Concept Narratives

PLAN CONCEPT 0 EXISTING SITE RECONFIGURED

Ability to Meet Project Goals

Increase recycling rates	Х
Maintain local control	
Regulatory compliance	Х
Provide long-term recycling capacity	Х
Provide long-term disposal capacity	
Enhance compatibility	Х
Opportunity for innovation	

General Description

All future solid waste activities will occur exclusively on the existing permitted 320-acre parcel. The WPWMA could elect to continue leasing to tenants or sell the western and eastern properties.

Processing and Recycling Operations

Core processing and recycling operations (MRF, C&D and composting) will occur on the northern portion of the existing property. Systems will be sized to accommodate anticipated material growth rates over the next 25 years. Maintaining relatively close and compact proximity of these operations to each other is intended to initially yield increased operational efficiencies and reduce operating costs. Flexibility to further expand or modify these



operations in the future may be hampered by lack of available space between operations.

Landfill Operations

Modules 1, 2, 10 and 11 (closed, unlined modules) will be immediately excavated and relocated to a lined module to facilitate expansion of processing and recycling operations. The space currently allocated for future Modules 8 and 9 will be utilized for processing and recycling operations and no longer available for landfilling. The overall permitted capacity of the landfill will be reduced from ~36.5 million cubic yards to ~17.7 million cubic yards, yielding an estimated remaining landfill life of approximately 30 years. Upon closure, wastes will continue to be received at the facility, processed for diversion, and the residuals transferred via long-haul trucks to a third-party landfill. Potential local options include Recology's Ostrom Road Landfill, Sacramento County's Kiefer Landfill, and Yolo County's Central Landfill.

Compatible Operations and Opportunities for Innovation

Space for compatible operations, emerging technology pilot studies and collaboration with universities is not included in this concept. The WPWMA could potentially pursue a separate project in the future to permit the western and eastern properties for such uses.

Enhanced Compatibility

Facility odors could be reduced by utilizing ASP composting technologies and earlier closure of the landfill, although opportunities to employ new odor-reducing waste processing technologies may be more limited (compared to Concepts 1 and 2) due to lack of available space

PLAN CONCEPT 1 LANDFILL EAST

Ability to Meet Project Goals

Increase recycling rates	Х
Maintain local control	Х
Regulatory compliance	Х
Provide long-term recycling capacity	Х
Provide long-term disposal capacity	Х
Enhance compatibility	Х
Opportunity for innovation	Х

General Description

The majority of the 158-acre eastern property will be reserved for future landfill capacity. MRF and C&D operations will remain proximate to each other on the existing 320-acre property. Composting and other organics management will occur on the 480-acre western property. Portions of the western property will be reserved for compatible third-party operations.

Processing and Recycling Operations

Systems will be sized to accommodate anticipated material growth rates over the next 25 years. Placement on the western property provides additional space specifically allowing for expansion of composting operations as necessitated by current and anticipated future organics regulations.



Landfill Operations

Future filling operations could occur on the eastern property. Modules 1, 2, 10 and 11 (closed, unlined modules) will be excavated and relocated to a lined module to facilitate expansion of processing, recycling operations and additional landfill space if necessary. Excavation and relocation can be phased as needed or as finances allow. The space currently allocated for future Module 9 will be utilized for processing and recycling operations and no longer available for landfilling. Landfill capacity will increase from ~36.5 million cubic yards to ~75.8 million cubic yards, yielding an estimated remaining landfill life of approximately 90 years.

Compatible Operations and Opportunities for Innovation

A significant portion of the western property will be available for compatible operations, emerging technology pilot studies and collaboration with universities. Doing so will serve to increase the recovery and marketability of materials and produce alternative fuels and energy.

Enhanced Compatibility

Concept 1 provides the WPWMA the greatest opportunity to employ new odor-reducing waste processing technologies such as ASP composting. Landfill odors could persist for a longer period compared to Concepts 0 and 2 due to a longer projected remaining life.

PLAN CONCEPT 2 LANDFILL WEST

Ability to Meet Project Goals

Increase recycling rates	Х
Maintain local control	Х
Regulatory compliance	Х
Provide long-term recycling capacity	Х
Provide long-term disposal capacity	Х
Enhance compatibility	Х
Opportunity for innovation	Х

General Description

Over half of the 480-acre western property will be reserved for future landfill capacity. All non-landfill solid waste activities will occur exclusively on the existing permitted 320-acre parcel. Portions of the eastern property will be reserved for compatible third-party operations and could also include a biological reserve area.

Processing and Recycling Operations

Systems will be sized to accommodate anticipated material growth rates over the next 25 years. Maintaining relatively close and compact proximity of these operations to each other should initially yield increased operational efficiencies and reduce operating costs. Flexibility to further expand or modify these operations in the future may be



hampered by the lack of available, unencumbered space between the individual operations.

Landfill Operations

Future filling operations could occur on the western property. Modules 1, 2, 10 and 11 (closed, unlined modules) will be immediately excavated and relocated to a lined module to facilitate expansion of processing and recycling operations. The space currently allocated for future Modules 8 and 9 will be utilized for processing and recycling operations and no longer available for landfilling. Landfill capacity will increase from ~36.5 million cubic yards to ~54.3 million cubic yards, yielding an estimated remaining landfill life of approximately 70 years.

Compatible Operations and Opportunities for Innovation

A significant portion of the eastern property will be available for compatible operations, emerging technology pilot studies and collaboration with universities, which could serve to increase recycling rates and produce alternative fuels and energy.

Enhanced Compatibility

Concept 2 provides the WPWMA some opportunity to employ new odor-reducing waste processing technologies such as ASP composting. Landfill odors could persist for a longer period compared to Concepts due to a longer project remaining life.

Timing of Elements for Plan Concepts 0, 1, and 2

Year	Plan Concept 0	Plan Concept 1	
0 (2022)	Compost - Temporary Positive ASP System	Compost - Temporary Positive ASP System	Compost - Temporary ASP
	Compost - ASP Curing System (build pad only)	Wetlands Mitigation	Compost - ASP Curing Syste
	Compost - Dedicated Stormwater Ponds		Compost - Dedicated Stormw
	Compost - Miscellaneous Equipment		Compost - Miscellaneous Equ
	Unlined Area Excavation/Backfill (50%)		Unlined Area Excavation/Bac
	Stockpile Relocation (50% of first relocation)		Stockpile Relocation (50% of
	Main Entrance – Initial Retrofit		Main Entrance – Initial Retrof
	Compost Pond Removal		Compost Pond Removal
	Wetlands Mitigation		Wetlands Mitigation
1 (2023)	Public Area (entire area)	Public Area – Roadways only	Public Area (entire area)
	Landfill Construction (module construction)	C&D Area	Landfill Construction (module
	Unlined Area Excavation/Backfill	Compost - Green Waste Pad	Unlined Area Excavation/Bac
	Primary Maintenance Facility	Compost - Wood Waste Pad	Primary Maintenance Facility
	New Stormwater Ponds (50%)	Compost - Outdoor Receiving Area	New Stormwater Ponds (50%
	Geotechnical Investigation (one of two investigations)	Compost - Screening and Product Storage Pad	Geotechnical Investigation (o
	Facility Beautification	Compost - Active Composting System (two of four ASPs)	Facility Beautification
	Site-wide Demolition and Disposal	Compost - Biofilter (two of four biofilters)	Site-wide Demolition and Dis
		Compost - ASP Curing System (two of four ASPs)	
		Compost - Dedicated Stormwater Ponds	
		Compost - Miscellaneous Equipment	
		Western Entrance	
		Primary Maintenance Facility	
		Satellite Maintenance Facility	
		New Stormwater Ponds (C&D and Public Area ponds, LF pond 50%)	
		Main Site HHW Building	
		Special Permits (Solid Waste Facility Permit for Permanent ASP Only)	
		Geotechnical Investigation (one of six investigations)	
		Facility Beautification	
		Site-wide Demolition and Disposal (partial site)	
2 (2024)	Unlined Area Excavation/Backfill (fill only)	Admin Building	Unlined Area Excavation/Bac
· · ·	Admin Building	New Stormwater Ponds (remaining LF pond 50%)	Admin Building
	New Stormwater Ponds (50%)	Facility Beautification (Admin Building landscaping)	New Stormwater Ponds (50%
	Facility Beautification (Admin Building landscaping)	Shared Site Utilities	Facility Beautification (Admin
3 (2025)	C&D Area	Public Area – Buyback, HHW, and Tipping Area only	C&D Area
0 (2020)			
		Overpass	
		Compost Pond Removal	
4 (2026)		Site-wide Demolition and Disposal (partial site)	
5 (2027)	Main Entrance Upgrade	Compost - Active Composting System (third of four ASPs)	Main Entrance Upgrade
	Facility Beautification (Main Entrance landscaping)	Compost - Biofilter (third of four biofilters)	Facility Beautification (Main E
		Compost - ASP Curing System (for one of two ASPs)	
		Main Entrance Upgrade	
		Facility Beautification (Main Entrance landscaping)	
6 (2028)	Compost - Green Waste Pad (50% and specialty equipment)	Public Area - Reuse Store Area only	Compost - Green Waste Pad

Plan Concept 2

stem (build pad only) mwater Ponds Equipment

Backfill (50%)

o of first relocation)

trofit

lule construction) 3ackfill (50%) ility

50%)

n (one of six investigations)

Disposal

Backfill (fill only)

50%) min Building landscaping)

n Entrance landscaping)

Pad (50%)

Timing of Elements for Plan Concepts 0, 1, and 2

Year	Plan Concept 0	Plan Concept 1	
	Compost - Wood Waste Pad (50% and specialty equipment)	Recyclables Storage Building	Compost - Wood Waste Pad
	Compost - Outdoor Receiving Area (50% and specialty equipment)	Geotechnical Investigation (second of six investigations)	Compost - Outdoor Receiving
	Compost - Screening and Product Storage Pad (50% and specialty equipment)		Compost - Screening and Pro
	Compost - Active Composting System (two of four ASP beds)		Compost - Active Composting
	Compost - Biofilter (two of four ASP beds and biofilters)		Compost - Biofilter (two of fou
	Compost - ASP Curing System (two of four ASP beds and biofilters)		Compost - ASP Curing Syste
	Stockpile Relocation (50% first relocation)		Stockpile Relocation (first relo
	Recyclables Storage Building		Recyclables Storage Building
	Special Permits (Compost Solid Waste Facility Permit)		Special Permits (Compost So
	Geotechnical Investigation (second of two investigations)		Geotechnical Investigation (tv
8 (2030)		Special Permits (for Environmental/Land Use)	
9 (2031)		Stockpile Relocation	
10 (2032)	Landfill Construction (module construction)	Compost - Active Composting System (fourth of four ASPs)	Landfill Construction (two of s
. ,	Stockpile Relocation (second relocation)	Compost - Biofilter (fourth of four ASPs)	Stockpile Relocation (second
	Shared Site Utilities	Compost - ASP Curing System (fourth of four ASPs)	Shared Site Utilities
		Landfill Construction (module construction)	
11 (2033)	Compost - Green Waste Pad (25%)	Geotechnical Investigation (three of six investigations)	Compost - Green Waste Pad
()	Compost - Wood Waste Pad (25%)		Compost - Wood Waste Pad
	Compost - Outdoor Receiving Area (25%)		Compost - Outdoor Receiving
	Compost - Screening and Product Storage Pad (25%)		Compost - Screening and Pro
	Compost - Active Composting System (third of four ASP beds and biofilters)		Compost - Active Composting
	Compost - Biofilter (three of four ASP beds and biofilters)		Compost - Biofilter (third of fo
	Compost - ASP Curing System (third of four ASP beds and biofilters)		Compost - ASP Curing System
	Landfill Closure (partial)		Landfill Closure (partial)
			Geotechnical Investigation (th
16 (2038)	Compost - Green Waste Pad (25%)	Geotechnical Investigation (four of six investigations)	Compost - Green Waste Pad
()	Compost - Wood Waste Pad (25%)		Compost - Wood Waste Pad
	Compost - Outdoor Receiving Area (25%)		Compost - Outdoor Receiving
	Compost - Screening and Product Storage Pad (25%)		Compost - Screening and Pro
	Compost - Active Composting System (fourth of four ASP beds and biofilters)		Compost - Active Composting
	Compost - Biofilter (fourth of four ASP beds and biofilters)		Compost - Biofilter (fourth of f
	Compost - ASP Curing System (fourth of four ASP beds and biofilters)		Compost - ASP Curing Syste
			Geotechnical Investigation (fo
20 (2042)	Landfill Construction (module construction)	Landfill Construction (module construction)	Landfill Construction (module
	Stockpile Relocation (third relocation)		
21 (2043)	Landfill Closure (partial)	Landfill Closure (partial)	Landfill Closure (partial)
	- W /	Geotechnical Investigation (five of six investigations)	Geotechnical Investigation (fi
_ ()		5 (
			Special Permits (environment
23 (2045)			Special Permits (environment
			Western Entrance
23 (2045) 25 (2047)	Landfill Closure (remaining closure)	Geotechnical Investigation (six of six investigations)	Western Entrance Overpass
23 (2045)	Landfill Closure (remaining closure) MRF Upgrade to TS	Geotechnical Investigation (six of six investigations)	Western Entrance

Plan Concept 2

ad (50%)

/ing Area (50%)

Product Storage Pad (50%)

ting System (two of four ASP beds and biofilters)

four ASP beds and biofilters)

stem (two of four ASP beds and biofilters)

relocation 50%)

ling

Solid Waste Facility Permit)

(two of six investigations)

of seven)

ond relocation)

Pad (25%)

ad (25%)

ving Area (25%)

Product Storage Pad (25%)

ting System (third of four ASP beds and biofilter)

f four ASP beds and biofilter)

stem (third of four ASP beds and biofilter)

(three of six investigations)

ad (25%)

ad (25%)

ving Area (25%)

Product Storage Pad (25%)

ting System (fourth of four ASP beds and biofilter)

of four ASP beds and biofilter)

stem (fourth of four ASP beds and biofilter)

(four of six investigations)

ule construction)

(five of six investigations)

ental/land use permits)

n (six of six investigations)

ity

Timing of Elements for Plan Concepts 0, 1, and 2

Year	Plan Concept 0	Plan Concept 1	
30 (2052)		Landfill Construction (module construction)	Landfill Construction (module
31 (2053)		Landfill Closure (partial)	Landfill Closure (partial)
40 (2062)		Landfill Construction (module construction)	Landfill Construction (module
41 (2063)		Landfill Closure (partial)	Landfill Closure (partial)
48 (2070)		Unlined Area Excavation/Backfill (50%)	
49 (2071)		Unlined Area Excavation/Backfill (remaining 50%)	
50 (2072)		Landfill Construction (module construction)	Landfill Construction (module
51 (2073)		Landfill Closure (partial)	Landfill Closure (partial)
60 (2082)		Landfill Construction (module construction)	Landfill Construction (module
61 (2083)		Landfill Closure (partial)	Landfill Closure (partial)
66 (2088)			Landfill Closure (remaining cl
			MRF Upgrade to TS
70 (2092)		Landfill Construction (module construction)	
71 (2093)		Landfill Closure (partial)	
80 (2102)		Landfill Construction (module construction)	
81 (2103)		Landfill Closure (partial)	
86 (2108)		Landfill Closure (remaining closure)	
		MRF Upgrade to TS	

Notes:

This table provides a summary of the initial capital outlays for this project (capital replacement costs are not presented in this table). During the life of the project, there are some years that don't have any initial capital expenditures. Only years with initial capital expenditures are shown.

ASP = aerated static pile HHW = household hazardous waste TS = transfer station

Plan Concept 2
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le construction)
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closure)