

We Are Up Project

Initial Study & Proposed Mitigated Negative Declaration

We Are Up

20 March 2023

County of Humboldt PLN-2022-18047 CUP/SP APN 509-181-057



Initial Study / Proposed MND We Are Up Project

Prepared for:



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World Topographic Map - labelless: California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Manage







MEZZANINE LEVEL





PROPOSED USES

#	USE	PROPOSED FLOOR AREA
3	ONE BEDROOM UNIT	550 SQ.FT.
5	ONE BEDROOM UNIT	575 SQ.FT.
7	TWO BEDROOM UNIT	820 SQ.FT.
	MAIN LEVEL PUBLIC AREAS	13,128 SQ.FT.
	MID LEVEL PUBLIC AREAS	8,198 SQ.FT.
	GREENHOUSE	2,880 SQ.FT.
	# 3 5 7	#USE3ONE BEDROOM UNIT5ONE BEDROOM UNIT7TWO BEDROOM UNIT7MAIN LEVEL PUBLIC AREASMID LEVEL PUBLIC AREASGREENHOUSE

We Are Up

Project No. 12560473

FIGURE 3

Main and Mezzanine Layout





UPPER LEVEL



PRC	OPO	SED USES	
l ID	#	IIGF	

ID	#	USE	PROPOSED FLOOR AREA
05	7	STUDIO UNIT	460 SQ.FT.
1A	16	ONE BEDROOM UNIT	580 SQ.FT.
2A	12	TWO BEDROOM UNIT	880 SQ.FT.
С		UPPER LEVEL PUBLIC AREAS	6,856 SQ.FT.
D		TOP LEVEL PUBLIC AREAS	6,390 SQ.FT.



Air Quality Modeling Results

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

We Are Up - Construction

Humboldt County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Educational	1.00	User Defined Unit	0.00	30,000.00	0
Parking Lot	73.00	Space	0.66	29,200.00	0
User Defined Recreational	3,600.00	User Defined Unit	0.00	3,600.00	0
Congregate Care (Assisted Living)	50.00	Dwelling Unit	3.13	32,000.00	69

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	103
Climate Zone	1			Operational Year	2026
Utility Company	Pacific Gas and Electric Com	pany			
CO2 Intensity (Ib/MWhr)	203.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity (Ib/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Const. Begin in 2024 or 2025

Land Use - Greenhouse and Add'I facilites added as 'Educational' land use. 50 residential units, 69 residents

Construction Phase - Demolition and Grading durations increased to 22 days. All other phases are model defaults.

Trips and VMT - Grading Hauling Trips 5 mile distance

Demolition - Approximately 3,800 SF demo (House, sheds, and barn)

Grading - 1,800 CY Import. 1,600 CY Export. All other cut/fill balanced onsite

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	8.00	22.00
tblGrading	MaterialExported	0.00	1,600.00
tblGrading	MaterialImported	0.00	1,800.00
tblLandUse	LandUseSquareFeet	0.00	30,000.00
tblLandUse	LandUseSquareFeet	0.00	3,600.00
tblLandUse	LandUseSquareFeet	50,000.00	32,000.00
tblLandUse	Population	143.00	69.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.033
tblProjectCharacteristics	CO2IntensityFactor	0	203.98
tblProjectCharacteristics	N2OIntensityFactor	0	0.004
tblTripsAndVMT	HaulingTripLength	20.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr								MT/yr							
2024	0.1954	1.6553	1.8979	3.6600e- 003	0.1792	0.0712	0.2504	0.0768	0.0666	0.1434	0.0000	321.5393	321.5393	0.0676	5.5100e- 003	324.8695
2025	0.9709	0.5587	0.7760	1.4400e- 003	0.0228	0.0227	0.0455	6.1700e- 003	0.0213	0.0275	0.0000	125.6901	125.6901	0.0248	2.1300e- 003	126.9424
Maximum	0.9709	1.6553	1.8979	3.6600e- 003	0.1792	0.0712	0.2504	0.0768	0.0666	0.1434	0.0000	321.5393	321.5393	0.0676	5.5100e- 003	324.8695

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/8/2024	5/7/2024	5	22	Existing Facility Demo
2	Site Preparation	Site Preparation	5/4/2024	5/10/2024	5	5	
3	Grading	Grading	5/11/2024	6/11/2024	5	22	
4	Building Construction	Building Construction	5/23/2024	4/9/2025	5	230	
5	Paving	Paving	4/10/2025	5/5/2025	5	18	
6	Architectural Coating	Architectural Coating	5/6/2025	5/29/2025	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 22

Acres of Paving: 0.66

Residential Indoor: 64,800; Residential Outdoor: 21,600; Non-Residential Indoor: 50,400; Non-Residential Outdoor: 16,800; Striped Parking Area: 1,752

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	17.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	425.00	10.80	7.30	5.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	62.00	16.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr							
Fugitive Dust					1.8700e- 003	0.0000	1.8700e-003	2.8000e- 004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0247	0.2297	0.2168	4.3000e- 004		0.0106	0.0106		9.8100e- 003	9.8100e-003	0.0000	37.3957	37.3957	0.0105	0.0000	37.6572
Total	0.0247	0.2297	0.2168	4.3000e- 004	1.8700e- 003	0.0106	0.0124	2.8000e- 004	9.8100e- 003	0.0101	0.0000	37.3957	37.3957	0.0105	0.0000	37.6572

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	is/yr							MT	/yr		
Hauling	2.0000e- 005	1.4200e- 003	2.4000e- 004	1.0000e- 005	1.4000e- 004	1.0000e- 005	1.5000e-004	4.0000e- 005	1.0000e- 005	5.0000e-005	0.0000	0.4917	0.4917	0.0000	8.0000e- 005	0.5147
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e- 004	5.2000e- 004	5.0300e- 003	1.0000e- 005	1.2700e- 003	1.0000e- 005	1.2800e-003	3.4000e- 004	1.0000e- 005	3.5000e-004	0.0000	1.0336	1.0336	4.0000e- 005	4.0000e- 005	1.0464
Total	8.2000e- 004	1.9400e- 003	5.2700e- 003	2.0000e- 005	1.4100e- 003	2.0000e- 005	1.4300e-003	3.8000e- 004	2.0000e- 005	4.0000e-004	0.0000	1.5253	1.5253	4.0000e- 005	1.2000e- 004	1.5611

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3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/yr							МТ	/yr		
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e- 003	0.0679	0.0458	1.0000e- 004		3.0700e- 003	3.0700e-003		2.8300e- 003	2.8300e-003	0.0000	8.3643	8.3643	2.7100e- 003	0.0000	8.4319
Total	6.6500e- 003	0.0679	0.0458	1.0000e- 004	0.0491	3.0700e- 003	0.0522	0.0253	2.8300e- 003	0.0281	0.0000	8.3643	8.3643	2.7100e- 003	0.0000	8.4319

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e- 004	1.4000e- 004	1.3700e- 003	0.0000	3.5000e- 004	0.0000	3.5000e-004	9.0000e- 005	0.0000	9.0000e-005	0.0000	0.2819	0.2819	1.0000e- 005	1.0000e- 005	0.2854
Total	2.2000e- 004	1.4000e- 004	1.3700e- 003	0.0000	3.5000e- 004	0.0000	3.5000e-004	9.0000e- 005	0.0000	9.0000e-005	0.0000	0.2819	0.2819	1.0000e- 005	1.0000e- 005	0.2854

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	is/yr							МТ	/yr		
Fugitive Dust					0.0781	0.0000	0.0781	0.0377	0.0000	0.0377	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0183	0.1873	0.1624	3.3000e- 004		7.9700e- 003	7.9700e-003		7.3300e- 003	7.3300e-003	0.0000	28.6703	28.6703	9.2700e- 003	0.0000	28.9021
Total	0.0183	0.1873	0.1624	3.3000e- 004	0.0781	7.9700e- 003	0.0861	0.0377	7.3300e- 003	0.0450	0.0000	28.6703	28.6703	9.2700e- 003	0.0000	28.9021

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ns/yr							МТ	/yr		
Hauling	3.4000e- 004	0.0122	4.2900e- 003	4.0000e- 005	8.8000e- 004	8.0000e- 005	9.6000e-004	2.4000e- 004	8.0000e- 005	3.2000e-004	0.0000	3.5291	3.5291	1.0000e- 005	5.5000e- 004	3.6947
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e- 004	5.2000e- 004	5.0300e- 003	1.0000e- 005	1.2700e- 003	1.0000e- 005	1.2800e-003	3.4000e- 004	1.0000e- 005	3.5000e-004	0.0000	1.0336	1.0336	4.0000e- 005	4.0000e- 005	1.0464
Total	1.1400e- 003	0.0128	9.3200e- 003	5.0000e- 005	2.1500e- 003	9.0000e- 005	2.2400e-003	5.8000e- 004	9.0000e- 005	6.7000e-004	0.0000	4.5627	4.5627	5.0000e- 005	5.9000e- 004	4.7412

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.1170	1.0688	1.2853	2.1400e- 003		0.0488	0.0488		0.0459	0.0459	0.0000	184.3200	184.3200	0.0436	0.0000	185.4097
Total	0.1170	1.0688	1.2853	2.1400e- 003		0.0488	0.0488		0.0459	0.0459	0.0000	184.3200	184.3200	0.0436	0.0000	185.4097

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5300e- 003	0.0713	0.0215	2.7000e- 004	8.1700e- 003	4.7000e- 004	8.6400e-003	2.3700e- 003	4.5000e- 004	2.8200e-003	0.0000	25.5428	25.5428	1.1000e- 004	3.6100e- 003	26.6213
Worker	0.0240	0.0154	0.1502	3.4000e- 004	0.0380	2.4000e- 004	0.0383	0.0101	2.2000e- 004	0.0104	0.0000	30.8764	30.8764	1.3100e- 003	1.1800e- 003	31.2596
Total	0.0266	0.0867	0.1717	6.1000e- 004	0.0462	7.1000e- 004	0.0469	0.0125	6.7000e- 004	0.0132	0.0000	56.4192	56.4192	1.4200e- 003	4.7900e- 003	57.8809

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0485	0.4427	0.5710	9.6000e- 004		0.0187	0.0187		0.0176	0.0176	0.0000	82.3314	82.3314	0.0194	0.0000	82.8153
Total	0.0485	0.4427	0.5710	9.6000e- 004		0.0187	0.0187		0.0176	0.0176	0.0000	82.3314	82.3314	0.0194	0.0000	82.8153

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e- 003	0.0310	9.3700e- 003	1.2000e- 004	3.6500e- 003	2.0000e- 004	3.8500e-003	1.0600e- 003	1.9000e- 004	1.2500e-003	0.0000	11.2201	11.2201	5.0000e- 005	1.5800e- 003	11.6910
Worker	0.0101	6.1600e- 003	0.0617	1.5000e- 004	0.0170	1.0000e- 004	0.0171	4.5200e- 003	9.0000e- 005	4.6200e-003	0.0000	13.3530	13.3530	5.3000e- 004	4.9000e- 004	13.5110
Total	0.0112	0.0372	0.0711	2.7000e- 004	0.0206	3.0000e- 004	0.0209	5.5800e- 003	2.8000e- 004	5.8700e-003	0.0000	24.5731	24.5731	5.8000e- 004	2.0700e- 003	25.2020

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	7.3800e- 003	0.0678	0.1096	1.7000e- 004		3.1700e- 003	3.1700e-003		2.9300e- 003	2.9300e-003	0.0000	14.7404	14.7404	4.6300e- 003	0.0000	14.8562
Paving	8.6000e- 004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.2400e- 003	0.0678	0.1096	1.7000e- 004		3.1700e- 003	3.1700e-003		2.9300e- 003	2.9300e-003	0.0000	14.7404	14.7404	4.6300e- 003	0.0000	14.8562

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	is/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e- 004	5.0000e- 004	5.0500e- 003	1.0000e- 005	1.3900e- 003	1.0000e- 005	1.4000e-003	3.7000e- 004	1.0000e- 005	3.8000e-004	0.0000	1.0920	1.0920	4.0000e- 005	4.0000e- 005	1.1049
Total	8.3000e- 004	5.0000e- 004	5.0500e- 003	1.0000e- 005	1.3900e- 003	1.0000e- 005	1.4000e-003	3.7000e- 004	1.0000e- 005	3.8000e-004	0.0000	1.0920	1.0920	4.0000e- 005	4.0000e- 005	1.1049

We Are Up - Construction - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Archit. Coating	0.9001					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5400e- 003	0.0103	0.0163	3.0000e- 005		4.6000e- 004	4.6000e-004		4.6000e- 004	4.6000e-004	0.0000	2.2979	2.2979	1.3000e- 004	0.0000	2.3011
Total	0.9016	0.0103	0.0163	3.0000e- 005		4.6000e- 004	4.6000e-004		4.6000e- 004	4.6000e-004	0.0000	2.2979	2.2979	1.3000e- 004	0.0000	2.3011

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	is/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e- 004	3.0000e- 004	3.0300e- 003	1.0000e- 005	8.3000e- 004	0.0000	8.4000e-004	2.2000e- 004	0.0000	2.3000e-004	0.0000	0.6552	0.6552	3.0000e- 005	2.0000e- 005	0.6630
Total	5.0000e- 004	3.0000e- 004	3.0300e- 003	1.0000e- 005	8.3000e- 004	0.0000	8.4000e-004	2.2000e- 004	0.0000	2.3000e-004	0.0000	0.6552	0.6552	3.0000e- 005	2.0000e- 005	0.6630

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

We Are Up - Operation

Humboldt County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	73.00	Space	0.66	29,200.00	0
User Defined Recreational	3,600.00	User Defined Unit	0.00	3,600.00	0
Congregate Care (Assisted Living)	50.00	Dwelling Unit	3.13	32,000.00	69

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	103
Climate Zone	1			Operational Year	2026
Utility Company	Pacific Gas and Electric Com	pany			
CO2 Intensity (Ib/MWhr)	160	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity (Ib/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Operations. PG&E CO2 intensity factor adjusted to 2020 PCL Base Plan

Land Use - Greenhouse and Add'I facilites added as 'Educational' land use. 50 residential units, 69 residents

Construction Phase - Operation Only

Vehicle Trips - 46.7 Daily on-way Trips. Avg. 0.934 trips/dwelling unit

Fleet Mix - Fleet Assumed 50/25/25 LDA/LDT1/LDT1

Woodstoves - No Fireplaces

Water And Wastewater - Indoor water demand: 2.2 MG/Year

Energy Use - Defaults = 3,972.46 total kWh/size/year. Non-title 24 electricity increased from 3,054.10 to 4,112.89 to account for Project-specific total annual energy demand estimates (161,000 KWh/year)

We Are Up - Operation - Humboldt County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	27.50	0.00
tblFireplaces	NumberWood	17.50	0.00
tblFleetMix	HHD	8.6230e-003	0.00
tblFleetMix	LDA	0.47	0.50
tblFleetMix	LDT1	0.07	0.25
tblFleetMix	LDT2	0.21	0.25
tblFleetMix	LHD1	0.05	0.00
tblFleetMix	LHD2	9.9950e-003	0.00
tblFleetMix	МСҮ	0.03	0.00
tblFleetMix	MDV	0.15	0.00
tblFleetMix	МН	3.3880e-003	0.00
tblFleetMix	MHD	6.4800e-003	0.00
tblFleetMix	OBUS	1.0290e-003	0.00
tblFleetMix	SBUS	1.4230e-003	0.00
tblFleetMix	UBUS	2.1500e-004	0.00
tblLandUse	LandUseSquareFeet	0.00	3,600.00
tblLandUse	LandUseSquareFeet	50,000.00	32,000.00
tblLandUse	Population	143.00	69.00
tblProjectCharacteristics	CO2IntensityFactor	203.98	160
tblVehicleTrips	ST_TR	2.93	0.93
tblVehicleTrips	SU_TR	3.15	0.93
tblVehicleTrips	WD_TR	2.60	0.93
tblWater	IndoorWaterUseRate	3,257,701.28	2,200,000.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction

Not Applicable

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	is/yr							МТ	/yr		
Area	0.2163	0.0121	0.8673	1.5300e- 003		0.0777	0.0777		0.0777	0.0777	10.1068	0.6721	10.7789	0.0480	0.0000	11.9789
Energy	1.0200e- 003	8.7100e- 003	3.7100e- 003	6.0000e- 005		7.0000e- 004	7.0000e-004		7.0000e- 004	7.0000e-004	0.0000	25.2462	25.2462	3.3200e- 003	5.6000e- 004	25.4973
Mobile	0.0169	0.0168	0.1724	4.0000e- 004	0.0477	2.7000e- 004	0.0479	0.0127	2.5000e- 004	0.0129	0.0000	36.3174	36.3174	1.6700e- 003	1.3900e- 003	36.7746
Waste						0.0000	0.0000		0.0000	0.0000	9.2625	0.0000	9.2625	0.5474	0.0000	22.9474
Water						0.0000	0.0000		0.0000	0.0000	0.6980	1.3856	2.0836	0.0720	1.7300e- 003	4.3977
Total	0.2343	0.0376	1.0434	1.9900e- 003	0.0477	0.0786	0.1263	0.0127	0.0786	0.0913	20.0673	63.6214	83.6886	0.6724	3.6800e- 003	101.5958

3.0 Construction Detail

Not Applicable

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/yr							MI	/yr		
Mitigated	0.0169	0.0168	0.1724	4.0000e- 004	0.0477	2.7000e- 004	0.0479	0.0127	2.5000e- 004	0.0129	0.0000	36.3174	36.3174	1.6700e- 003	1.3900e-003	36.7746
Unmitigated	0.0169	0.0168	0.1724	4.0000e- 004	0.0477	2.7000e- 004	0.0479	0.0127	2.5000e- 004	0.0129	0.0000	36.3174	36.3174	1.6700e- 003	1.3900e-003	36.7746

4.2 Trip Summary Information

	Ave	erage Daily Trip Rat	e	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	46.70	46.70	46.70	133,667	133,667
Parking Lot	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	46.70	46.70	46.70	133,667	133,667

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.500000	0.250000	0.250000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.467585	0.065185	0.206638	0.147892	0.048469	0.009995	0.006480	0.008623	0.001029	0.000215	0.033079	0.001423	0.003388
User Defined Recreational	0.467585	0.065185	0.206638	0.147892	0.048469	0.009995	0.006480	0.008623	0.001029	0.000215	0.033079	0.001423	0.003388

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15.1567	15.1567	3.1300e- 003	3.8000e- 004	15.3478
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15.1567	15.1567	3.1300e- 003	3.8000e- 004	15.3478
NaturalGas Mitigated	1.0200e- 003	8.7100e- 003	3.7100e-003	6.0000e- 005		7.0000e- 004	7.0000e-004		7.0000e- 004	7.0000e-004	0.0000	10.0895	10.0895	1.9000e- 004	1.8000e- 004	10.1495
NaturalGas Unmitigated	1.0200e- 003	8.7100e- 003	3.7100e-003	6.0000e- 005		7.0000e- 004	7.0000e-004		7.0000e- 004	7.0000e-004	0.0000	10.0895	10.0895	1.9000e- 004	1.8000e- 004	10.1495

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					tor	s/yr							МТ	/yr		
Congregate Care (Assisted Living)	189070	1.0200e- 003	8.7100e-003	3.7100e- 003	6.0000e- 005		7.0000e-004	7.0000e- 004		7.0000e- 004	7.0000e-004	0.0000	10.0895	10.0895	1.9000e-004	1.8000e- 004	10.1495
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		1.0200e- 003	8.7100e-003	3.7100e- 003	6.0000e- 005		7.0000e-004	7.0000e- 004		7.0000e- 004	7.0000e-004	0.0000	10.0895	10.0895	1.9000e-004	1.8000e- 004	10.1495

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

<u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		MT	/yr	
Congregate Care (Assisted Living)	198623	14.4150	2.9700e-003	3.6000e- 004	14.5967
Parking Lot	10220	0.7417	1.5000e-004	2.0000e- 005	0.7511
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		15.1567	3.1200e-003	3.8000e- 004	15.3478

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT.	/yr		
Mitigated	0.2163	0.0121	0.8673	1.5300e- 003		0.0777	0.0777		0.0777	0.0777	10.1068	0.6721	10.7789	0.0480	0.0000	11.9789
Unmitigated	0.2163	0.0121	0.8673	1.5300e- 003		0.0777	0.0777		0.0777	0.0777	10.1068	0.6721	10.7789	0.0480	0.0000	11.9789

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory tons/yr									MT	/yr						
Architectural Coating	0.0102					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1409					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0510	7.5500e- 003	0.4627	1.5100e- 003		0.0755	0.0755		0.0755	0.0755	10.1068	0.0000	10.1068	0.0473	0.0000	11.2880
Landscaping	0.0142	4.5800e- 003	0.4046	2.0000e- 005		2.1800e- 003	2.1800e-003		2.1800e- 003	2.1800e-003	0.0000	0.6721	0.6721	7.5000e- 004	0.0000	0.6909
Total	0.2163	0.0121	0.8673	1.5300e- 003		0.0777	0.0777		0.0777	0.0777	10.1068	0.6721	10.7789	0.0480	0.0000	11.9789

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category		M	Г/yr	
Mitigated	2.0836	0.0720	1.7300e- 003	4.3977
Unmitigated	2.0836	0.0720	1.7300e- 003	4.3977

7.2 Water by Land Use Unmitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	ī/yr	
Congregate Care (Assisted Living)	2.2 / 2.05377	2.0836	0.0720	1.7300e- 003	4.3977
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0/0	0.0000	0.0000	0.0000	0.0000
Total		2.0836	0.0720	1.7300e- 003	4.3977

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
		М	T/yr	
Mitigated	9.2625	0.5474	0.0000	22.9474
Unmitigated	9.2625	0.5474	0.0000	22.9474

8.2 Waste by Land Use Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	/yr	
Congregate Care (Assisted Living)	45.63	9.2625	0.5474	0.0000	22.9474
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		9.2625	0.5474	0.0000	22.9474

Appendix C

Aquatic Resources Delineation and Sensitive Habitat Report Rev2



Aquatic Resources Delineation and Sensitive Habitat Report_Rev2

We Are Up Housing Project

March 01, 2023



Aquatic Resources Delineation and Sensitive Habitat Report_Rev2 We Are Up Housing Project

This document has been prepared for:



We Are Up 4636 Fieldbrook Rd #109 McKinleyville, CA 95519

By:



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March 01, 2023

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1. Summary

GHD prepared this Aquatic Resources Delineation and Sensitive Habitat Report and accompanying appendices on behalf of We Are Up (Client), in support of the proposed We Are Up Housing Project (Project) within the community of McKinleyville, California (Appendix A Figure 1). The surveys were conducted within the Project Study Boundary (PSB) as shown in Appendix A, Figure 2. GHD conducted the aquatic resource delineation fieldwork on September 17th, 22nd, November 19th, December 2nd, 2021, and January 25th, 2022. A site visit was made on September 15, 2022 to assess a small area added in the northwest corner of the PSB resulting from a lot line adjustment after the wetland delineations were completed. The area encompassed by the expanded PSB is approximately 0.36 acres, most of which is comprised of regularly mowed field, and the remainder is gravel and paved surfaces. Hydrology monitoring through groundwater monitoring wells was conducted in January and February of 2023. United States Army Corps of Engineers (USACE) three-parameter wetlands were mapped based on wetland indicative vegetation, hydric soils, and wetland hydrology. GHD conducted a CDFW protocol level Sensitive Natural Community (SNC) survey on September 14th, 2021. GHD also mapped the Riparian drip line as required by the 2017 Humboldt General Plan. Three-parameter wetlands were mapped as shown in Appendix A, Figure 3. The Project is within the McKinleyville Community Plan which requires mapping of one-parameter wetlands (including threeparameter wetlands) requirements. No one-parameter wetlands were found in addition to the threeparameter identified in Figure 3 (McKinleyville Community Plan, 2002). There were two Sensitive Natural Communities (SNCs) observed within the PSB.

The aquatic resource delineation identified one three-parameter wetland with hydric soil, hydrophytic vegetation, and hydrology indicators, and two SNCs. The three-parameter wetland extends throughout most of the PSB. The total area of the three-parameter wetland mapped within the PSB is 8.68 acres and the total area of SNCs mapped within the PSB is 1.6 acres (**Appendix A, Figure 3**). The three-parameter wetlands are hydrologically connected to Mill Creek, a tributary of Mad River (a navigable water) and is likely USACE and Regional Water Quality Control Board (RWQCB) jurisdictional. The total area of three-parameter wetlands encompasses 8.68 acres, or 56.2% of the PSB.

2. Introduction

This report supports the Project's environmental documentation, permitting, and construction planning as deemed appropriate. The proposed PSB encompasses 15.4 acres (**Appendix A Figure 3**). This report is subject to, and must be read in conjunction with, the limitations set out in Section 6, Special Terms and Conditions, and the assumptions and qualifications contained throughout the report.

2.1 Site Location and Project Description

The PSB consists of partially developed, and grassy and vegetated open space, just west of Grocery Outlet in McKinleyville, California (**Appendix A, Figure 1**). The PSB is bordered by residential areas to the north and west, and by Mill Creek to the south, and a forested lot to the east. The property is a generally flat to mildly sloped grassland field, with several small clumps of trees within, and bordered by trees to the south and west of the property. The study of this Project is an investigation of uplands, wetlands, and SNCs on the parcel to inform future proposed development.

2.2 Regulatory Background

2.2.1 Federal

Waters of the United States

The Code of Federal Regulations (CFR), 40 CFR § 230.3 states the following:

The term waters of the United States are defined as:

(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:

(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

(ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(iii) 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 paragraphs (s)(1) through (4) of this section;
- (6) The territorial sea;

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. (40 CFR § 230.3).

Wetlands Definition

40 CFR § 230.3 continues and defines, "(t) The term wetlands are defined 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" (40 CFR § 230.3).

Wetland Delineation Manual

The 1987 USACE Wetland Delineation Manual provides guidelines and methods to determine whether an area is a wetland subject to federal regulation under Section 404 of the Clean Water Act. The manual specifies that wetland hydrology, soil, and vegetation indicators must be present to identify a wetland (USACE 1987, p. 10). In addition, the Wetlands Delineation Manual states, "If hydrophytic vegetation is

being maintained only because of man-induced wetland hydrology that would no longer exist if the activity (e.g., irrigation) were to be terminated, the area should not be considered a wetland," (USACE, 1987).

Federal Geographic Data Committee (FGDC) Wetland Classification Standard

The Classification of Wetlands and Deepwater Habitats of the United States (FGDC, 2013) provides a nationally standardized hierarchical system for classifying wetland and deepwater habitats based on Cowardin et al. (1979). The National Wetland Inventory (NWI), a publicly available resource that provides information on the distribution of wetlands in the U.S., classifies wetlands according to the FDGC standard. The FDGC classification is based on a definition of wetlands with at least one of the three wetland attributes: predominantly hydrophytic vegetation, predominantly hydric soil, and hydrology. However, they state that all available information should be used, and all three attributes should be considered if they are present (FGDC, 2013).

2.2.2 State

The State Water Resources Control Board's (SWRCB) April 2019 Procedures for Discharges of Dredged or Fill Material to Waters of the State says the following:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes, or the area lacks vegetation.

The Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the state" includes all "waters of the U.S." The following wetlands are waters of the state:

- 1. Natural wetlands,
- 2. Wetlands created by modification of a surface water of the state, and
- 3. Artificial wetlands that meet any of the following criteria:

a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;

b. Specifically identified in a water quality control plan as a wetland or other water of the state;

c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or

d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):

- i. Industrial or municipal wastewater treatment or disposal,
- ii. Settling of sediment,

iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,

iv. Treatment of surface waters,

v. Agricultural crop irrigation or stock watering,

vi. Fire suppression,

vii. Industrial processing or cooling,

viii. Active surface mining – even if the site is managed for interim wetlands functions and values,

ix. Log storage,

x. Treatment, storage, or distribution of recycled water, or

xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or

xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state" (SWRCB, 2019).

The February 2020 Draft Guidance State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State further clarifies as follows:

Human activity can cause changes to the surrounding landscape (e.g., grading activities, road construction, direct hydromodification) such that wetlands form where wetlands did not previously exist. Where such artificial wetlands are now a relatively permanent part of the natural landscape, and are not subject to ongoing operation and maintenance, they are waters of the state. By requiring that the wetlands are relatively permanent, the framework excludes wetlands that are temporary or transitory. That they are part of the natural landscape also indicates the relative permanence of the wetlands and suggests that the wetland is self-sustaining without ongoing operation and maintenance activities and provides similar ecosystem services as natural wetlands. By way of example, this category of wetlands includes situations where water flow is permanently redirected as the result of human activity, such as grading in another area, such that new wetlands form in areas that were previously dry. These wetlands may not be natural wetlands because they result from human activity and they were not formed by modifying a water of the state (rather they were an indirect result), but nevertheless they take on the function of natural wetlands such that they should be considered waters of the state. This category would not include artificial wetlands constructed for specific purposes listed in section II.3.d because the construction of the artificial wetlands would be too recent to be deemed "historic" and the artificial wetland would likely require ongoing maintenance such that they would not be deemed "relatively permanent," and/or the artificial wetland is not part of the "natural landscape" (SWRCB, 2020).

The RWQCB carry out and regionally regulate the SWRCB's definition of Waters of the State.

2.2.3 McKinleyville Community Plan

The McKinleyville Community Plan (2002, updated 2017) defines wetland areas using a 1-parameter definition as follows (p. 49):

Wetland Areas shall be defined according to the criteria utilized by the CA Dept. of Fish and Game (also included in the County's Open Space Implementation Standards). In summary, the definition requires that a given area satisfy at least one of the following three criteria:

- 1. The presence of at least periodic predominance of hydrophytic vegetation; or,
- 2. predominately hydric soils; or,
- 3. periodic inundation for seven (7) consecutive days.

For this study, "hydrophytic vegetation" is deemed to be plants that have their roots in saturated soil (reduced conditions) during the growing season (i.e., water table at the surface). Hydrophytic plants are FACW or wetter (OBL) per the wetlands indicator status as defined by the *2020 National Wetland Plant List* (USACE 2020) and are the dominant plant species in any given plot.

3. Methodology

3.1 Aquatic Resources Delineation Approach

GHD scientists conducted the aquatic resource delineation on September 17th, 22nd, November 19th, December 2nd, 2021, and January 25th, 2022. The PSB expanded after the initial wetland delineations, and on September 15, 2022, GHD scientists visited this site to assess the presence or absence of aquatic resources. Groundwater monitoring occurred in the winter of 2022-2023 to further investigate hydrology onsite and aided in determining wetland boundaries.

To define a wetland, the USACE requires that vegetation, soil, and hydrology (three-parameters) all show wetland attributes (USACE 1987; USACE 2010). The wetland delineation used USACE criteria from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)* (USACE 2010). The current standard field forms provided by the USACE (2010) were used to collect vegetation, soils, and hydrology data (**Appendix B**).

In potential three-parameter wetland areas, vegetation, soil, and hydrology data were collected in a transect across the upland/wetland boundary with two plots (upland/wetland) per transect. The naming convention used on datasheets to designate upland or wetland plots associated with a transect is -U or -W, respectively.

Three-parameter wetland/upland boundaries and plots were mapped in the field with an Eos Arrow 100 Submeter Global Positioning System (GPS) Receiver with Global Navigation Satellite System (GNSS) and an iPad running ArcGIS Collector software. The wetland/upland boundary was recorded with the GPS unit as needed to map the wetland's spatial extent. The points were then connected in the office using ArcMap software for figure creation and the boundaries were clipped to the extent of the PSB.

Each three-parameter wetland area was designated with a number (e.g., W1). The wetland points were also labeled with their respective wetland number. In addition to the wetland sampling points, upland sampling points were described. These were labeled beginning with a "U" and numbered in sequence (e.g., U1, U2). The upland sampling points were completed to confirm and document the absence of any wetland indicators (soils, hydrology, and vegetation). **Appendix B** contains all datasheets recorded during the delineation.

3.2 Botanical Methodology

Vegetation data collection consisted of listing the dominant species in the herbaceous, shrub, and tree layer within a standard-sized plot determined by the strata layer. Nomenclature follows *The Jepson Manual* (Baldwin et al. 2012), which was cross-checked to federal standard nomenclature to identify the indicator status. The species' wetland indicator status for the Western Mountains, Valleys, and Coast Region was denoted in the respective column, using the standard reference: *2020 National Wetland Plant List* (USACE 2020). This list classifies species based on the probability that they are found in wetlands (USACE 1987) as follows:

- Obligate (OBL): almost always in wetlands (99% probability)
- Facultative Wetland (FACW): usually occurring in wetlands (67% to 99% probability)
- Facultative (FAC): commonly occurring in wetlands and uplands (34% to 66% probability of occurring in wetlands)
- Facultative Upland (FACU): usually occurring in uplands (1% to 33% probability of occurring in wetlands)
- Upland (UPL): upland obligate, rarely in wetlands (1% in wetlands)

Species that do not appear on the list are considered to be in the upland category (Lichvar et al. 2018). Standard procedures for documenting hydrophytic vegetation indicators were used per the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010). Site photographs have been included as **Appendix C**. A separate Botanical Memo contains the locations and extents of mapped vegetation alliances and Sensitive Natural Communities within the PSB (GHD 2021). Wetland vegetation is considered an assembly of plants that are FAC or wetter.

3.3 Vegetation Mapping and Assessment

The vegetation community onsite was assessed in the field and classified at the alliance level according to the Manual of California Vegetation (Sawyer et al. 2009) using the Rapid Assessment method. Kelsey McDonald assessed potential SNCs according to protocol (CDFW 2018) and mapped Mill Creek's Riparian Drip line on September 14, 2021, in accordance with the Humboldt County General Plan as directed by the county (2021, Trevor Estlow, pers. comm.). Vegetation Rapid Assessment forms (Appendix D) were used to characterize the dominant vegetation and evaluate habitat quality, and this assessment provided the basis for designating vegetation as SNCs per CDFW should it gualify. Photo documentation of the habitat observed onsite can be found in **Appendix C**. The Rapid Assessment location was mapped using a point collected in the field with an Eos Arrow 100 Submeter Global Navigation Satellite System (GNSS) Receiver and an iPad running ArcGIS Collector software in the WGS84 datum. The location of the Vegetation Rapid Assessments is shown in Appendix A Figure 3. A Natural Resources Conservation Service (NRCS) soils map was consulted prior to conducting surveys (Appendix A Figure 4), as is required by CDFW's protocols for surveying and evaluating impacts to special status native plant populations and sensitive natural communities (CDFW 2018). The full NRCS Custom Soil Resource report for the PSB is available in Appendix E. Mapping of sensitive plant species will occur in the spring/summer of 2022 and the results will be transmitted in a separate report.

3.4 Soils Methodology

Hydric soils were defined based on the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010) procedures in combination with the Natural Resources Conservation Service's (NRCS) definitions presented in *Field Indicators of Hydric Soils in the United States* (USDA/NRCS 2018 version 8.2). Soil pits were dug to an approximate depth of 14 to 18 inches. Data on soil color, texture, and redoximorphic features were recorded. Any observed redoximorphic features (iron concentrations) were noted along with their percentage within the soil matrix, and care was taken to distinguish chromas of 1 and 2 are indicative of an iron-depleted soil within 12 inches of the soil surface (USACE 2010; USDA/NRCS 2018).

The *Munsell Soil Color Book* (COLOR, M. 2000) was used to describe the soil colors for the entire depth of the test pit. Moist, natural soil aggregate (ped) surfaces, which had not been crushed, were used to determine the soil's color. Soils with low chroma were verified as being hydric or upland with *Field Indicators of Hydric Soils in the United States* (Version 8.2, 2018).

3.4.1 Existing Soils Information

The NRCS identifies three main soil units within the PSB (**Appendix A, Figure 4; and Appendix E**). A brief map unit description, as generated by the NRCS, is provided for each soil unit below (NRCS 2022). Although NRCS soil mapping is informative, the scale is generally too broad to definitively characterize potential wetlands. Please see the full report included as **Appendix E** for complete details.

Worswick-Arlynda complex 0 to 2 percent slopes

The Worswick-Arlynda complex 0 to 2 percent slopes map unit composition contains: 55% Worswick and similar soils, 15% Arlynda and similar soils, and 10% minor components. Worswick-Arlynda soils can be found in river valleys, backslopes and mountain bases; the parent material is alluvium derived from mixed sources rock. Worswick-Arlynda complex soils consist of silty loam in the top and lower horizons, with loamy and gravelly sand in the middle horizons. Worswick-Arlynda soils would be considered prime farmland if irrigated and drained. These soils are very poorly drained, and the depth to water table is 0 to 4 inches. Worswick-Arlynda complex is considered a hydric soil. This soil type is in the southeastern corner of the PSB and comprises 9.7% of the PSB.

Arcata and Candymountain, 0 to 9 percent slopes

The Arcata and Candymountain 0 to 9 percent slopes map unit composition contains: 50% Arcata and similar soils, 35% Candymountain and similar soils, and 15% minor components. Arcata and Candymountain soils can be found on marine terraces, backslopes and tread; the parent material is marine deposits derived from mixed sources. Arcata and Candymountain soils 0 to 9 percent consist of very fine to fine sandy loam. These soils are considered Prime farmland if irrigated. These soils are well drained, and the depth to water table is more than 80 inches. Arcata and Candymountain are not considered hydric soil. This soil type is in a very thin linear line that separates the Worsick-Arlynda complex 0 to 2% slopes from the Arcata and Candymountain soils 2 to 9% slopes, thus comprises a very small portion of the project area.

Arcata and Candymountain, 2 to 9 percent slopes

The Arcata and Candymountain 2 to 9 percent slopes map unit composition contains: 50% Arcata and similar soils, 35% Candymountain and similar soils, and 15% minor components. Arcata and Candymountain soils can be found on marine terraces, backslopes and tread; the parent material is marine deposits derived

from sedimentary sock. Arcata and Candymountain soils consist of loam, sandy loam, and fine sandy loam. Arcata and Candymountain soils are considered farmland of statewide importance. These soils are well drained, and the depth to water table is more than 80 inches. Arcata and Candymountain are not considered hydric soils. This soil type is in the main portion of the PSB and comprises 90.3% of the PSB.

3.5 Precipitation and Hydrology

GHD performed the investigation within the PSB during September 17th, 22nd, November 19th, December 2nd, 2021, and January 25th, 2022, starting at the end of the dry season and continuing through the winter wet season. Additionally, groundwater was monitored in the 2022-2023 water year. A WETS table showing climate data for the Arcata Eureka Airport, CA, Station is provided in **Appendix F** (NOAA 2022). The Mill Creek Wetlands overlay as defined can is shown in Figure 4 (**Appendix A, Figure 5**). The FEMA flood hazard map is included in **Appendix A, Figure 6** (FEMA 2022). Aerial photography and the National Wetland Inventory Mapper were referenced before conducting fieldwork (**Appendix A, Figure 7**) (NWI 2022). Wetland hydrology indicators, such as drainage patterns, material deposits, soil saturation, high water table, or surface water presence, were recorded in the field.

Field investigations were conducted in the winter of 2022-2023 and included visual observations, test pits, and soil characterization at seven hydrology pits, and monitoring of ten groundwater monitoring wells (piezometers) after 50 percent average annual rainfall was recorded for the nearest appropriate climate station (**Appendix A, Figure 8**). Each monitoring well ("MW") was designated with a number (e.g., MW-1), and each hydrology pit ("HP") was also designated with a number (e.g., HP-1). Precipitation data and rainfall measurements to aid in groundwater monitoring were taken from the NOAA rain gage at the Eureka Weather Forecast Office (WFO) on Woodley Island. The Eureka NOAA rain gauge is the station nearest to the project site with sufficient historical data (at least 20 years) required to analyze the average annual rainfall. **Appendix F** presents the NRCS WETS table data applicable to the Project site for the 2023 water year.

3.5.1 Groundwater Monitoring Well Installation

Ten monitoring wells (piezometers) were installed onsite on January 11, 2022 (MW-1 through MW-10) (**Appendix A, Figure 8**). The wells were installed in potential wetlands and mapped uplands. Wells installed in potential wetlands were installed to determine if wetlands hydrology exists or does not exist (groundwater with 12 inches of the surface for 14 consecutive days) and were used to inform this wetlands delineation (MW-2 and MW-3, located on the western portion of the property). Other wells were installed in uplands to inform wetlands creation (to be incorporated into the Wetlands Mitigation and Monitoring Plan) and stormwater infiltration (to inform the stormwater engineering design).

Wells were installed by hang auguring to a depth of four to five feet. One-inch PVC piping was used, with the bottom approximate one half of the wells being slots (and was wrapped with geofabric and had a slot size of 0.010 inches), and the top approximate one half being solid. The well was placed in the augured hole and back filled with clean, dry sand to approximately one foot from the ground surface. The remainder of the hole was filled with Bentonite hole plug, which was mounded around each well. Each well was then labelled, and prior to monitoring in 2023, the top of casing was measured (distance from the ground surface to the top of PCV pipe).

Once half of the annual average rainfall occurred monitoring of the wells commenced. Monitoring started on January 7, 2023 and was completed on February 21, 2023. Depth to groundwater was measured with an electronic groundwater measurement device that "beeped" when water was encountered. Depth to groundwater was measure in a tenth of a foot.

The U.S. Army Corps of Engineers (2005) provides a technical standard for monitoring hydrology. This standard requires 14 or more consecutive days of flooding or ponding, or a water table within 12 inches of the soil surface, during the growing season at a minimum frequency of 5 years in 10 (50 percent or higher probability) (National Research Council 1995). Groundwater was monitored once 50 percent of the average annual rainfall had been met and was monitored for five consecutive weeks (Day 0, 7, 14, 21, 28, and 35), after the 50 percent of average annual rainfall (**Appendix F**), starting on January 7, 2023 and completed on February 21, 2023.

Depth to groundwater was measured with an electronic groundwater measurement device that "beeped" when water was encountered (Heron Instruments Little Dipper water level data logger). Weekly measurements included the water depth for each well and depth to groundwater was measured in tenths of a foot. Groundwater elevations generally correlate to rainfall data, with groundwater elevations rising following precipitation events, and falling after and between events.

3.5.2 Hydrology Soil Pits

In addition to MW-2 and MW-3 installed in the western portion of the property, "hydro-soil" pits (HPs) where excavated to determine groundwater condition surrounding MW-2 and MW-3 (**Appendix A, Figure 8**). Seven HPs were dug (HP-1 through HP-7) by hand, commencing on January 24, 2023 and terminating on February 21, 2023. During each visit each HP was hand dug with a sharpshooter to approximately 14-18 inches and remained open for 20-30 minutes prior to any measurement. For each visit, a new hole was excavated. Once the HP was left open for the time previously mentioned, depth to groundwater was measured from the surface. Measurement was in inches.

Soil Profile at Hydrology Soil Pits

At each HP location, soils data was collected on February 25, 2023, which was a sunny day. Soil pits were excavated to approximately 14 inches and data was collected regarding horizon depth, soil color, and redoximorphic features. Special attention was given to soil chroma color.

4. Results

The PSB contains one three-parameter wetland that is likely USACE and RWQCB jurisdictional and two Sensitive Natural Communities (SNCs) as well as a Riparian Drip line as defined by the Humboldt County General Plan. Upland sampling pits (plot locations) are also described to confirm and document the absence of wetland hydrology, hydric soils and hydrophytic plants in these uplands sampling areas. **Appendix A, Figure 3** shows the results of the three-parameter wetland delineation, and SNC determination based upon dominant vegetation. The Riparian Drip line was mapped per guidance from the Humboldt County General Plan and county staff.

4.1 Wetland

One contiguous three-parameter wetland was mapped within the PSB totaling 8.68 acres. Please see the USACE Data Forms in **Appendix B** for more details and see **Appendix A**, **Figure 3** for the associated map. Soil pits and vegetation plots were conducted throughout the PSB totaling nine transect points (**Table 1**). An additional 143 soil pits (**Table 2**) were dug, of which 101 ended up being hydric and 42 were non hydric soils.

The determination of hydric and non-hydric soil on these 143 soil pits was solely based on soil features and morphology.

Groundwater monitoring also occurred after 50 percent average annual rainfall was observed for the 2022-2023 water year to further investigate hydrologic patterns on-site. Monitoring occurred every seven days for 35 consecutive days beginning 1/17/2023 and extending to 2/21/2023. Results from this monitoring are summarized in **Section 4.3**.

Wetland 1 was open and mostly free of rooted woody vegetation and is classified according to the Cowardin system as a Palustrine Emergent wetland (PEM) (FGDC 2013). The vegetation was primarily characterized by redtop (*Agrostis stolonifera*, FAC), reed fescue (*Festuca arundinacea*, FAC), common velvetgrass (*Holcus lanatus*, FAC), Italian rye grass (*Festuca perennis*, FAC), slough sedge (*Carex obnupta*, OBL), and mountain bod sedge (*Scirpus microcarpus*, OBL). Wetland 1 mostly passed the dominance test for hydrophytic vegetation (wetlands plots).

Soil in Wetland 1 consisted mostly of loams with a 10YR 3/2 upper horizon (0 to 4 or 6 inches) with 0% to 20% of 7.5YR 4/6 redoximorphic features and a 10YR 3/2 lower horizon (4 or 6 to14 inches) with distinct 10% to 30% of 7.5YR 4/6 redoximorphic features. The hydric soil indicator is Redox Dark Surface (F6). Wetland 1 was drier in some locations and wetter in others with standing water in the swales, appearing to drain south to Mill Creek. Primary indicators of wetland hydrology were a High Water Table (A2), Saturation (A2), and secondary indicators of wetland hydrology included geomorphic position (D2) and passing the vegetation FAC-neutral test (D5). Wetland 1 is hydrologically connected to a Mill Creek which is connected to the Mad River, a navigable waterway and is therefore assumed to be under USACE and RWQCB jurisdiction. Please see attached data forms for sample points W1T1-W and W1T1-U in **Appendix B** and **Table 1** for additional details.

Sample Point	Location (lat/long) center of transect (wetlands uplands boundary)
W1T1 / U1T1	(40.932710409, -124.098692428)
W1T2 / U1T2	(40.932734608, -124.098625034)
W1T3 / U1T3	(40.932764517, -124.097496859)
W1T4 / U1T4	(40.933062453, -124.099412379)
W1T5 / U1T5	(40.933518773, -124.099463200)
W1T6 / U1T6	(40.934214987, -124.098043217)
W1T7 / U1T7	(40.933722303, -124.097575092)
W1T8 / U1T8	(40.932748433, -124.097355161)
W1T9 / U1T9	(40.933377525, -124.098205482)

Table 1 Wetland Transect Sampling Locations

4.2 Uplands

Upland sampling points were also collected to characterize areas that are likely to be affected by the Project. No wetlands indicators were detected within the areas characterized by the upland pits and vegetation plots.

The upland sample points were located throughout the PSB, wherever the ground appeared to be slightly drier and higher than the surrounding areas. Upland areas were dominated by redtop (FAC), sweet vernal grass (*Anthoxanthum odoratum*, FACU), sweet vernal grass (FAC), ribwort (*Plantago lanceolata*, FACU), and hawkbit (*Leontodon saxatillis*, FACU). Soils did not show hydric soil characteristics and contained mostly a loam texture with an upper horizon of 10YR 3/3 from 0 to 9 inches with no redoximorphic features, and a lower horizon from 9 to 14 inches of 10YR 3/4 with usually 0% redoximorphic features. The site did not show any primary or secondary indicators of wetland hydrology. Vegetation plots did not pass the FAC Neutral test. While many plots contained primarily facultative plants, these plants were not acting as hydrophytic vegetation, and were present on convex slopes with well drained soils. Uplands were determined using a three-parameter approach, and while facultative plants may have been primarily present in many of the upland plots, there were also facultative upland or upland plants present with hydric soils and no hydrology was present. Out of all nine of the upland transect plots, none were determined to contain hydrophytic vegetation (**Table 2**). A total of 42 upland pits were dug to determine upland boundaries (**Table 3**).

Upland Vegetation Plot ID	% Facultative or Wetter Vegetation	Pass Fac Neutral Test?	Prevalence Index	Wetlands Vegetation Present?
U1T1	50%	No	-	No
U1T2	50%	No	-	No
U1T3	50%	No	-	No
U1T4	50%	No	-	No
U1T5	100%	No	3.67	No
U1T6	100%	No	3.02	No
U1T7	50%	No	-	No
U1T8	100%	No	3.11	No
U1T9	50%	No	-	No

 Table 2
 Upland Transect Plot Wetland Vegetation Determination

Table 3 Total Number of Hydric and Non-Hydric and Soil Pits

Wetland	Upland	
101	42	

4.3 Hydrology Monitoring

4.3.1 Groundwater Monitoring

Groundwater monitoring occurred every seven days from January 17 to February 21, 2023 by GHD soil scientist Misha Schwarz and technician Alex Crowe. Results are summarized in **Table 4.** Only MW-2 and

MW-3 are analyzed in this report because they were installed specifically to investigate the wetland boundary in the western portion of the PSB (results bolded and shaded blue in Table 4). Over the course of monitoring, several notable precipitation events occurred where measured rainfall was over 100 percent of average for that time of the month (January 17, 24, and 31, and February 2; **Appendix F**). Results demonstrated that groundwater levels (i.e., the water table) were not within 12 inches of the soil surface for 14 consecutive days, and thus wetland hydrology is not present at the site of MW-2 and MW-3. Hydrology monitoring from soil pits dug around these piezometers further informed the location of the wetland boundary in the western portion of the PSB, described in **Section 4.3.2**.

	DATE:	1/17/2023	1/24/2023	1/31/2023	2/7/2023	2/14/2023	2/21/2023
	Rainfall YTD:	20.97	21.80	21.93	23.34	23.69	23.89
	Normal YTD:	18.93	20.39	21.77	23.15	24.52	25.96
	Current % Norm:	110.8%	106.9%	100.7%	100.8%	96.6%	92.0%
	Name(s) of Data						
	Recorders:	M.Schwarz	M.Schwarz	M.Schwarz	M.Schwarz	A.Crowe	M.Schwarz
Monitoring Well Number	TOC (feet ags)	Water Depth (feet bgs) (DTW - TOC)	Water Depth (feet bgs) (DTW - TOC)	Water Depth (feet bgs) (DTW - TOC)			
MW-1	0.90	1.00	1.55	2.08	1.60	1.27	2.08
MW-2	0.85	1.36	1.90	2.40	1.60	0.76	2.30
MW-3	1.04	0.61	1.06	1.71	0.71	0.50	1.58
MW-4	0.69	0.91	1.36	1.94	1.36	1.06	1.96
MW-5	0.90	1.00	1.50	2.55	1.55	1.86	2.74
MW-6	1.04	0.76	0.97	1.22	0.76	0.50	1.11
MW-7	1.02	0.68	0.78	1.01	0.73	0.17	0.73
MW-8	0.98	0.82	2.12	2.64	1.92	3.03	3.64
MW-9	1.08	1.32	2.22	3.52	1.54	1.12	3.07
MW-10	1.06	0.84	1.44	2.17	0.99	0.56	1.87

Table 4 Results from Monitoring Wells

NOTES:

TOC = Top of Casing (measured in inches and converted to decimal-feet)

DTW = Depth to Water (measured at TOC)

Bgs = below ground surface

Ags = above ground surface

4.3.2 Hydrology Soil Pits

Seven hydrology soil pits were excavated around MW-2 and MW-3 to investigate the groundwater level in finer detail between and around the monitoring wells, concurrent with the dates that piezometers were monitored. Groundwater monitoring occurred every seven days from January 24 to February 21, 2023 by GHD soil scientist Misha Schwarz and Alex Crowe. Results are summarized in **Table 5.** Groundwater levels were not within 12 inches of the soil surface for 14 consecutive days for any of the hydrology pits. The wetland boundary was mapped in contour with HP-1, HP-3, HP-5, HP-7, and MW-3, as they appear to be at a transitional line where the water table becomes shallower. Three-parameter wetlands are delineated to the east of this line (**Appendix A, Figure 3**).

Hydro Pit	1/17/2023	1/24/2023	1/31/2023	2/7/2023	2/14/2023	2/21/2023
				DTW	DTW	
		(inches bgs)	(inches bgs)	(inches bgs)	bgs)	(inches bgs)
HP-1	-	14.50	16 (DRY)	14.50	5.25	18 (DRY)
HP-2	-	14 (DRY)	17 (DRY)	14.25	13.50	19 (DRY)
HP-3	-	15 (DRY)	17 (DRY)	16.00	11.75	21 (DRY)
HP-4	-	15 (DRY)	15 (DRY)	13.50	9.00	18 (DRY)
HP-5	-	15.25	15 (DRY)	10.00	7.50	18 (DRY)
HP-6	-	14 (DRY)	16 (DRY)	16.75	12.75	17 (DRY)
HP-7	-	14.25	15 (DRY)	10.00	4.50	18.00

NOTES: DTW (inches below ground surface) - Unless noted as "DRY"

4.4 Soil Monitoring

4.4.1 Soil Profile at Monitoring Wells 2 and 3

The soil profile was characterized for monitoring wells installation, summarized in **Table 6.** Soils throughout the profile were generally loam. Results demonstrated that the soils for MW-2 and MW-3 do not meet hydric soil indicators. While redoximorphic features were present in the soil profile, they were at a depth that does not qualify as a hydric soil indicator (in combination with matrix value and chroma). Soil matrix chromas were often too high (greater than 2) to qualify for hydric soils indicators associated with redox concentrations.

Hydro Pit	Soil Depth	Matrix	Redoximorphic Features ¹
	0-9″	10YR 2/2	None
N 10 1/ 2	9-20"	10YR 3/3	None
MW-2	20-39"	2.5Y 4/3	15% FeC
	39-48″	2.5Y 5/3	10% FeC
MW-3	0-13"	10YR 3/2	None
	13-26″	10YR 4/3	15% FeC
	26-36"	10YR 4/4	5% FeC
	36-48″	10YR 5/4	5% FeC

 Table 6
 Soil Profiles from Monitoring Wells

1. FeC = iron concentrations (e.g., redoximorphic features).

4.4.2 Soil Profile at Hydrology Pits

The soil profile was characterized for hydrology pits on January 25, 2023, summarized in **Table 7**. Soils throughout the profile were generally loam. Results demonstrate that the soils for each hydrology pit do not meet hydric soil indicators. While redoximorphic features were present in some of the soil profiles, they were at a depth that does not qualify as a hydric soil indicator (in combination with matrix value and chroma). Soil matrix chromas were often too high (greater than 2) to qualify for hydric soils indicators associated with redox concentrations. At four of the soil pits, no redoximorphic features were observed.

Table 7Soil Profiles from	Hydrology Soil Pits
---------------------------	---------------------

Hydro Pit	Soil Depth	Matrix	Redoximorphic Features ¹
HP-1	0-14"	10YR 3/2+	None
HP-2	0-9"	10YR 3/2+	None
	9-14"	10YR 3/2+	15% FeC
HP-3	0-14"	10YR 3/3	None
HP-4	0-10"	10YR 3/3	None

Hydro Pit	Soil Depth	Matrix	Redoximorphic Features ¹
HP-4	10-14"	10YR 3/2+	5% FeC
HP-5	0-10"	10YR 3/3	None
	10-14"	10YR 3/2+	5% FeC
	0-10"	10YR 3/3	None
НР-б	10-14"	10YR 3/2+	5% FeC
HP-7	0-14"	10YR 3/2+	None

2. FeC = iron concentrations (e.g., redoximorphic features).

4.5 Sensitive Natural Communities

The PSB contains two SNCs, totaling 1.6 acres. Please see attached Rapid Assessment datasheet in **Appendix D** for additional details and see **Appendix A, Figure 3** for the associated map. No wetlands were mapped within the boundaries of the SNCs. **Table 8** contains additional details.

4.5.1 Sitka Spruce Alliance

The Sitka Spruce Alliance corresponds to the Rapid Assessment datasheet WEIR001 in **Appendix D**. The Sitka Spruce Alliance was observed in the north, northwest, and southwest edges of the PSB and covers 0.75 acres of the PSB. This SNC contained a tree canopy cover of 40% Stika spruce (*Picea sitchensis*), 35% red alder (*Alnus rubra*), and 20% incense cedar (*Thuja plicata*), and is associated with California blackberry (*Rubus ursinus*). The Sitka Spruce Alliance has a State ranking of S2, therefore qualifying it as an SNC.

4.5.2 Coastal Willow Alliance

The Coastal Willow Alliance corresponds to the Rapid Assessment datasheet WEIR002 in **Appendix D**. The Coastal Willow Alliance was observed in the north, northwest, and southwest edges of the PSB and covers 0.85 acres of the PSB. This SNC contained a tree canopy cover of 2% red alder (*Alnus rubra*), a shrub layer of 85% coastal willow (*Salix hookeriana*), and 20% California blackberry. The Coastal Willow Alliance has a State ranking of S3, therefore qualifying it as an SNC.

Table 8 Sensitive Natural Communities

Sensitive Natural	Lat/Long	Area	
Community			
Sitka Spruce Alliance (S2)	(40.9341790, -124.0968654)	0.75 acres	
Coastal Willow Alliance (S3)	(40.9339933, -124.0968717)	0.85 acres	

4.6 Riparian Corridor

The Riparian Corridor of Mill Creek was mapped to the drip line, and no wetlands were assessed underneath the canopy. The Riparian Dripline can be found in **Appendix A, Figure 3**. Much of the two SNCs are present within the Mill Creek Riparian corridor.

5. Conclusions

The aquatic resources delineation for the We Are Up Housing Project, completed on January 25th, 2022, determined the extent of three-parameter wetlands within the PSB based on hydrophytic vegetation, hydric soils, and wetland hydrology using methods and indicators outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)* (USACE 2010). An additional site visit on September 15, 2022 to assess the presence or absence of aquatic resources in the expanded PSB determined the absence of wetland features from two soil pits that are characterized by upland soils and vegetation. Groundwater monitoring was conducted in January and February of 2023 to better understand hydrologic patterns on-site. The total area of three-parameter wetlands mapped within the PSB is 8.68 acres, or 56% of the PSB, and due to the hydrological connection with Mill Creek, are likely considered USACE and RWQCB jurisdictional. The area of Uplands on the site totals 5.07 acres, and all 11 upland plots contain no hydrophytic vegetation. The area of SNCs totals 1.6 acres, or 10% of the PSB. Wetlands were not mapped within the Riparian Corridor Dripline or underneath the SNC canopy. Wetland data forms are attached showing sample plot data collected in transects across wetland boundaries and additional upland sampling points (**Appendix B**) and Rapid Assessment data forms determining the SNC are attached (**Appendix D**).

6. Special Terms and Conditions

6.1 **Purpose of this Report**

GHD prepared this report for the Client, and the Client may only use and rely on this report for the purpose agreed upon between GHD and the Client, as set out in the scope and contract for work effort reported herein. GHD Inc. is not liable for any action arising out of the reliance of any third party on the information contained within this report. GHD otherwise disclaims responsibility to any entity other than the Client arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

6.2 Scope and Limitations

This report does not authorize any individuals to develop, fill, or alter the delineated wetlands. Verification of the delineation by jurisdictional agencies is necessary prior to the use of this report for planning and development purposes. A USACE jurisdictional approval letter is required to signify confirmation of delineation results. In situations where a field investigation determines that no jurisdictional wetlands occur, jurisdictional concurrence with these findings is recommended.

The delineation conclusions were based on the information available during the period of the investigation, which took place on in late 2021 to early 2022, with groundwater monitoring extending into early 2023.

The opinions, conclusions, and any recommendations in this report are based on conditions encountered and information reviewed by the date of preparation of the report. Site conditions may change after the date of this report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change unless contracted to do so.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions, and any recommendations in this report are based on the information obtained from and testing undertaken at or in connection with specific sample points. Conditions at other locations of the site may be different from the conditions found at the specific sample points.

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Appendix A Figures



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Appendix B Wetland Delineation Datasheets

WETLAND DETR	RMINATION D	ATA FOR	M – Western Mou	untains, Valleys, and	Coast Region
Project/Site: Hechn		0	City/County: Mckin	legville / Humboldts	Sampling Date: 9/17/21
Applicant/Owner: (7HD for	1 Mary	Keehn	Verelapment	State: S	Sampling Point: (WTT1-L)
Investigator(s): H.McDona	Id, M.Sch	warz:	Section, Township, Ra	ange: <u>55, TGN</u>	RIE
Landform (hillslope, terrace, etc.):	swale		Local relief (concave,	convex, none): conci	VC Slope (%): 3
Subregion (LRR):	į.	Lat: 40	,93271041	Long: - 124,0986	924 Datum: W6584
Soil Map Unit Name: Acceta	and Candyin	ionnthin	2-9% 51	ones NWI classificat	ion NA PEM
Are climatic / bydrologic conditions on	the site typical for th	his time of yes	Ves V No	/If no, exclain in Rer	narks)
Are Vacatation Sail	the site typical for u	algolficently c		"Nermal Circumstances" pro	No
Are vegetation, soil, o	Hydrology	significantiy o	isturbed? Are	Normal Circumstances pre	
Are Vegetation, Soil, o	r Hydrology	naturally prot	olematic? (If ne	eeded, explain any answers	in Remarks.)
SUMMARY OF FINDINGS - /	Attach site map	showing	sampling point I	ocations, transects, i	mportant features, etc.
Hydrophytic Vegetation Present?	Yes V	No	T		· · · · · · · · · ·
Hydric Soil Present?	Yes	No	Is the Sampled	Area	
Wetland Hydrology Present?	Yes I	No	within a Wetla	nd? Yes V	_ No
Remarks:		6			
	and the second			and the second	
VEGETATION – Use scientifi	c names of pla	nts.			
		Absolute	Dominant Indicator	Dominance Test worksh	eet:
Tree Stratum (Plot size:		% Cover	Species? Status	Number of Dominant Spec	cies
1.				That Are OBL, FACW, or I	FAC: (A)
2				Total Number of Dominan	2
A		-		Species Across All Strata:	(B)
· ·			= Total Cover	Percent of Dominant Spec	
Sapling/Shrub Stratum (Plot size:)			Providence Index worked	
1		-		Total % Cover of	Multiply by
2.				OBI species	
3				FACW species	x2=
4				FAC species	x3=
5				FACU species	x 4 =
Herb Stratum (Plot size: 1.		·	= Total Cover	UPL species	x 5 =
THE OCOLUMN INTO SEC. IN			12 L	STATE OF PRODUCES AND ADDRESS OF THE PROPERTY OF T	

				FACW species x 2 =
4		-		FAC species x 3 =
5.	-			FACU species x 4 =
Herb Stratum (Plot size: 1	÷.,	_ = 10(a) (Jover	UPL species x 5 =
1. Itolsus lanatus	35	<u> </u>	FAC	Column Totals: (A) (B)
2 Accostis stoloniter2	-36	<u> </u>	-ÉAC	Prevalence Index = B/A =
3 Kanunculus repens	6_		CAC	Hydrophytic Vegetation Indicators:
4 Mentus pulegium	-5-		OBL	1 - Rapid Test for Hydrophytic Vegetation
5 Hypochaeris cidicata	- 3		FACU	2 - Dominance Test is >50%
6. Anthoxanthum oderature	12	-	FACU	3 - Prevalence Index is ≤3.0 ¹
7 Juneus mesperius	-5	-	EACW	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants
10.	-			Problematic Hydrophytic Vegetation' (Explain)
11	ดา	- Total C		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		_= 10(a) C	Uver	
1			* 39	Hydrophytic
2.				Vegetation
% Bare Ground in Herb Stratum		_= Total C	over	Present? Yes V No
Remarks:	-2-			

Alashan and

SOIL

Profile Des	cription: (Describe	to the dep	th needed to docur	nent the	indicator	or confirm	m the absence of indicators)
Depth	Matrix		Redo	x Feature	s		
(inches)	Color (moist)		Color (moist)	%	Type	Loc ²	Texture Remarks
0-6	104×3/2	80	7.5984/6	20	<u> </u>	<u>_M</u>	loam
6-14	104R3/2	20	7.5YR 4/6	10	_ (m	SiltCoam
			/				1 Timeran M
					Without in the second second		
				<u></u>		8	
	• ••••••••••••••••••••••••••••••••••••	· ·····			-	-	
Market Street	-					-	annalisian ta' anna an an anna an anna an anna an anna an an
91(
Type C=C	Concentration D=Den	lation PM-	Reduced Matrix CC				2
Hydric Soil	Indicators: (Application	able to all	LRRs, unless other	wise note	d)	d Sand Gr	Indicators for Problematic Hydric Soils ³
Histoso	l (A1)		Sandy Redox (S	35)			2 cm Muck (A10)
Histic E	pipedon (A2)	5	Stripped Matrix	(S6)		8 M	Red Parent Material (TF2)
Black H	listic (A3)		Loamy Mucky N	lineral (F1) (except	MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrog Deplete	en Sullide (A4) ed Below Dark Surface	· (A11)	Loamy Gleyed Model	Matrix (F2)			Other (Explain in Remarks)
Thick D	ark Surface (A12)		X Redox Dark Sur	(FS) face (F6)			³ Indicators of hydrophytic vegetation and
Sandy I	Mucky Mineral (S1)		Depleted Dark S	Surface (F	7)		wetland hydrology must be present.
Sandy (Gleyed Matrix (S4)		Redox Depressi	ons (F8)	- 1: 	5 22 ADM	unless disturbed or problematic.
Restrictive	Layer (if present):						
Type:							
Depth (in	iches):			8	3		Hydric Soil Present? Yes No
Remarks.							
YDROLO Wetland Hy	GY drology Indicators:						
2nmary Indi	cators (minimum of or	ne required;	check all that apply)			Secondary Indicators (2 or more required)
Surface	valer (AT) ater Table (A2)		vvater-Stain	2 4A ar	s (89) (exi ad 49)	cept	Water-Stained Leaves (B9) (MLRA 1, 2,
Saturatio	on (A3)		Salt Crust (311)	10 40)		X Drainage Patterns (B10) S (410)
Water M	larks (B1)		Aquatic Inve	ertebrates	(B13)		Drv-Season Water Table (C2)
Sedimer	nt Deposits (B2)		Hydrogen S	ulfide Odd	or (C1)		Saturation Visible on Aerial Imagery (C9)
_ Drift Dep	posits (B3)		Oxidized Rh	izosphere	s along Li	ving Root	s (C3) K Geomorphic Position (D2) Swale
Algal Ma	at or Crust (B4)		Presence of	Reduced	Iron (C4)		Shallow Aquitard (D3)
_ Iron Dep	oosits (B5)		Recent Iron	Reduction	n in Tilled	Soils (C6)	FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)	22222 (P7)	Stunted or S	stressed P	lants (D1)	(LRR A)	Raised Ant Mounds (D6) (LRR A)
Snarsely	Vegetated Concave	Surface (B8		ant in Ken	Idiks)		Frost-Heave Hummocks (D7)
ield Observ	vations:		<i>''</i>				
urface Wate	er Present? Yes	s No	Depth (inch	es):			
ater Table	Present? Yes	s No	Depth (inch	es):			
aturation Pr	esent? Yes	s No	Depth (inch	es):		Wetlar	nd Hydrology Present? Yes X No
	illary fringe)		toring well, aerial nh	otos prev	ious inspe	ctions) if	available
escribe Rec	orded Data (stream o	auge mon		hick	100 C	and the second state of th	
ncludes cap escribe Rec	orded Data (stream g	auge, moni					
ncludes cap escribe Rec emarks:	Based on	Topos	ryphic po	sition	1 7 5	oils	na na na na
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nciudes cap escribe Rec emarks:	Based on	Topos	ryphic po	sition	1 7 5	oils	

WETLAND DETERMINATIO	N DATA FORM – Wes	tern Mountains, Valleys,	and Coast Region
Project/Site: Keenn	City/Count	. McKinleyville/Humb	11+ Sampling Date: 9/17/21
Applicantowner: GAD for Mary	Keehn Drueloom	ent state ch	Sampling Point: (,)TT1-L
Investigator(s): K. McDenald, M. Sch	W212 Section. To	ownship, Range: S5 T6A	, RIE
Landform (hillslope, terrace, etc.): _/one	Local relie	f (concave, convex, none)	01 Slope (%). 3
Subregion (LRR):	Lat: 40, 932 -	71041 Long -124. C	986924 Datum: 4658
Soil Map Unit Name: Areztz and Canty	monntain, 2-9%	6 Slopes NWI da	ssification: None
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes	No (If no, explain	in Remarks)
Are Vegetation Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstanc	es" present? Yes 🗹 No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any ar	swers in Remarks.)
SUMMARY OF FINDINGS - Attach site	map showing samplir	ng point locations, transe	ects, important features, etc.
Hydrophytic Vegetation Present? Yes	No		
Hydric Soil Present? Yes	No Is th	ne Sampled Area	No. V
Wetland Hydrology Present? Yes		in a wettand r res_	NO
Remarks:	a Magalaran		
	(
VEGETATION – Use scientific names of	plants.	wayayaa harana ayaa ayaa ahaa ahaa ahaa ahaa ahaa a	
	Absolute Dominant	Indicator Dominance Test	vorksheet:
Iree Stratum (Plot size:)	% Cover Species?	Number of Domina	nt Species
2			
3.		Species Across All	Strata:(B)
4		Percent of Domina	nt Species
Castion/Chash Stratum /Distance	= Total Co	over That Are OBL, FAC	CW, or FAC: 50 (A/B)
1	n farallen	Prevalence Index	worksheet:
2		Total % Cover	of: Multiply by:
3		EACW species	x1=
4		FAC species	63 x3= 189
5		FACU species	29 x4= 116
Herb Stratum (Plot size: 100)	= 1 otal CC	UPL species	x5=
1 Holcus lanatus	-18 N	EAC Column Totals:	<u>92</u> (A) <u>305</u> (B)
2 Agrostis Stolenitera	- 30 - 7-	FAC Prevalence Ir	dex = B/A = 3, 32
3 Anthox 20thur odc	ator 23 -1-	FACU Hydrophytic Vege	tation Indicators:
A Hypothan is radicated	-25	FACU 1 - Rapid Test	for Hydrophytic Vegetation
6 Cestura oprennis	IE N	FAC J 3 - Provalence	Index is <3.0 ¹
7		4 - Morphologi	cal Adaptations ¹ (Provide supporting
8		data in Ren	narks or on a separate sheet)
9		5 - Wetland No	on-Vascular Plants ¹
10		Problematic H	ydrophytic Vegetation' (Explain)
11	97	be present, unless	disturbed or problematic.
Woody Vine Stratum (Plot size;)			36.
1	and a second sec	Hydrophytic	
2		Vegetation	Yes No V
% Bare Ground in Herb Stratum	= Total Con	ver	
Remarks	and the second terror descent to a second terror and the second terror and the second terror and the second terror and the second terror and terr		

Profile Des	cription: (Describe t	o the dept	n needed to docu	ment the	indicator	or confirm	n the absence of ir	ndicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)		Color (moist)	%	Type	Loc ²	Texture	Remarks
6-6	104RZ/2	100					Loam	
6-14	104R2/2	<u>100</u>					Sill Loam	
-			λ				· ·	
Type: C= Hydric Soi Histos Histic I Black I Hydrog Deplet	Concentration, D=Dep I Indicators: (Application of (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Below Dark Surfact	able to all I	Reduced Matrix, C RRs, unless othe Sandy Redox (Stripped Matrix) Loamy Mucky Loamy Gleyed Depleted Matri	S=Covere erwise not (S5) (S6) Mineral (F Matrix (F2) (X (F3)	d or Coate ted.) 1) (excep 2)	ed Sand G	rains. ² Location Indicators fo 2 cm Mu Red Pare Very Sha Other (E	n: PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ : ck (A10) ent Material (TF2) allow Dark Surface (TF12) xplain in Remarks)
Sandy Sandy	Mucky Mineral (S1) Gleyed Matrix (S4)		Redox Dark Si Depleted Dark Redox Depres	Surface (F8) sions (F8)) F7)		wetland h unless dis	ydrology must be present, turbed or problematic.
Restrictive Type: _ Depth (e Layer (if present):		<u> </u>	i de la	-	ŭ E	Hydric Soil Pres	sent? Yes No_K
Remarks:	ă. Ac	1 3.				<u>9</u> 8 - 3		
HYDROL	OGY		1 - 1 - 1 - P	1.1	Υ	1	2 (3) (4) (4)	
Wetland H	lydrology Indicators:		1					
Primary In	dicators (minimum of o	ne required	; check all that app	oly)			Secondary	Indicators (2 or more required)
Surfac	e Water (A1) Vater Table (A2)		Water-Sta MLRA	ained Leav 1, 2, 4A,	ves (B9) (and 4B)	except	Water 4A	-Stained Leaves (B9) (MLRA 1, 2 ,, and 4B)

____ Salt Crust (B11)

 Aquatic Invertebrates (B13)
Hydrogen Sulfide Odor (C1)

- ____ Hydrogen Sulfide Odor (C1) ____ Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
 - Recent Iron Reduction in Tilled Soils (C6)
 - ____ Stunted or Stressed Plants (D1) (LRR A)
- Other (Explain in Remarks)
- ____ Inundation Visible on Aerial Imagery (B7) ____ Oti ____ Sparsely Vegetated Concave Surface (B8)

Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes No Yes No Yes No	X Depth (inches): X Depth (inches): Depth (inches): Depth (inches):		- - Wetland Hydrolog	gy Present? Yes	No <u>k</u>
Describe Recorded Data (str	eam gauge, monito	oring well, aerial photos	s, previous inspe	ections), if available:	C	E No
Remarks:		UKS	a g	12 88 2011		

Saturation (A3)

Water Marks (B1)

Drift Deposits (B3)

Iron Deposits (B5)

Sediment Deposits (B2)

Algal Mat or Crust (B4)

Surface Soil Cracks (B6)

Drainage Patterns (B10)

Geomorphic Position (D2)

Shallow Aquitard (D3)

FAC-Neutral Test (D5)

____ Frost-Heave Hummocks (D7)

Dry-Season Water Table (C2)

Raised Ant Mounds (D6) (LRR A)

Saturation Visible on Aerial Imagery (C9)

rejectistie	WETLAND DETERMINATION D	ATA FORM	A – Western Mou	intains, Valleys, and Coast Region
pplcantOver G1D Ar. Maxy Metch Dec.1 State CA Samping Point G112 vestgator(s) L Metch Scient Township, Range S.S. T(AV, R.1.C. State Signed Point G124 State Signed Point	Project/Site: Keenn	C	City/County: McKing	In ville /Hunbeldt sampling Date 9/17/21
westgator(s) <u>L</u> <u>Mr</u> <u>Dens U</u> <u>Section</u> . Township, Range. <u>SS</u> , <u>T6A</u> , <u>B1C</u> androm (hildspic, terrace, ect) <u>Suballa</u> <u>Loaritefiel (concurve, convex, none)</u> , <u>SOPE (%)</u> <u>SOPE (%)</u> ubdregion (IRR) <u>A</u> <u>Lat</u> <u>40</u> , <u>93243141</u> Loag <u>C124, 448625</u> Datum <u>C4394</u> we climate: hydrologic conditions on the site byteal for this time of year? Yes. No	upplicant/Owner 6HD for Mary Kee	ha Den	d	State: CA Sampling Point: (,)172-6
androm (hillslope, terrace, etc.) Surgle	nvestigator(s) 12 Mc Ponzild M. Sch	ware s	Section, Township, Ra	inge: 55 TGN R1C
ubregion (LRR) Lat Ust	andform (hillslope, terrace, etc.): Stand	de Transmission investories.	Local relief (concave,	convex, none) concave Slope (%)
oil Map Unit Name Arc242 2.2 (And yon Ar 7.94% 5/04 / 5 (No caspian in Remarks) re de climater / hydrology	ubreaion (LRR):	Lat: 46	93213461	Long -124.698625 Datum 68584
re climate / hydrologic conditions on the site hydrology	Soil Map Unit Name Architz 2nd Canilyn	+ 7-9	19/2 -lupis	NWI classification: PEM
revegetation	the climatic / hydrologic conditions on the site typical for t	his time of yea	Ar? Yes INO	(If no, explain in Remarks)
re Vegetation	ve Vegetation Soil or Hydrology	significantly of	disturbed? Are	"Normal Circumstances" present? Yes
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes Westand Hydrology Present? Yes Westand Hydrology Present? Yes Dets not p2:ss PT, but hzs hydrology Ard Spils. Density: Species? Status Dets not p2:ss PT, but hzs hydrology Ard Spils. Density: Species? Status 1	re Vegetation X Soil or Hydrology	naturally prot	blematic? (If ne	eeded, explain any answers in Remarks.)
Summary OF PIRCINGS - Attach site map showing sampling point locations, transects, important reaches, etc. Hydrophytic Vegatation Present? Yes Yes No Wetland Hydrology Present? Yes No			aamaline naint l	antional transporte important features etc.
Hydrophylic Vegetation Present? Yes No Wettand Hydrology Present? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes Yes No Decs not p265 PT, but h25 hydrology And Sol'lS. VEGETATION - Use scientific names of plants. Tree Stratum (Plot size Absolute Dominant Indicator Species Across All Stratus Query of Dominant Strates Total Number of Dominant Strates Total Number of Dominant Strates Species Across All Stratus (B) Prevent of Dominant Strates Prevent of Dominant Strates Total Areo BL, FACW or FAC. (C) (A) Total Number of Dominant Strates Total Number of Dominant Strates (B) Prevent of Dominant Strates (C) (C) Prevent of Dominant Strates (C) Prevent of Dominant Strates (C) (C) Prevent of Dominant Strates (B) Prevent of Dominant Strates (B) Prevent of Dominant Strates (C) Prevent of Dominant Strates <	SUMMARY OF FINDINGS - Attach site ma	p snowing	sampling point i	ocations, transects, important leatures, etc.
Inglit Its	Hydrophytic Vegetation Present? Yes		Is the Sampled	Area
Remarks: Do is so if p255 PI, but h2s hydrology And SollS, //EGETATION - Use scientific names of plants. Dominant indicator Dominance Test worksheet: 1:	Wetland Hydrology Present?	No	within a Wetlar	nd? Yes V No
Does not p245 PI bat h2s hydrology And Soils VEGETATION - Use scientific names of plants. Image: Stratum Provide scientific names of plants. 2 Scientific names of plants. 2 Scientific names of plants. 2 Scientific names of plants. 3 Scientific names of plants. 4 Scientific names of plants. 3 Scientific names of plants. 3 Scientific names of plants. 4 Scientific names of plants. 2 Scientific names of plants. 3 Scientific names of plants. 4 Scientific names of plants. 1 Scientific names of plants. 2 Scientific names of plants. 3 Scientific names of plants. 1 Scientific names of plants. 2 Scientific names of plants. 2 Scientific names of plants. 3 Scientific names of plants. 4 Scientific names of plants. 2 Scientific names of plants. 3 Scicon for plants. 4 <td>Remarks</td> <td></td> <td></td> <td></td>	Remarks			
VEGETATION - Use scientific names of plants. Tree Stratum (Plot size:	Does not pass PI, but	has hy	drology and	soris.
VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: Absolute Dominant Indicator 1 Mumber of Dominant Species That Are OBL, FACW, or FAC: (A) 2 Total Number of Dominant Species That Are OBL, FACW, or FAC: (A) 3		'	1	
Absolute Dominant Indicator % Cover Species2 % Cover Species % Cover Species % Cover Species % Cover Species % Cover Total Number of Dominant % Cover Prevalence index worksheet: % Cover Total % Cover of Multiply by 9 Species 1 Species 2 Species 3 Cover of Multiply by OBL species 0 X 1 = Cover FACW species 1 Cover of 1 Cover of 1 Species 2 Dottics 2 Status 1 Species 2 Status 1 Species 2 Status 2 Dottics	/EGETATION – Use scientific names of pla	ants.		
Intervention Intervention Number of Dominant Species Q (A) 2 Intal Are OBL, FACW, or FAC: Q (A) 3 Intal Are OBL, FACW, or FAC: Q (A) 4 Intervention Species Arcss All Strata (B) Percent of Dominant Species Intal Are OBL, FACW, or FAC: (A) 3 Intal Are OBL, FACW, or FAC: (A) 1 Intal Are OBL, FACW, or FAC: (A) 2 Intal Are OBL, FACW, or FAC: (A) 3 Intervention Prevalence Index worksheet: (A) 1 Intal Are OBL, FACW, or FAC: (A) (A) 3 Intervention OBL species: 0 (A) 4 Intervention OBL species: 0 (A) 5 Intervention OBL species: 0 (A) 30/4 (B) 1 Nameer of Namar Species 0 X4 = 40 40 UPL species: 0 X4 = 40 1 Nameer of Namar Species 10 X4 = 40 UPL species: 0 X4 = 40 2 Intervention Son	Tree Stratum (Plot size:	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
2	1	<u></u>	openes. oraido	That Are OBL, FACW, or FAC:
3	2.			Total Number of Dominant
44	3			Species Across All Strata:
Saping/Shrub Stratum (Plot size:	4		- · ·	Percent of Dominant Species
Sapinoviduo sitatum (Piot size Multiply by 1	CastraciChack Clashum / Dial aires		= Total Cover	That Are OBL, FACW, or FAC: 100 (A/B)
2	Saping/Shrub Stratum (Plot size/			Prevalence Index worksheet:
3	2			Total % Cover of Multiply by
$ \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c}$	3.			OBL species O $x_1 = O$
$ \frac{5}{1} = Total Cover $ $ \frac{1}{1} = Total Cover $ $ \frac{1}{2} = Total$	4			FAC species $88 \times 3 = 264$
Herb Stratum (Plot size:	5.			FACU species 10 x4 = 40
Intervention Intervention Image: Construct a percention Image: Construlic percentis Image: Construct a percent	Herth Stratum (Plot size:)	manager and a statement of	= Total Cover	UPL species x 5 =
2 Perconnis IO Y CAC 3 CAUS Cornection Indicators: 10 GAC 4 Holews Langtus IO GAC 5 Granus Langtus IO GAC 6 Hypo chaler is radicata G GAC 7 IO GAC No 8 Gac IO GAC 9 III Gac IIII 10 IIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	1 Arcostis stalarifera	60	Y FAC	Column Totals: <u>98</u> (A) <u>309</u> (B)
3 CALLS COMING B CALL 4 Holcuss (angless) G GAL 1. Rapid Test for Hydrophytic Vegetation 5 Gramus (hordaceus) G GAL 1. Rapid Test for Hydrophytic Vegetation 6 Hypo challer (s radicata) G GAL 1. Rapid Test for Hydrophytic Vegetation 7 GAL Yes (Provide supporting data in Remarks or on a separate sheet) - 9	2 Fostura perennis	10	Y FAC	Prevalence Index = B/A = 3.10
4. Halews (analysis) 10 CAC	3 Lotus compations	_8_	- AL	Hydrophytic Vegetation Indicators:
5. Granus hocdaceus 5 GRU Y2 - Dominance Test is >50% 6. Hypo chaeris radicata 5 GRU N 3 - Prevalence Index is \$30' 7.	4. Holcus Janatus	-10	<u> </u>	1 - Rapid Test for Hydrophytic Vegetation
6. <u>Hype curser is radicata</u> <u>5</u> <u>ENCO</u> 7.	5 Bronus hordaceus		eAW	$\sqrt{2}$ - Dominance Test is >50%
7.	6 Hypochaerisradicata		FUO	N 3 - Prevalence Index is ≤3 0
Bare Ground in Herb Stratum 2	7			data in Remarks or on a separate sheet)
10	0			5 - Wetland Non-Vascular Plants ¹
11.	10		5	Problematic Hydrophytic Vegetation' (Explain)
<u>Woody Vine Stratum</u> (Plot size:) 1 2 % Bare Ground in Herb Stratum <u>2</u> = Total Cover Remarks: Does not passFAL-neutral	111			¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		48	= Total Cover	be present, unless disturbed of problematic.
1Hydrophytic 22	Woody Vine Stratum (Plot size:)			
"Bare Ground in Herb Stratum 2 = Total Cover Present? Yes No V Remarks: Does not passFRC-neutral	1		-	Hydrophytic Vegetation
% Bare Ground in Herb Stratum <u>2</u> Remarks: Does not passFAC-neutral	۲ ک		= Total Cover	Present? Yes No V
Remarks Does not passFAC-neutral	% Bare Ground in Herb Stratum			
	Remarks: Does not passFAC-n	entral		
				E S ¹ ang Saturdan

All a grad a

JUIL	1

M	BS	И	echn	9/17/	151	Sampling Point:	W	- ST/	W	
		- 1	* * * * *	(1)/1	~ .	the second s				

 $\label{eq:phi} (p_{i}, p_{i}) = - (p_{i}, p_{i}) \int_{0}^{1} dp_{i} dp_{$

in state

Profile Desc	cription: (Descr	ibe to the dep	th needed to docum	nent the i	ndicator	or confirm	n the absence of	indicators.)	And an and an
Depth	Matr	ix	Redo	x Feature	s				
(inches)	Color (moist) %	Color (moist)	_%	Type'	Loc ²		Remarks	
0-6	104×2/2	90	7.54R 4/4	10	<u> </u>	M	Loam_	-	
6-14	104 R3/2	<u>eo</u>	754R 4/6	20	_(m	Liam		
N.						-21	<i>n</i>		
			· · · · · · · · · · · · · · · · · · ·	and the second				and the second	
				-					
			-	-					
			-	-				- 1977 and a second stranger of the second	a a construction of the second se
'Type C=C	oncentration, D=	Depletion, RM	=Reduced Matrix, CS	=Covered	d or Coate	ed Sand G	rains. ² Locati	on: PL=Pore Lining.	M=Matrix.
Hydric Soil	Indicators: (Ap	plicable to all	LRRs, unless other	wise not	ed.)		Indicators	for Problematic Hyd	ric Soils':
Histosol	I (A1)		Sandy Redox (S	65)			2 cm M	luck (A10)	÷
Histic E	pipedon (A2)		Stripped Matrix	(S6)	1.1.1		Red Pa	arent Material (TF2)	
Black H	istic (A3)		Loamy Mucky N	lineral (F	I) (excep	t MLRA 1)	Very S	hallow Dark Surface (TF12)
Hydroge	en Suilide (A4) Id Below Dark Su	rface (A11)	Loamy Gleyed Matrix	(F2))		Other (Explain in Remarks)	10 a 10
Depleter	ark Surface (A12		X Redox Dark Sur	(F3) face (F6)			³ Indicators	of hydronhytic veneta	tion and
Sandy M	Mucky Mineral (S	1)	Depleted Dark S	Surface (F	7)		wetland	hydrology must be pr	esent.
Sandy C	Gleyed Matrix (S4	4)	Redox Depressi	ons (F8)			unless d	isturbed or problemat	ic.
Restrictive	Layer (if presen	t):					1	and the second	
Type:									
Depth (in	ches):						Hydric Soil Pre	esent? Yes	No X
Remarks:	nen anten angelikter annenker	and the second		an a				and the second se	
									- 14 A
						W			
HYDROLO	GY		-		d.	S	W	- C	(A
Wetland Hy	drology Indicate	ors:							
Primary India	cators (minimum	of one require	d, check all that apply	1)		*****	Seconda	ry Indicators (2 or mo	re required)
Surface	Water (A1)		Water-Stain	ned Leave	es (B9) (e	xcept	Wate	er-Stained Leaves (BS	9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA 1	l, 2, 4A, a	nd 4B)		4	A, and 4B)	
Saturatio	on (A3)		Salt Crust ((B11)			L Drain	nage Patterns (B10)	Swale
Water M	1arks (B1)		Aquatic Inv	ertebrate	s (B13)		Dry-	Season Water Table	(C2)
Sedimer	nt Deposits (B2)		Hydrogen S	Sulfide Oc	for (C1)		Satu	ration Visible on Aeria	al Imagery (C9)
Drift Dep	posits (B3)		Oxidized R	hizosphei	res along	Living Roo	ots (C3) X Geo	morphic Position (D2)	Swele
Algal Ma	at or Crust (B4)		Presence of	f Reduce	d Iron (C4	4)	Shal	low Aquitard (D3)	N (28
Iron Dep	bosits (B5)		Recent Iron	n Reductio	on in Tille	d Soils (Cf	5) FAC	-Neutral Test (D5)	
Surface	Soil Cracks (B6)) 	Stunted or	Stressed	Plants (D	1) (LRR A) Rais	ed Ant Mounds (D6)	(LRR A)
Inundation	on Visible on Aer	ial Imagery (B	7) Other (Exp	lain in Re	marks)		Fros	t-Heave Hummocks (D7)
Sparsely	vegetated Cond	cave Surface (88)	-		20			
Field Obser	vations:								
Surface Wate	er Present?	Yes	No <u>X</u> Depth (inc	hes):	1	-1 (20)			
Water Table	Present?	Yes	No Depth (inc	hes):		- 1		2.15	
Saturation Pr	resent?	Yes	No <u> </u>	hes):		Wetl	and Hydrology P	resent? Yes X	No
Describe Rec	corded Data (stre	am gauge mo	nitoring well, aerial o	hotos pre		Dections	if available:		
	2.12	an googo, m	intering treat center p	notos, pri	241003 1113	pections),	ii avaliable.		
Remarks		K				The second second			

WETLAND DETERMINATIO	N DATA FORM -	- Western Mountains, Valleys, ar	nd Coast Region
Project/Site: Hern	City	County Mckinley ville / Humbaldt	Sampling Date: 9117/2
Applicant/Owner GHD for Mary	Keehn Den	elopment State: CA	Sampling Point: WITAL)
Investigator(s): K Mc Donzld, M,	Schwart see	tion, Township, Range:	, RIE
Landform (hillslope, terrace, etc.) Swale	Lo	cal relief (concave, convex, none):	CX Slope (%):
Subregion (LRR)	Lat: 40.	93273461 Long: -124.091	8625 Datum: W6584
Soil Map Unit Name: Arcatz and ca	ndymountain,	2-9 2/0 Slopes NWI classif	ication: None
Are climatic / hydrologic conditions on the site typica	I for this time of year?	Yes No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly dist	urbed? Are "Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrology _	naturally proble	malic? (If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showjng sa	mpling point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes	No		/
Hydric Soil Present? Yes	No	Is the Sampled Area	
Wetland Hydrology Present? Yes	No	within a wetland?	Nº
Remarks	er Di		11 N N N N N N N N N N N N N N N N N N
(- ⁷ - 1		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) 1	Absolute <u>% Cover</u>	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)		
3			Species Across All Strata: (B)		
4	es excitizacioni in internazio Administra internazio di Antonio	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)		
1			Prevalence Index worksheet: Total % Cover of:Multiply by:		
3			OBL species x 1 =		
4			FACW species x 2 = FAC species x 3 =		
Herb Stratum (Plot size: + W) ²	··· ··································	= Total Cover	FACU species x 4 = UPL species x 5 =		
1. Agrostis stolenitera	50	Y FAC	Column Totals: (A) (B)		
3 Festura annolation	5	<u> </u>	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:		
4 Holcus Lanatus	94	FACU	1 - Rapid Test for Hydrophytic Vegetation		
· Plantago lanceolata	2	EACU	3 - Prevalence Index is ≤3 0 ¹		
8		<u> </u>	 4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) 		
9			5 - Wetland Non-Vascular Plants' Problematic Hydrophytic Vegetation' (Explain)		
11	au	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Woody Vine Stratum (Plot size:)					
2		· · · · · · · · · · · · · · · · · · ·	Hydrophytic Vegetation Prosent? Yes No		
% Bare Ground in Herb Stratum		_= Total Cover			
Remarks:					
SOIL	MB5	Keehn 9	15/17/21	Sampling Point: WI	T2 -
--	-------------------------------	-----------------------	-----------------------------	--	----------
Profile Description: (Describe to the dept	n needed to document the ind	icator or confirm	the absence of inc	licators.)	
Depth Matrix	Redox Features				
(inches) Color (moist) %	Color (moist) %	Type Loc ²	Texture	Remarks	
0-9 104R3/2 100			Loam		
9-14 104 R3/3 90	7.54R4/6 10	C m	Silflam		
	*	vi 8			
· · · · · · · · · · · · · · · · · · ·		10 10			
				and a second	
¹ Type: C=Concentration D=Depletion RM=	Reduced Matrix, CS=Covered of	or Coated Sand G	rains ² Location	PL=Pore Lining, M=Matrix	(.
Hydric Soil Indicators: (Applicable to all I	RRs, unless otherwise noted	l.)	Indicators for	Problematic Hydric Soils	3:
Histosol (A1)	Sandy Redox (S5)		2 cm Muc	k (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)		Red Pare	nt Material (TF2)	
Black Histic (A3)	Loamy Mucky Mineral (F1)	(except MLRA 1)	Very Sha	llow Dark Surface (TF12)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Other (Ex	plain in Remarks)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)				
Thick Dark Surface (A12)	Redox Dark Surface (F6)		³ Indicators of	hydrophytic vegetation and	
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hy	drology must be present,	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		unless dist	urbed or problematic.	
Restrictive Layer (if present):		2			
Туре:			947 - RY12 - 122 - 1290727		r
Depth (inches):		a ang sa	Hydric Soil Pres	ent? Yes No 7	<u>~</u>
Remarks					
HYDROLOGY		e de de		-	
Wetland Hydrology Indicators:			144		
Primary Indicators (minimum of one require	d; check all that apply)	-	Secondary	Indicators (2 or more requi	rea)
Surface Water (A1)	Water-Stained Leaves	s (B9) (except	Water	-Stained Leaves (B9) (MLR	A 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, ar	nd 4B)	4A	, and 48)	
Saturation (A3)	Salt Crust (B11)		Draina	age Patterns (B10)	
Water Marks (B1)	Aquatic Invertebrates	(B13)	Dry-S	eason Water Table (C2)	
Sediment Deposits (B2)	Hydrogen Sulfide Od	or (C1)	Satur	ation Visible on Aerial Image	ery (C9)
Drift Deposits (B3)	Oxidized Rhizosphere	es along Living Ro	oots (C3) Geom	orphic Position (D2)	
Algal Mat or Crust (B4)	Presence of Reduced	Iron (C4)	Shallo	ow Aquitard (D3)	
_ Agai mar or order (bri)		a in Tilled Solle (C	EAC-	Neutral Test (D5)	

- Shallow Aquitara
 - FAC-Neutral Test (D5) de (DE) (I DD .

and a hollow -

Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co	6) kerial Imagery (B7) oncave Surface (B8)	Recent Iron Reduction in Tille Stunted or Stressed Plants (Other (Explain in Remarks)	ed Soils (C6) FAC-Neutral D1) (LRR A) Raised Ant M Frost-Heave	Test (D5) Iounds (D6) (L Hummocks (D	LRR A) 07)
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s	Yes No Yes No Yes No tream gauge, monito	Y Depth (inches): Y Depth (inches): Y Depth (inches): Y Depth (inches): oring well, aerial photos, previous in	Wetland Hydrology Present?	Yes	_ No <i>¥</i>
Remarks	2	Ser. a p. s.			

Recent Iron Reduction in Tilled Soils (C6)

haelin		n.V.	1. Hell Lide and alit	112
oject/Site: 178ECAVI	1/ 1	City/County: / ICA-IN	Sampling Date: 111	-2
plicant/Owner: 61-10 for 1120	y Kelha		State: Sampling Point:	12
estigator(s): h. McConald, M	Schwarz	Section, Township, Ra	ange: 53, 7-6N, 121E	
dform (hillslope, terrace, etc.): _ ラレルe		Local relief (concave,	convex, none): <u>Concave</u> Slope (%):	1C
region (LRR):	Lat: <u>40</u>	.3276452	_ Long: _124.0974969 Datum:	658
Map Unit Name: Areats and Car	ily part 2-	1% slan 15	NWI classification: PEM	
climatic / hydrologic conditions on the site tyr	pical for this time of ve	ar? Yes No	(If no, explain in Remarks.)	
Vegetation Soil or Hydrolog	v significantly	disturbed? Are	"Normal Circumstances" present? Yes No	- i
Vegetation Soil or Hydrolog	v naturally pro	blematic? (If ne	eeded explain any answers in Remarks.)	77
vegetation, our invaloiog	y hattirally pro	biemaaer (mit		
IMMARY OF FINDINGS – Attach s	ite map showing	sampling point I	ocations, transects, important features	s, etc
ydrophytic Vegetation Present? Yes _	V No			
rdric Soil Present? Yes	No	Is the Sampled	i Area	
		I section - thister.	Add Van V No	
Vetland Hydrology Present? Yes _ emarks:	1 No	within a Wetla	nd? Yes <u>V</u> No	
letland Hydrology Present? Yes _ emarks:	<u>, 7 No</u>	within a Wetlan	nd? Yes <u>/</u> No	*
etland Hydrology Present? Yes _ emarks: GETATION – Use scientific names	y Nos of plants.	within a Wetlan	nd? Yes <u>Y</u> No	*
etland Hydrology Present? Yes_ marks: GETATION – Use scientific names se Stratum (Plot size:)	s of plants.	Dominant Indicator Species? Status	Dominance Test worksheet:	
etland Hydrology Present? Yes _ marks: GETATION – Use scientific names ee Stratum (Plot size:)	s of plants.	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
etland Hydrology Present? Yes _ marks: GETATION – Use scientific names ee Stratum (Plot size:)	s of plants. Absolute Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
etland Hydrology Present? Yes _ emarks: GETATION – Use scientific names <u>ee Stratum</u> (Plot size:)	s of plants. Absolute K Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata:	(A) (B)
etland Hydrology Present? Yes _ emarks: GETATION – Use scientific names ee Stratum (Plot size:)	s of plants. Absolute Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Barcoart of Dominant	(A) (B)
etland Hydrology Present? Yes _ marks: GETATION – Use scientific names ee Stratum (Plot size:)	S of plants. Absolute Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Job	(A) (B) (A/B)
etland Hydrology Present? Yes _ marks: GETATION – Use scientific names ee Stratum (Plot size:) pling/Shrub Stratum (Plot size:)	s of plants. Absolute K Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Job Percent of Dominant Species That Are OBL, FACW, or FAC: Job Percent of Dominant Species That Are OBL, FACW, or FAC: JOCO Prevalence Index worksheet:	(A) (B) (A/B)
etland Hydrology Present? Yes _ marks: GETATION – Use scientific names ee Stratum (Plot size:) pling/Shrub Stratum (Plot size:)	s of plants. Absolute K Cover	Dominant Indicator Species? Status 	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of:	(A) (B) (A/B)
etland Hydrology Present? Yes _ emarks: GETATION – Use scientific names ee Stratum (Plot size:) pling/Shrub Stratum (Plot size:	s of plants. Absolute % Cover	Dominant Indicator Species? Status = Total Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 =	(A) (B) (A/B)
Vetland Hydrology Present? Yes _ emarks:	x No s of plants. Absolute % Cover	Within a Wetlan Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species FACW species x 1 = FACW species	(A) (B) (A/B)

	A Maria		Total % Cover of:	Multiply by:
2			OBL species	x 1 =
3			FACW species	x 2 =
4		<u> </u>	FAC species	x 3 =
5			FACU species	x4=
1.02	= Tota	I Cover	UPL species	x 5 =
Herb Stratum (Plot size: 1 (1)	DO V	CRI	Column Totals	(A) (B)
1 Carex aboutta		_usc	Coldmin rotais.	(0)
2 Festuca annaligació	-70-1	-FAC	Prevalence Index	= B/A =
3. Agrestis staloniter 2	-35-4	- EAC	Hydrophytic Vegetatio	n Indicators:
4. Ranunculus repens			1 - Rapid Test for H	lydrophytic Vegetation
5 Lotus corniculatus			2 - Dominance Test	t is >50%
6. Holcus lanatus			3 - Prevalence Inde	x is ≤3 0 ¹
7			4 - Morphological A	daptations ¹ (Provide supporting
8		annuar a staint a staint an	data in Remarks	or on a separate sheet)
9.		-	5 - Wetland Non-Va	iscular Plants'
10		10	Problematic Hydrop	ohytic Vegetation ¹ (Explain)
11	19	61	Indicators of hydric soil	and wetland hydrology must
y	166 = Total	Cover	be present, unless distu	rbed or problematic.
Woody Vine Stratum (Plot size:)			1	N 1
1		all.	Hydrophytic	
2		·	Vegetation	
Philip d	= Total	Cover	Present? Yes	s_V No
% Bare Ground in Herb Stratum			, age of the second sec	
Remarks: Passa CAC				
lasses the neutra	N and			

SOIL			1	135	Ke	ehn	9/17/ ZI Sampling Point: WI	<u>T3-1</u>
Profile Desc	cription: (Describe t	o the dep	oth needed to docu	ment the	indicator	or confirm	m the absence of indicators.)	1
Depth	Matrix		Red	ox Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc	Texture Remarks	
0-5	109K 312	10	1.5TK 46	10	<u> </u>	m	Loam	
5-14	104R 3/2	85	751R 1/4	15	<u> </u>	n	SiltLoam	
			1	1		24 23		12
1			5		100 H			
	1	-	Contract Contract Contractory Contractory			n (*****************************		
						•	- manufacture description	
		-	-			<u></u>		
		-	November 11					
¹ Type: C=C	oncentration, D=Depl	etion, RM	=Reduced Matrix, C	S=Covere	d or Coat	ed Sand G	Grains. ² Location. PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (Applica	able to all	LRRs, unless othe	rwise not	ed.)		Indicators for Problematic Hydric Soils ³	:
Histosol	I (A1)		Sandy Redox ((S5)			2 cm Muck (A10)	1. 1960.
Histic E	pipedon (A2)		Stripped Matrix	(S6)			Red Parent Material (TF2)	
Black H	istic (A3)		Loamy Mucky	Mineral (F	1) (excep	t MLRA 1)) Very Shallow Dark Surface (TF12)	
Hydroge	en Sulfide (A4)		Loamy Gleyed	Matrix (F2	?)		Other (Explain in Remarks)	
Deplete	d Below Dark Surface	(A11)	Depleted Matri	x (F3)	an takat			
Thick D	ark Surface (A12)		X Redox Dark Su	urface (F6)	*		³ Indicators of hydrophytic vegetation and	
Sandy M	Mucky Mineral (S1)		Depleted Dark	Surface (F	7)		wetland hydrology must be present,	3 a
Sandy C	Gleyed Matrix (S4)		Redox Depres	sions (F8)			unless disturbed or problematic.	
Restrictive	Layer (if present):	10 N	and the second		No g	0. S. 10. S.		
Type:		- 3	Garan Salita					10.0
Depth (in	ches)	750		19		-4 S	Hydric Soil Present? Yes <u>K</u> No	2
Remarks:		24	Sec. Aspen 40		8		1	
								8 1
								1.5.3
HYDROLO	GY							
Wetland Hy	drology Indicators:					p.	a	
Primary India	cators (minimum of or	ne require	d check all that app	(v)			Secondary Indicators (2 or more required	d) I

Primary Indicators (minimum of one required; cl	heck all that apply)	Secondary Indicators (2 or more required)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) 	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) X Drainage Patterns (B10) S tool Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) coots (C3) Geomorphic Position (D2) S tool Shallow Aquitard (D3) C6) Shallow Aquitard (D3) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Field Observations: Surface Water Present? Yes No _ Water Table Present? Yes No _ Saturation Present? Yes No _ (includes capillary fringe) No _ Describe Recorded Data (stream gauge, monitor)	X Depth (inches):	etland Hydrology Present? Yes <u>Y</u> No
Remarks:	a strategy as a first particular	

ect/site: Geenn	25	City	County: McKin !	legville / Humboldt Sampling Date:
cant/Owner: 640	for Many	Keehn	1.2	State: Sampling Point: WTT3-
stigator(s): K. M. Dr	nald. M. Sc	hwart sec	tion. Township, Ra	nge: 55, T6N, R1E
form (hillslope terrace etc.)	sizale	Lo	cal relief (concave	convex none): DONE Slope (%): 3
		Lat Un i	3276452	1000 -124,0974969 Datum WGS1
	- /	Lat	n col	Long Data Data
Map Unit Name: 11/224	t and can	ay mounte	h, 2-940	STOPES NWI classification:
climatic / hydrologic condition	is on the site typical for	this time of year?	Yes No	(If no, explain in Remarks.)
Vegetation, Soll	, or Hydrology	significantly dist	urbed? Are "	"Normal Circumstances" present? Yes No
Vegetation, Soil	or Hydrology	naturally proble	matic? (If ne	eeded, explain any answers in Remarks.)
MMARY OF FINDING	i – Attach site ma	ap showing sa	mpling point l	ocations, transects, important features, et
drophytic Vegetation Presen	17 Yes	No	1	The second se
dric Soil Present?	> Yes	No	Is the Sampled	Area
etland Hydrology Present?	Yes	No	within a Wetlar	nd? YesNo
marks:				
		-		
GETATION – Use scie	ntific names of p	lants.		
		Absolute D	ominant Indicator	Dominance Test worksheet:
e Stratum (Plot size:		<u>% Cover</u> S	pecies? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
anna an ann an Anna an				The second
n and a second				Species Across All Strata: 2 (B)
anana ah, mananananan (Annunsen and a second			
and a second	No		Total Cover	That Are OBL, FACW, or FAC 50% (A/B
pling/Shrub Stratum (Plot	ize:)			Prevalence Index worksheet:
	5			Total % Cover of Multiply by:
	2			OBL species x1 =
	and the second		<u>N</u> = = =	FACW species x 2 =
				FAC species x 3 =
an to a	2-			FACU species x 4 =
1	-2		Total Cover	LIPI species x5=
rb Stratum (Plot size:		60	V CAC	Column Totals (A) (B)
Agcostis:	tologitec	- <u>30</u> -	VEAC	
ANThoxanth	im oper game	1 2 -	TERCO	Prevalence Index = B/A =
Festuca acur	idinacea	_1 0	<u> </u>	Hydrophytic Vegetation Indicators:
Hypochaerie	stadicata			
Lotus cornic	ulatus_			✓ 2 - Dominance Test is >50%
Daucus card	-2	$- \rightarrow -$		3 - Prevalence Index is ≤3.0'
Plantago lac	icedata_			 4 - Morphological Adaptations' (Provide supportin data in Remarks or on a separate sheet)
		······································		5 - Wetland Non-Vascular Plants ¹
		J	10 ST	Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must
•		99 =	Total Cover	be present, unless disturbed or problematic.
	e:)			
loody Vine Stratum (Plot siz				Hydrophytic
loody Vine Stratum (Plot siz	· · · · · · · · · · · · · · · · · · ·			Magaintian
loody Vine Stratum (Plot siz				Present2 Yes I No
loody Vine Stratum (Plot siz	1		Total Cover	Present? Yes No

SOIL

M	BS	Ver	ha	91	13/21	Sampling Point:	WI	T3-U
/ .	10 1	PL C C	111	11	17101	ouriping . one.		

lepth	Matrix		Rede	ox Features	5				
inches)	Color (moist)	%	Color (moist)	%	Type	Loc ²	Texture	Remarks	
0-6	104R3/2	100	-			1	Silf Loam		
5-14	104R33	100					Siltloam		
	- 1 ⁸		<u> </u>	s (<u>.</u> 1935)	19. ×	(¹ Klas			
	nin.								Èsi
			-		·	-			
(all)	<u>x</u>			1- 			<u></u>	and a second	
Type: C=0	Concentration, D=Dep	etion, RM	Reduced Matrix, C	S=Covered	d or Coate	ed Sand Gr	ains. ² Location:	PL=Pore Lining, M=Ma	trix.
Type: C=(lydric Soi	Concentration, D=Dep I Indicators: (Applic	bletion, RM able to all	=Reduced Matrix, C LRRs, unless othe	S=Covered	d or Coate ed.)	ed Sand Gr	rains. ² Location: Indicators for	PL=Pore Lining, M=Ma Problematic Hydric Sc	ntrix. bils ³ :
Type: C=(Iydric Soi Histoso Histoso	Concentration, D=Dep I Indicators: (Applic of (A1)	bletion, RM able to all	=Reduced Matrix, C LRRs, unless othe Sandy Redox Stripped Matri	S=Covered erwise not (S5)	d or Coate ed.)	ed Sand Gr	rains. ² Location: Indicators for 2 cm Muck Red Paren	PL=Pore Lining, M=Ma Problematic Hydric Sc (A10) t Material (TE2)	ntrix. bils ³ :
Type: C=(Iydric Soi Histoso Histic I Black I	Concentration, D=Dep I Indicators: (Applic of (A1) Epipedon (A2) Histic (A3)	bletion, RM able to all	=Reduced Matrix, C LRRs, unless othe Sandy Redox Stripped Matri Loamy Mucky	S=Covered erwise not (S5) x (S6) Mineral (F	d or Coate ed.)	ed Sand Gr	rains. ² Location: Indicators for 2 cm Muck Red Paren Very Shall	PL=Pore Lining, M=Ma Problematic Hydric Sc (A10) It Material (TF2) ow Dark Surface (TF12)	itrix. bils ³ :
Type: C=0 Iydric Soi Histoso Histic I Black I Hydroo	Concentration, D=Dep I Indicators: (Applic ol (A1) Epipedon (A2) Histic (A3) den Sulfide (A4)	bletion, RM	Reduced Matrix, C LRRs, unless othe Sandy Redox Loamy Mucky Loamy Gleved	S=Covered erwise not (S5) x (S6) Mineral (F Matrix (F2	d or Coate ed.) 1) (excep	ed Sand Gr t MLRA 1)	rains. ² Location: Indicators for 2 cm Muck Red Paren Very Shall Other (Exp	PL=Pore Lining, M=Ma Problematic Hydric So (A10) It Material (TF2) ow Dark Surface (TF12) plain in Remarks)	ntrix. bils ³ :
Type: C=(Iydric Soi Histosi Histic I Black I Hydrog Deplet	Concentration, D=Dep I Indicators: (Applic ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Below Dark Surfac	e (A11)	Reduced Matrix, C LRRs, unless othe Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed Depleted Matri	S=Covered erwise not (S5) x (S6) Mineral (F Matrix (F2 ix (F3)	d or Coate ed.) 1) (excep	ed Sand Gr	rains. ² Location: Indicators for 2 cm Muck Red Paren Very Shall Other (Exp	PL=Pore Lining, M=Ma Problematic Hydric So (A10) It Material (TF2) ow Dark Surface (TF12) Itain in Remarks)	ntrix. bils ³ :
Type: C=(Hydric Soi Histosi Histic I Black I Hydrog Deplet Thick I	Concentration, D=Dep I Indicators: (Applic ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Below Dark Surfac Dark Surface (A12)	bletion, RM able to all ce (A11)	Reduced Matrix, C LRRs, unless othe Sandy Redox Loamy Redox Loamy Mucky Loamy Gleyed Redox Dark S	S=Covered arwise not (S5) x (S6) Mineral (F Matrix (F2) ix (F3) urface (F6)	d or Coate ed.) 1) (excep	ed Sand Gr	rains. ² Location: Indicators for 2 cm Muck Red Paren Very Shall Other (Exp ³ Indicators of h	PL=Pore Lining, M=Ma Problematic Hydric Sc (A10) It Material (TF2) ow Dark Surface (TF12) Italian in Remarks) ydrophytic vegetation ar	ntrix. bils ³ :
Type: C=(Hydric Soi Histosi Histic I Black I Hydrog Deplet Thick I Sandy	Concentration, D=Dep I Indicators: (Applic of (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1)	bletion, RM cable to all ce (A11)	Reduced Matrix, C LRRs, unless othe Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark S Depleted Dark	CS=Covered arwise not (S5) x (S6) Mineral (F Matrix (F2) ix (F3) urface (F6) x Surface (F6)	d or Coate ed.) 1) (excep 2) =7)	ed Sand Gr	rains. ² Location: Indicators for 2 cm Muck Red Paren Very Shall Other (Exp ³ Indicators of h wetland hyd	PL=Pore Lining, M=Ma Problematic Hydric So (A10) It Material (TF2) ow Dark Surface (TF12) plain in Remarks) ydrophytic vegetation ar prology must be present,	ntrix bils ³ :
Type: C=(Hydric Soi Histosi Histic I Black I Hydrog Deplet Thick I Sandy Sandy	Concentration, D=Dep I Indicators: (Applic of (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)	bletion, RM cable to all ce (A11)	Reduced Matrix, C LRRs, unless othe Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark S Depleted Dark Redox Depres	S=Covered erwise not (S5) x (S6) Mineral (F Matrix (F2) ix (F3) urface (F6) x Surface (F8) ssions (F8)	d or Coate ed.) 1) (excep 2) =7)	ed Sand Gr	rains. ² Location: Indicators for 2 cm Muck Red Paren Very Shall Other (Exp ³ Indicators of h wetland hyd unless distu	PL=Pore Lining. M=Ma Problematic Hydric So (A10) It Material (TF2) ow Dark Surface (TF12) olain in Remarks) ydrophytic vegetation ar prology must be present, rrbed or problematic.	ntrix. bils ³ :
Type C=(Hydric Soi Histosi Histic I Black I Hydrog Deplet Thick I Sandy Sandy Restrictive	Concentration, D=Dep I Indicators: (Applic of (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) a Layer (if present):	oletion, RM cable to all ce (A11)	Reduced Matrix, C LRRs, unless other Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark S Depleted Dark Redox Depres	CS=Covered erwise not (S5) x (S6) Mineral (F Matrix (F2) ix (F3) urface (F6) c Surface (F8)	d or Coate ed.) 1) (excep 2) -7)	t MLRA 1)	rains. ² Location: Indicators for 2 cm Muck Red Paren Very Shall Other (Exp ³ Indicators of h wetland hyd unless distu	PL=Pore Lining, M=Ma Problematic Hydric Sc (A10) It Material (TF2) ow Dark Surface (TF12) olain in Remarks) ydrophytic vegetation ar Irology must be present, rbed or problematic.	nd
Type: C=(Hydric Soi Histosi Black I Hydrog Deplet Thick I Sandy Sandy Restrictive Type: _	Concentration, D=Dep I Indicators: (Applic of (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) a Layer (if present):	oletion, RM able to all ce (A11)	Reduced Matrix, C LRRs, unless other Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark S Depleted Dark Redox Depres	CS=Covered erwise not (S5) x (S6) Mineral (F Matrix (F2) ix (F3) urface (F6) c Surface (F8)	<u>d or Coate</u> ed.) 1) (excep 2) =7)	t MLRA 1)	rains. ² Location: Indicators for 2 cm Muck Red Paren Very Shall Other (Exp ³ Indicators of h wetland hyd unless distu	PL=Pore Lining, M=Ma Problematic Hydric Sc (A10) It Material (TF2) ow Dark Surface (TF12) olain in Remarks) ydrophytic vegetation ar lrology must be present, rbed or problematic.	nd

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check	all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hurmocks (D7)
Sparsely vegetated Concave Surface (B8)	and the second	343 I
Field Observations:		
Surface Water Present? Yes No	Depth (inches):	
Water Table Present? Yes No	_ Depth (inches);	나라면 가지? 안 많이 들어 가지 않는 것
Saturation Present? Yes No (includes capillary fringe)	Depth (inches): Wetland H	lydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspections), if ava	ilable
Remarks		

WETLAND DETERMINATION DATA FORM – Weste	rn Mountains, Yalleys, and Coast Region
roject/Site: HELLON	Millide alle Hundred Samoling Date 9/22/21
policant/Owner GAD for Mary Keeps Devel	State: (A Sampling Date WITHIN
vestigator(s) K. McDonald M. Schw2/2 Section Tow	mship Range: SS TLN. RIE
andform (hillslope terrace etc.) hillslope	concave convex none): $(Gn) \not\in \checkmark$ Slope (%): 5
ubregion (I BR)	245 Long -124,099124 Datum WSS 841
Man Linit Name: Acreta 's (Zadumat 7-940 6/001	I NIM classification: MML
e dimatic / bydrologic conditions on the site troicel for the time of year? Year	
re Contract / Hydrologic Containons on the site typical for this time of year / res	
a Vegetation, Soil, of Hydrologysignificantly disturbed?	Ale Normal Circumstances present res no
e vegetation, soit, or hydrology hatdraity problematic?	(in needed, explain any answers in remarks.)
UMMARY OF FINDINGS – Attach site map showing sampling	point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V No Is the	Sampled Area
Hydric Soil Present? Yes No withi	n a Wetland? Yes No No
Pemarke:	
Remarks.	
EGETATION – Use scientific names of plants.	
Absolute Dominant	Indicator Dominance Test worksheet:
Tree Stratum (Plot size:) <u>% Cover</u> Species?	Status Number of Dominant Species 2
1	That Are OBL, FACW, or FAC:
2	Total Number of Dominant
3	Species Across All Strata (B)
4 = Total Cov	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	Brovalance Index worksheet:
1	Total % Cover of Multiply by:
2	OBL species x 1 =
3	FACW species x 2 =
4	FAC species x 3 =
5	FACU species x 4 =
Herb Stratum (Plot size: 1 M2)	UPL species x 5 =
1 Holcus lanatus 35	\underline{FAC} Column Totals (A) (B)
2 Aarostis stologiters 45 Y	Prevalence Index = B/A =
3 Anthoxanthumodoratur 10	Hydrophytic Vegetation Indicators:
1 Latus corniculatus 4	A - Rapid Test for Hydrophytic Vegetation
5 Festuca arundinacea s	$\Delta = \frac{V}{2}$ - Dominance Test is >50%
6,	3 - Prevalence Index is \$3.0
7	data in Remarks or on a separate sheet)
8	5 - Wetland Non-Vascular Plants ¹
9	Problematic Hydrophytic Vegetation ¹ (Explain)
10	¹ Indicators of hydric soil and wetland hydrology must
91 = Total Cov	ver be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	
1	Hydrophytic /
2	Present? Yes V No
a Dee Council in Mark Strahum 3= Total Cou	
% Bare Ground in Herb Stratum	
TACHBURAS S	

Profile Description: (Describe to the dep	and the second se		
Death	ih needed to document the indicator or c	confirm the abs	ence of indicators.)
(inches) Color (moist) %	Redox Features	oc ² Texts	re Demarks
0-7 104RZ/2 100		- / 100	M
7-13 1048212 70	7. =+R4/4 30 1		······································
7-15 101Kg2 70	41311C/14 30 C	m 1.00	<u>~</u>
		,	
		······································	35
Type: C=Concentration, D=Depletion, RM	Reduced Matrix, CS=Covered or Coated S	and Grains	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Inc	licators for Problematic Hydric Soils":
Histosol (A1)	Sandy Redox (S5)	5	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	PA 1)	Ven Shallow Dark Surface (TE12)
Hydrogen Sulfide (A4)	Loamy Gleved Matrix (F2)		Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
Thick Dark Surface (A12)	X Redox Dark Surface (F6)	³ In	dicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		unless disturbed or problematic.
Restrictive Layer (if present):			
Туре:			K
Depth (inches):		Hydrid	Soil Present? Yes <u>K</u> No
	2 21 22 00		
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one require	d: check all that apply)		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (exce	pt	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation (A3)	Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
			Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	1.	Gatdration Visible on Achar integery (00)
Sediment Deposits (B2) Drift Deposits (B3)	— Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Livit	ng Roots (C3)	Ceomorphic Position (D2) Low Sac
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4)	ng Roots (C3)	Geomorphic Position (D2) Low Sac- Shallow Aquitard (D3)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So	ng Roots (C3)	Saturation Visible of Achievent Integery (00) Comparison (D2) Com Source Shallow Aquitard (D3) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I	ng Roots (C3) bils (C6) LRR A)	Saturation Visible of Achievent Integery (00) C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I Other (Explain in Remarks) 	ng Roots (C3) pils (C6) LRR A)	 Saturation Visible of Achievent Integery (00) Cew Sacca Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livii Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I Other (Explain in Remarks) B8) 	ng Roots (C3) bils (C6) LRR A)	Saturation Visite of Achievent Integery (00) Geomorphic Position (D2) Low Sacc- Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Field Observations:	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livii Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I Other (Explain in Remarks) B8) 	ng Roots (C3) bils (C6) LRR A)	Saturation Visite of Achievent integery (00) Geomorphic Position (D2) Low Saxe- Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livii Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I Other (Explain in Remarks) B8) No Depth (inches):	ng Roots (C3)	Saturation Visite of Achieven (Co) Geomorphic Position (D2) <i>Lew Swc-</i> Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vater ment Deposits (B2) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes Water Table Present? Yes	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livii Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I Other (Explain in Remarks) B8) No Y Depth (inches): Depth (inches):	ng Roots (C3)	Saturation Visite of Achieven (Co) Geomorphic Position (D2) Low Sac- Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vater ment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Gincludes capillary fringe) Describe Recorded Data (stream gauge, model	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livii Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I Other (Explain in Remarks) B8) No Y Depth (inches): Depth (inches):	ng Roots (C3) bils (C6) LRR A) Wetland Hydr	Saturation Visite of Achieven (Co) Complete Position (D2) Com Source Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Fology Present? Yes <u>No</u> No

WETLAND DETE	RMINATION DATA FO	RM – Western Mountains, '	Valleys, and (Coast Region	
Project/Site: heghn		_ City/County: Mckinley vilk	Humboldt s	ampling Date: 9/2	12/21
Applicant/Owner: 6110 far	Mary Keehn	Sta	ite: <u>CA</u> s	ampling Point:	T4-U
Investigator(s) M. Schwarz	. K.Mc Donald	_ Section, Township, Range:	5, T6N,	RIE	
Landform (hillslope, terrace, etc.):	listope	Local relief (concave, convex, no	one): name	Slope (%)	10
Subregion (LRR)	Lat: 4	40.93306245 Long: -	124.0994	124 Datum: 6	8594
Soll Map Unit Name: Arcz+z 2	and Candy Main	tan 2-940 slopes	NWI classificati	on: none	
Are climatic / hydrologic conditions on I	he site typical for this time of	year? Yes V No (If	no, explain in Ren	narks.)	
Are Vegetation, Soil, or	Hydrology significan	illy disturbed? Are "Normal Ci	ircumstances" pre	sent? YesN	0
Are Vegetation, Soil, or	Hydrology naturally	problematic? (If needed, exp	lain any answers	in Remarks.)	
SUMMARY OF FINDINGS - A	Attach site map showi	ng sampling point location	s, transects, i	mportant feature	s, etc.
Hydrophytic Vegetation Present?	Yes No V			/	
Hydric Soil Present?	Yes No	Is the Sampled Area	Vac	No. I	a.,
Wetland Hydrology Present?	Yes No	within a wetland r	ies	- ¹¹⁰	
Remarks:	1 1 1 1 1				

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) 1	Absolute % Cover	Dominant Indicat Species? Statu	or Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3	-14 -1 -1		Species Across All Strata:
Sapling/Shrub Stratum (Plot size:)		= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1.		1 83 A	Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
	-		OBL species x 1 =
			FACW species x 2 =
с.	-		FAC species x 3 =
	-	- Total Covor	FACU species x 4 =
Herb Stratum (Plot size: 100^2)			UPL species x 5 =
1. Parostis staanifers	45	Y FAC	Column Totals: (A) (B)
2 Horas Janati	15	EAC	Prevalence Index = B/A =
3 Anthoxanthum about	18	Y FAC	U Hydrophytic Vegetation Indicators:
4 Hypo chaeris radicati	3	FAC	U 1 - Rapid Test for Hydrophytic Vegetation
5 Leotrdon saxatilis	à	(A)	UN 2 - Dominance Test is >50%
6 Plantan lance data	2	EAC	$3 - Prevalence Index is \leq 3.0^{1}$
7. Lotus ramiculatus	3	EA	4 - Morphological Adaptations ¹ (Provide supporting
8. Daucus carola	2	EAG	data in Remarks or on a separate sheet)
9 Rumer acetosella	<u> </u>	<u>FA</u> (U 5 - Wetland Non-Vascular Plants
10			 Problematic Hydrophytic Vegetation' (Explain)
11			Indicators of hydric soil and wetland hydrology must
	91	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			
1	1	· · · · · · · · · · · · · · · · · · ·	Hydrophytic
2			Vegetation /
% Bare Ground in Herb Stratum		_= Total Cover	Present? Yes No
Remarks		-	· Star de

		the second se									
Depth	Matrix	5	Redo	x Features							
(inches)	Color (moist)		Color (moist)		Type'	Loc ²	Texture	<u>}</u>	F	Remarks	
0-9.	104K3/2	100	~ ~				Loa	<u>m</u>	+		
9-14	1048313	80	7.5484/4	20	C	m	Loa	<u>m/si</u>	17 La	am	- 49
र्ष्									ō		russes and Sale BAD
	1		5.								
-								-			
											MARKAN CHURCH CHURCH AND CHURCH A
Type C=Cor	centration, D=Depl	etion, RM=f	Reduced Matrix, CS	=Covered of	or Coated	Sand Gra	ains. 2	Location:	PL=Pore	Lining, M=M	atrix.
lydric Soil In	dicators: (Applica	able to all L	RRs, unless other	wise noted	1.)		Indic	ators for I	Problema	tic Hydric S	oils ³ :
Histosol (#	A1)	-	Sandy Redox (S	5)			2	cm Muck	(A10)		
Histic Epip	oedon (A2)		Stripped Matrix ((S6)			F	Red Parent	Material	(TF2)	
Black Hist	ic (A3)	_	Loamy Mucky M	ineral (F1)	(except l	MLRA 1)		/ery Shallo	w Dark S	urface (TF12	()
Hydrogen	Sulfide (A4)	0 and	Loamy Gleyed N	Aatrix (F2)				Other (Expl	ain in Re	marks)	
_ Depleted I	Below Dark Surface	e (A11) _	Depleted Matrix	(F3)			. San an		1.020101002-0	14 19	
Thick Dark	Surface (A12)	1 885 -	_ Redox Dark Sur	lace (F6)	2 2		Indic	ators of hy	drophytic	vegetation a	nd
_ Sandy Mu	cky Mineral (S1)	-	_ Depleted Dark S	unace (F7))		We	etland hydr	ology mu	st be presen	
estrictive I a	ver (if present)		_ redux Depressi				un I	iless distur	ued or pr	oblematic.	
Tuno	yer (in present).			r							
Dooth (inch						28	Lindala C	- II Davasa	10 V.		Š.
Depth (inch	es).		and the second				nvaric S	on Preser	it res	N	0
emarks:								1. 1. 1. 1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	1		
(emarks:		- - 	a a a a a a a a a a a a a a a a a a a						1		<u>.</u>
/DROLOG	2 2 Y										1.
Procession (DROLOG	Y plogy Indicators:									- - - - - -	
YDROLOG Vetland Hydro	Y plogy Indicators: ors (minimum of on	e required.	check all that apply				Se	condary In	dicators (2 or more rec	wired)
YDROLOG Vetland Hydro rimary Indicate Surface Wi	Y plogy Indicators: ors (minimum of on ater (A1)	e required;	check all that apply Water-Stain	ed Leaves	(89) (exc	apt	<u>Se</u>	condary In Water-St	dicators (2 or more red	<u>uired)</u>
YDROLOG Vetland Hydro nimary Indicati Surface Wa High Water	Y ology Indicators: ors (minimum of on ater (A1) Table (A2)	e required;	check all that apply Water-Stain MLRA 1	ed Leaves	(B9) (exc	cept	Se	condary In Water-St	dicators (ained Lea	2 or more red ves (B9) (M I	<u>uired)</u> .RA 1, 2,
/DROLOG /etland Hydro nimary Indicati Surface Wa High Water Saturation	Y ology Indicators: ors (minimum of on ater (A1) Table (A2) (A3)	e required;	check all that apply) Water-Stain MLRA 1, Salt Crust (f	ed Leaves , 2, 4A, and 311)	(B9) (exc d 4B)	cept	<u>Se</u>	condary In Water-St 4A, ar	dicators (ained Lea nd 4B) Patterns	2 or more red ves (B9) (M I	<u>uired)</u> .RA 1, 2,
Processing States State	Y blogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (A3) (A1)	e required;	check all that apply) Water-Stain MLRA 1, Salt Crust (f Aquatic Inve	ed Leaves , 2, 4A, and 311)	(B9) (exc d 4B) B13)	cept	Se	condary In Water-Sta 4A, ar Drainage	dicators (ained Lea nd 4B) Patterns	2 or more red ves (B9) (M I (B10) Table (C2)	<u>uired)</u> .RA 1, 2,
Processing Section 12 (1997) (19977) (19977) (1997) (19977) (19977) (19977) (19	Y blogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (A3) (A3) (B1) beposits (B2)	e required;	check all that apply) Water-Stain MLRA 1, Salt Crust (B Aquatic Inve Hvdrogen S	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor	(B9) (exc d 4B) B13) - (C1)	cept	<u>Se</u>	condary In Water-Sta 4A, ar Drainage Dry-Seas Saturatio	dicators (ained Lea nd 4B) Patterns on Water	2 or more rec ves (B9) (MI (B10) Table (C2)	<u>uired)</u> .RA 1, 2,
Provide the second seco	Y blogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (e required,	check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor	(B9) (exc d 4B) B13) c (C1)	cept	<u>Se</u>	condary In Water-Str 4A, ar Drainage Dry-Seas Saturatio Geomorp	dicators (ained Lea nd 4B) Patterns on Water n Visible (bic Positi	2 or more rec ves (B9) (M I (B10) Table (C2) on Aerial Ima	<u>quired)</u> .RA 1, 2, gery (C9)
Provide the second seco	Y plogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (e required,	check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of	ed Leaves , 2, 4A, and 311) ertebrates (l ulfide Odor izospheres Reduced I	(B9) (exc d 4B) B13) · (C1) s along Lin ron (C4)	cept ving Roots	<u>Se</u>	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow	dicators (ained Lea nd 4B) Patterns on Water n Visible o hic Positi	2 or more rea ves (B9) (M I (B10) Table (C2) on Aerial Ima on (D2)	<u>quired)</u> .RA 1, 2, gery (C9)
Processing States State	Y ology Indicators: ors (minimum of on ater (A1) Table (A2) (A3) us (B1) Deposits (B2) its (B3) r Crust (B4) ls (B5)	e required,	check all that apply) — Water-Stain MLRA 1, — Salt Crust (R — Aquatic Inve — Hydrogen S — Oxidized Rh — Presence of Recent Iron	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduction	(B9) (exc d 4B) B13) (C1) s along Liv ron (C4) in Tilled S	cept ving Roots	<u>Se</u>	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A EAC-Neu	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi Aquitard (trat Test	2 or more red ves (B9) (MI (B10) Table (C2) on Aerial Ima on (D2) D3)	<u>guired)</u> .RA 1, 2, gery (C9)
PROLOG Content Co	Y ors (minimum of on ater (A1) Table (A2) (A3) (A) (A) (A) (A) (A) (A) (A) (A	e required;	check all that apply) Water-Stain MLRA 1, Salt Crust (R Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduction	(B9) (exc d 4B) B13) (C1) s along Lin iron (C4) in Tilled S ants (D1)	ving Roots Soils (C6)	s (C3)	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Paired A	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi Aquitard (tral Test (at Mound	2 or more red ves (B9) (Mi (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) (D5) (1 BB	<u>auired)</u> .RA 1, 2, gery (C9)
PROLOG Tetland Hydro Tetland Hydro Tetland Hydro Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Surface Soi Ipundation	Y plogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (C3) (e required;	check all that apply) Water-Stain MLRA 1, Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Evolution)	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduction itressed Pla in in Rema	(B9) (exc d 4B) B13) (C1) s along Lin ron (C4) in Tilled S ants (D1) arks)	ving Roots Soils (C6) (LRR A)	<u>Se</u>	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Ernet Ha	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi Aquitard (tral Test (nt Mound and Huma	2 or more red ves (B9) (Mi (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR	<u>auired)</u> .RA 1, 2, gery (C9) A)
PROLOG Vetland Hydro mary Indicate Surface Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposit Surface Soi Inundation	Y blogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (e required; agery (B7) Surface (B8)	check all that apply) Water-Stain MLRA 1, Salt Crust (B Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla	ed Leaves , 2, 4A, and 311) ertebrates (lu ulfide Odor izospheres Reduced I Reduction tressed Pla in in Rema	(B9) (exc d 4B) B13) (C1) s along Lin ron (C4) in Tilled S ants (D1) arks)	cept ving Roots Soils (C6) (LRR A)	s (C3)	condary In Water-Sti 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Frost-Hea	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi Aquitard (tral Test (nt Mound ave Humr	2 or more rec ves (B9) (MI (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR nocks (D7)	<u>auired)</u> .RA 1, 2, gery (C9) A)
Provide Servert	Y plogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (C) (A3) (C) (A3) (C) (C) (C) (C) (C) (C) (C) (C	e required; agery (B7) Surface (B8)	check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expland)	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduction itressed Pla in in Rema	(B9) (exc d 4B) B13) (C1) s along Liv iron (C4) in Tilled S ants (D1) arks)	cept ving Roots Soils (C6) (LRR A)	<u>Se</u>	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Frost-Hea	dicators (ained Lea ad 4B) Patterns on Water n Visible (hic Positi Aquitard (tral Test (nt Mound ave Humr	2 or more red ves (B9) (MI (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR nocks (D7)	<u>auired)</u> .RA 1, 2, gery (C9) A)
(DROLOG (etland Hydro rimary Indicate Surface Wa High Water Saturation Water Mark Sediment D Drift Depose Algal Mat o Iron Depose Surface Soi Inundation V Sparsely Ve Id Observati	Y plogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (A3) (s (B1))eposits (B2) its (B3) r Crust (B4) its (B5) I Cracks (B6) Visible on Aerial Im egetated Concave S ons: present2	e required; agery (B7) Surface (B8)	check all that apply) Water-Stain MLRA 1, Salt Crust (f Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduced I Reduction itressed Pla in in Rema	(B9) (exc d 4B) B13) (C1) s along Lin ron (C4) in Tilled S ants (D1) arks)	cept ving Roots Soils (C6) (LRR A)	s (C3)	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A Frost-Hea	dicators (ained Lea ad 4B) Patterns on Water n Visible of hic Positi Aquitard (i tral Test of nt Mound ave Humr	2 or more ree ves (B9) (MI (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR nocks (D7)	<u>auired)</u> .RA 1, 2, gery (C9) A)
/DROLOG /etland Hydro rimary Indication 	Y plogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (A4) (A4) (A5) (e required, agery (B7) Surface (B8)	check all that apply) Water-Stain MLRA 1, Salt Crust (F Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla	ed Leaves , 2, 4A, and 311) ertebrates (luilfide Odor izospheres Reduced I Reduction itressed Pla in in Rema	(B9) (exc d 4B) B13) (C1) s along Lit ron (C4) in Tilled S ants (D1) arks)	cept Soils (C6) (LRR A)	s (C3)	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Frost-Hea	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi Aquitard (trai Test (nt Mound ave Humr	2 or more red ves (B9) (MI (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR nocks (D7)	guired) .RA 1, 2, gery (C9) A)
YDROLOG Yetland Hydro rimary Indicati Surface Wa High Water Saturation Water Mark Sediment D Drift Depose Algal Mat o Iron Depose Surface Soi Inundation V Sparsely Ve eld Observati urface Water Pre	Y plogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (e required; agery (B7) Surface (B8)	check all that apply) Water-Stain MLRA 1, Salt Crust (F Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla Depth (inch Depth (inch	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduction itressed Pla ain in Rema es): es):	(B9) (exc d 4B) B13) (C1) s along Liv iron (C4) in Tilled S ants (D1) arks)	cept ving Roots Soils (C6) (LRR A)	s (C3)	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Frost-Hea	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi Aquitard (trai Test (nt Mound ave Humr	2 or more red ves (B9) (Mi (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR nocks (D7)	auired) .RA 1, 2, gery (C9) A)
	Y plogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (Case (B1) (A3) (Crust (B2) (Crust (B4)) (Crust (B4)) (C	e required; agery (B7) Surface (B8) 	check all that apply)	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduction itressed Pla in in Rema es): es): es):	(B9) (exc d 4B) B13) (C1) s along Liv iron (C4) in Tilled S ants (D1) arks)	cept ving Roots Soils (C6) (LRR A) Wetlar	s (C3)	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Frost-Hea	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi hic Positi Aquitard (tral Test (nt Mound ave Humr	2 or more red ves (B9) (Mi (B10) Table (C2) on Aerial Ima on (D2) D3) D5) s (D6) (LRR nocks (D7)	auired) .RA 1, 2, gery (C9) A)
YDROLOG Yetland Hydro rimary Indicate Surface Wa High Water Saturation Water Mark Sediment D Drift Depose Algal Mat o Iron Depose Surface Soi Inundation Sparsely Ve ald Observate Irface Water Pre- ater Table Pre- scribe Record	Y plogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (Cashing (B4) (B4) (B5) (Cracks (B6) Visible on Aerial Im- egetated Concave S ons: Present? Yes sent? Yes or (Yes or (Yes) (A3) (Cashing (B4) (Cashing (B6) (Cashing (Cashing	e required; agery (B7) Surface (B8) No No No No No	check all that apply)	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduction itressed Pla in in Rema es): es): es): es):	(B9) (exc d 4B) B13) (C1) s along Lit iron (C4) in Tilled S ants (D1) arks) ous inspe	ving Roots Soils (C6) (LRR A) Wetlar	s (C3)	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Frost-Hea	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi Aquitard (trai Test (nt Mound ave Humr nt? Yes	2 or more ree ves (B9) (MI (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR nocks (D7)	auired) .RA 1, 2, gery (C9) A)
YDROLOG Yetland Hydro Yetland Hydro Yetland Hydro Surface Wa High Water Saturation Water Mark Sediment D Drift Depose Algal Mat o Iron Depose Iron Depose Surface Sol Inundation V Sparsely Ve eld Observati Irface Water P ater Table Pre- turation Prese cludes capillar scribe Record marks:	Y plogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (C) (A3) (C) (C) (B4) (C) (C) (C) (C) (C) (C) (C) (C	e required, i agery (B7) Surface (B8) 	check all that apply)	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduction itressed Pla ain in Rema es): es): es): otos, previo	(B9) (exc d 4B) B13) (C1) s along Lir ron (C4) in Tilled S ants (D1) arks) ous inspe	ving Roots Soils (C6) (LRR A) Wetlar	s (C3)	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Frost-Hea	dicators (ained Lea and 4B) Patterns on Water n Visible hic Positi Aquitard (i tral Test (nt Mound ave Humr nt? Yes	2 or more red ves (B9) (MI (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR nocks (D7)	auired) .RA 1, 2, gery (C9) A)
YDROLOG Yetland Hydro Timary Indicati Surface Wa High Water Saturation Water Mark Sediment D Drift Deposi Algal Mat o Iron Deposi Surface Soi Inundation V Sparsely Ve eld Observati Irface Water P ater Table Pre turation Prese cludes capillar scribe Record	Y blogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (Case (B1) (A3) (Case (B2) (Case (B4) (S) (Cracks (B6) Visible on Aerial Im regetated Concave S ons: Present? Yes sent? Yes ent? Yes (Case (Case	e required, agery (B7) Surface (B8) No No No auge, monit	check all that apply)	ed Leaves , 2, 4A, and 311) ertebrates (luifide Odor izospheres Reduced I Reduction itressed Pla ain in Rema es): es): es): otos, previo	(B9) (exc d 4B) B13) (C1) is along Lit ron (C4) in Tilled S ants (D1) arks) ous inspe	ving Roots Soils (C6) (LRR A) Wetlar	s (C3)	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Frost-Hea	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi Aquitard (tral Test (nt Mound ave Humr nt? Yes	2 or more red ves (B9) (MI (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR nocks (D7)	auired) .RA 1, 2, gery (C9) A)
YDROLOG /etland Hydro rimary Indicate 	Y blogy Indicators: ors (minimum of on ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (Cast (B2) (Cast (B4) (B4) (Cast (B4) (Cast (B4) (S5) (Cracks (B6) Visible on Aerial Im egetated Concave S ons: Present? Yes sent? Yes ent? Yes (A3) (Cast (A2) (Cast (B4) (Cast (B4)) (Cast (e required, agery (B7) Surface (B8) 	check all that apply) Water-Stain MLRA 1, Salt Crust (B Aquatic Inversion Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expland) Y Depth (inch Y Depth (inch Oring well, aerial ph	ed Leaves , 2, 4A, and 311) ertebrates (i ulfide Odor izospheres Reduced I Reduction itressed Pla ain in Rema es): es): es): otos, previo	(B9) (exc d 4B) B13) (C1) is along Liv ron (C4) in Tilled S ants (D1) arks) ous inspe	ving Roots Soils (C6) (LRR A) Wetlar	s (C3)	condary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A FAC-Neu Raised A Frost-Hea	dicators (ained Lea nd 4B) Patterns on Water n Visible (hic Positi Aquitard (i tral Test (nt Mound ave Humr nt? Yes	2 or more red ves (B9) (MI (B10) Table (C2) on Aerial Ima on (D2) D3) (D5) s (D6) (LRR nocks (D7)	auired) .RA 1, 2, gery (C9) A)

WETLAND DETERMINATION D	ATA FORM -	Western Mou	ntains, Valleys, and Coast Region
piert/Site: Log Lon	City/	County McKinle	ville/Humbildt sampling Date: 912212
volucional (240 Gr Maan // 44	he Renel		State: CA Sampling Point: W175-1
pricantowner. The particular for	V/2 Cod	ion Tourship Do	SS TAN RIE
vestigator(s):	Seci	ion, Township, Ra	lige Slope (%) 25
ndform (hillslope, terrace, etc.): MILSLOP	Loc	al relief (concave,	convex, none) (10411 Stope (10). 2-3
bregion (LRR):	Lat. <u>40.9</u>	3351877	Long: -129, 0999832 Datum: 2013 01
il Map Unit Name: Arcatz 3 Candymon	+ 2-990	SLAPIS	NWI classification:
e climatic / hydrologic conditions on the site typical for t	this time of year?	Yes K No_	(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology	_significantly distu	irbed? Are	"Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology	_ naturally problem	natic? (If ne	eded, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site ma	p showing sa	mpling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No	La the Complete	A (
tydric Soil Present? Yes	No	Is the Sampled	nd? Yes V No
Netland Hydrology Present? Yes	No		
remarks To SWofbarn		1	
EGETATION – Use scientific names of pla	ants.	Annual Indiana	De-Income Test worksheet
ree Stratum (Plot size)	Absolute Do % Cover Sp	ecies? Status	Dominance Test worksneet:
			That Are OBL, FACW, or FAC:
			Total Number of Dominant
т. <u>— такита на конструкции на конструкции на конструкции на конструкции на конструкции на конструкции на констр</u>			Species Across All Strata (B)
			Descent of Deminant Species
	= T	otal Cover	That Are OBL, FACW, or FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
). 			FACW species x 2 =
	······································		FAC species x 3 =
		otal Cover	FACU species x 4 =
Herb Stratum (Plot size: 1m2)		otal Cover	UPL species x 5 =
Holcus Lanatus	_ 28 _	Y FAC	Column Totals: (A) (B)
Lotus comiculatus	_ 20 _	FAC	Prevalence Index = B/A =
Festuca perennis	-15-	YEAC	Hydrophytic Vegetation Indicators:
Agrostis stologiter	125_	YEAC	1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
j., <u></u>		ana ana ana amin' ana amin'	3 - Prevalence Index is ≤3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide supporting
3	anness annessantestationest Matter		data in Remarks or on a separate sheet)
)			5 - Wetland Non-Vascular Plants
0			Problematic Hydrophytic Vegetation (Explain)
i1.			be present, unless disturbed or problematic.
Mandu Vine Stratum (Dist eize)	= T	otal Cover	
4			Hydronbytic
2			Vegetation
L	98 =	otal Cover	Present? Yes V No
% Bare Ground in Herb Stratum	anna an		
Remarks:		1	

8

 $\mathbf{g}^{(i_1, i_2)} = \{i_1, ..., ..., i_{i_1}\}_{i_2} \in \mathbf{g}^{(i_1, i_2)}$

Depth	Matrix		Pedo	v Foaturo	•			
(inches)	Color (moist)	%	Color (moist)	x reature	S Type ¹	1 oc2	Texture	Pemarke
0-6	111483/2	100						
(. 2	10/102/2			••••	- 450	<u> </u>	Luam	
2-15	109K5/2	00	JS9K9/6	20		m	Loam	
			•					
100		1				N STRAT		
			2 2					
i ha Maria and Andreas		·						
	-							
		0 0				(-	
Manufacture Control of	- Revision			1 12 - Class - Mill 12 - Class	Sec. 19			
ype: C=C dric Soil	Concentration, D=Dep Indicators: (Application	letion, RM able to all	=Reduced Matrix, CS LRRs, unless other	=Covered	l or Coate	d Sand Gr	ains. ² Locati Indicators	on: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Type: C=C ydric Soil Histosc Black H Hydrog Deplete Thick D Sandy I Sandy 0 astrictive	Concentration, D=Depi Indicators: (Applica I (A1) ipipedon (A2) en Sulfide (A4) ed Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Laver (if present):	letion, RM able to all e (A11)	 Reduced Matrix, CS LRRs, unless other Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depressi 	=Covered wise note (S5) (S6) lineral (F1 Matrix (F2) (F3) face (F6) Surface (F6) Surface (F8)	d <u>or Coate</u> ad.)) (except) 7)	d Sand Gr MLRA 1)	ains. ² Locati Indicators 2 cm M Red Pa Very SI Other (³ Indicators o wetland unless d	on: PL=Pore Lining, M=Matrix, for Problematic Hydric Soils ³ : luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and hydrology must be present, isturbed or problematic.
ype: C=C ydric Soil Histosc Histic E Black H Hydrog Deplete Thick D Sandy 0 Sandy 0 Sandy 0	Concentration, D=Depi Indicators: (Applica I (A1) ipipedon (A2) en Sulfide (A4) ed Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Layer (if present):	letion, RM able to all e (A11)	=Reduced Matrix, CS LRRs, unless other Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depressi	=Covered wise note (S5) (S6) lineral (F1 Matrix (F2) (F3) face (F6) Surface (F6) ons (F8)	d <u>or Coate</u> ad.)) (except) 7)	MLRA 1)	ains. ² Locati Indicators 2 cm M Red Pa Very SI Other (³ Indicators of wetland unless d	on: PL=Pore Lining, M=Matrix, for Problematic Hydric Soils ³ : luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and hydrology must be present, isturbed or problematic.
ype: C=C ydric Soil Histosc Histic E Black H Hydrog Deplete Thick D Sandy f Sandy f	Concentration, D=Depi Indicators: (Applica I (A1) ipipedon (A2) en Sulfide (A4) ed Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Layer (if present):	letion, RM able to all e (A11)	=Reduced Matrix, CS LRRs, unless other Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Sur Redox Depressi	=Covered wise note (S5) (S6) lineral (F1 Matrix (F2) (F3) face (F6) Surface (F6) ons (F8)	d <u>or Coate</u> ad.)) (except) 7)	d Sand Gr	ains. ² Locati Indicators 2 cm M Red Pa Very SI Other (³ Indicators of wetland unless d	on: PL=Pore Lining, M=Matrix, for Problematic Hydric Soils ³ : luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and hydrology must be present, isturbed or problematic.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (e High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Algal Mat or Crust (B4) Presence of Reduced Iron (C4 Iron Deposits (B5) Recent Iron Reduction in Tilled Surface Soil Cracks (B6) Stunted or Stressed Plants (D Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Axcept Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Field Observations:	
Surface Water Present? Yes No r Depth (inches):	-
Water Table Present? Yes No Depth (inches):	_
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	pections), if available:
Remarks: Based on hydric soils + Toposraphic	pasition

WETLAND DETE	RMINATION DA	TA FORM -	Western Mou	ntains, Valleys, and Coast Region
oject/Site: he-ehn		City	County McKd	leaville Hubblet glaph
oplicant/Owner: GAP for	- Mara Ke	eL. Deul	County: <u>7.21-14</u>	CA Sampling Date 1000
vestigator(s) K. McDonel	1 MSch	12/2 cm		State: Sampling Point:
ndform (hillslone terrace etc.):	Ilcione	Sect Sect	ion, Township, Rar	nge: 33, 16N, KIE
branion (LRP)	insight-		al relief (concave, o	convex, none) <u>CONVEX</u> Slope (%): 50
Il Man Linit Name Acca to	<u> </u>	_ Lat: <u>40. 1</u>	3351877	Long -124.0994632 Datum: W558
n wap Unit Name: <u>III CATA</u>	and carry	Monntan	2-9.10	Sprs_ NWI classification:
e climatic / hydrologic conditions on	the site typical for thi	s time of year?	Yes 👱 No _	(If no, explain in Remarks.)
Vegetation, Soil, c	or Hydrology	significantly distu	irbed? Are "	Normal Circumstances" present? Yes No
e Vegetation, Soil, c	or Hydrology	naturally problem	natic? (If ne	eded, explain any answers in Remarks.)
UMMARY OF FINDINGS -	Attach site map	showing sa	mpling point le	ocations, transects, important features, etc.
lydrophytic Vegetation Present?	Yes N	No Vi	1	
lydric Soil Present?	Yes N	NO	Is the Sampled	Area
Vetland Hydrology Present?	Yes N		within a Wetlar	nd? Yes No V
Remarks:		8 ¹ 3	3	
			1991	
-GETATION – Use scientif	ic names of plan	nts.		
ree Stratum (Plot size:		Absolute Do % Cover Sp	minant Indicator ecies? Status	Dominance Test worksheet:
	/			Number of Dominant Species
		The second se		
A				Species Across All Strata:
k				Percent of Deminant Species
	1. 	= T	fotal Cover	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
· -				Total % Cover ofMultiply by:
3				OBL species x 1 =
, <u> </u>				FACW species $x^2 = -\frac{1}{210}$
5				FAC species $10 \times 3 = 270$
1 1	124	=]	Total Cover	FACU species $D \times 4 = 52$
Herb Stratum (Plot size: 100	<u> </u>	25	V CAC	Column Totals: qB (A) 360 (B)
1 Cous corniculat		- 22 -	Y CAC	
Agrostis stola	intad		- FA	Prevalence index = B/A =
Harcostanaios	nu	-16	EAC	1. Papid Test for Hydrophytic Venetation
Runney acotose	11-	8	FACU	1/2 - Dominance Test is >50%
Trifelium cepe	ns l	3	FAC	N_3 - Prevalence Index is $\leq 3.0^1$
7				4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
).				5 - Wetland Non-Vascular Plants
10				Problematic Hydrophytic Vegetation' (Explain)
11				be present, unless disturbed or problematic.
		<u> </u>	otal Cover	
Woody Vine Stratum (Plot size:				Hydrophytic
1	1			Vegetation
2	• •	=	otal Cover	Present? Yes No V
% Bare Ground in Herb Stratum	5			
Remarks: NIL C	N		2	steepslappe with well-
MI tawita	tive plar	ms on	convex	Sicclusion wind Carr
				1 1 - 1 - 1 - 1

NL			MBS	Kee	hn	9/21/	21	s	ampling Poin	$wW1^{-1}$	<u>15</u> -
ofile Desc	cription: (Describe I	to the depth	needed to docu	ment the	indicator	or confirm	n the abser	nce of indicat	ors.)		
epth	Matrix		Red	lox Feature	es				2 <u>0</u>		
ncnes)	Color (moist)	_%	Color (moist)	%_	Type'	Loc	Texture		Remarks		
0-6	104×3/3	100	-				Loam	Dandy	Loam		2
5-14	104R3/3	100					Gray	lelly Sano	1 Loan	(<i>fi</i>	
	· · · · · · · · · · · · · · · · · · ·		±			-	• • • • • • • • • • • • • • • • • • •				
ype: C=C	Concentration, D=Dep	letion, RM=F	Reduced Matrix, (CS=Cover	ed or Coal	ted Sand G	Grains	2Location: PL	Pore Lining.	M=Matrix	
ydric Soil	Indicators: (Applic	able to all L	RRs, unless oth	erwise no	oted.)		India	ators for Pro	blematic Hyd	dric Soils':	
_ Histoso	ol (A1)	-	Sandy Redox	(S5)				2 cm Muck (A	0)		
_ Histic E	pipedon (A2)		Stripped Matr	ix (S6)				Red Parent M	aterial (TF2)	(7540)	
_ Black H	histic (A3)	.v	_ Loamy Mucky	/ Mineral (F1) (exce	pt MLRA 1)	Very Shallow I	Dark Surface	(TF12)	
- Hydrog	en Sulfide (A4)	-	_ Loamy Gleye	d Matrix (F	-2)			Other (Explain	in Remarks)		
_ Deplete	ed Below Dark Surfac	e (A11) _	_ Depleted Mat	nx (F3)	e) .		3 Indi	cators of budg	obudia voast	tion and	
_ Thick L	Muchy Minaral (S1)	-	_ Redox Dark :	Surface (F	0) (E7)		indi	etland bydrold	ophytic veget	resent	
_ Sandy	Gleved Matrix (S4)	-	_ Depleted Dal	ssions (FF	(<i>r /)</i>			nless disturbe	d or problema	itic	
_ Gandy	Laver (if present)		_ nedox bepre	3310113 (1 0	<i>,</i>		1	meas distance			
Type	Layer (in present):										
Death (nchac)	anne (1015 y ann 1016 y 1999) ann			+ .		Hydric	Soil Present?	Voc	No	<
Deput (i	nules).	1999					inyune	Son Presenti	103	- 10 4	
DROL	DGY		-m	1113) - J. M.	ę.	-24-	121		1		
Vetland H	ydrology Indicators	: one required	check all that ar	(עומר			s	econdary Indi	cators (2 or m	ore require	ed)
Curfac	a Mater (A1)	one required	Water.	stained Le	aves (Rg)	(excent		Water-Stair	ed Leaves (12
Sunac	Votor Table (A1)		Water-C		aves (DS)	(except	-	4A and	4R)		1, 2,
_ High v			Salt Co	(P11)	, and 40)	0		Drainage B	atterns (B10)		
_ Satura	Nortes (B1)		Salt Ort	Invertebra	ates (B13)			_ Drainager	Water Table	(C2)	
vvater	Marks (BT)		Aquatic	niverteura	Odor (C1)		-	Saturation	Visible on Ae	rial Imagen	(00)
Sedim	ent Deposits (B2)		Ovidize	d Phizoen	bares alor	a Living Pr		_ Geomorph	c Position (D	an intager 2)	, (03)
_ Dnm D	eposits (B3)		Oxidize	a of Pedu	uced from (CA)	0003 (00) _	Shallow Ar	uitard (D3)	2)	
Algal N	Mat or Crust (B4)		Present	Iron Redu	iction in Ti	lled Soils ((-	EAC-Neutr	al Test (D5)		
_ Iron D	eposits (BO)		Recent	for Stress	ed Plante	(D1) (I BB	A)	_ Paised An	Mounds (D6		
Sunac	e Soll Cracks (Bo)	Imagon / P7	Other (Evolain in	Remarks)		~ -	Kaised An	e Hummocks	(D7)	
Inunda	tion visible on Aerial	inagery (b/			Remarks		20 -	i iost-i ieat	re numinoux	s (07)	
Sparse	ely vegetated Concav	e sunace (c	(0)			r					2
ield Obse	ervations:		V Dert	(inch)							
iurface W	ater Present?	res N	Depth	(inches):							
Vater Tabl	le Present?	Yes N	Depth	(inches):							10
Saturation	Present?	Yes N	lo Depth	(inches):		We	etland Hydr	ology Preser	t? Yes	No	×_
Describe R	apillary tringe) Recorded Data (strear	n gauge, mo	nitoring well, aer	ial photos	previous	inspections	s), if availab	le	1	ļ	
Remarks					an an anns - christian s			where a there will be don't for		and a statement of the	
						<u></u>		1	to the same function of the states of the second		
			Construction of the second s	Contract of the second s	the second se	Contraction of the local division of the loc		And a second sec		the second se	

WETLAND DETERMINATION DATA FORM – Western Moun	tains, Valleys, and Coast Region
minusin theeland	ville / Hun beldt sampling Date 11/1912)
Applicant/Owner 61th for Man Kerker Arne!	State: Of Sampling Point: WITGh
Investigator(s) K McDunald M Schware Section Township Ran	ae: S5. T
Landform (hillstone terrace etc.)) . OOS (OC Local relief (concave c	slope (%): 5
Subracion (IRR): A	1000 -124,0980431 Datum WAS 84
Sall Man Hold Name A Cratter in Cande and 2-9% sloves	NVM classification:
Soli Map Unit Name	(if no evoluin in Remarks)
Are climatic / hydrologic conditions on the site typical for this time of year / res No	
Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are N	
Are Vegetation, Soil, or Hydrology naturally problematic? (If nee	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No	. /
Hydric Soil Present? Yes No Is the Sampled A	Area
Wetland Hydrology Present? Yes No	
Remarks See	
Seek	
VEGETATION – Use scientific names of plants.	Development Testurelister
Tree Stratum (Plot size) % Cover Species? Status	Dominance Test worksheet:
1.	That Are OBL, FACW, or FAC:
2	Total Number of Dominant
3	Species Across All Strata:(B)
4	Percent of Dominant Species
= Total Cover	That Are OBL, FACW, or FAC: (AVB)
Sapling/Shrub Stratum (Plot size:)	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
2	OBL species x 1 =
3	FACW species x 2 =
9	FAC species x 3 =
= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 101)	UPL species x 5 =
1 SCIEDUS MICROCARDUS SO Y COL	Column Totals (A) (B)
2 Lotus cocniculatus 5 (AC	Prevalence Index = B/A =
3 Festuca aundina 43 30 Y EAU	Hydrophytic Vegetation Indicators:
A JUTICUS hesperiles 15 FACLO	1 - Rapid Test for Hydrophytic Vegetation
5.	✓ 2 - Dominance Test is >50%
6	3 - Prevalence Index is ≤3.01
7	4 - Morphological Adaptations ¹ (Provide supporting
8	5 - Wetland Non-Vascular Diants ¹
9	Problematic Hydrophytic Vegetation ¹ (Evaluate)
10	Indicators of hydric soil and wottand hydrology must

100 = Total Cover

= Total Cover

1

O

¹ Indicators of hydric soil and wetl	land hydrology mus
be present, unless disturbed or p	problematic.
and the second	

Yes_L

___ No

Hydrophytic Vegetation Present?

Woody Vine Stratum (Plot size:

% Bare Ground in Herb Stratum

1. 2.

Remarks:

SOIL

Kechn 11/19/21 Sampling Point: WITG - W

Depth Matrix		Redox	Feature	s	1990 State of the State of Sta				
(inches) Color (moist)	% Col	or (moist)	%	Type'	Loc ²	Texture		Remarks	<u>}</u>
0-6 10483/2 9	10 75	YR 4/4	10	C	m	Loam			
6-14 104 N/2 8	30 7.5	YR 416	20	<u> </u>	M				
		/			72				
in and a second s			and the second se				2). Adapted in an and a second		
and the second									an de la construction de la construcción de la construcción de la construcción de la construcción de la constru
-		NAMES OF TAXABLE PARTY OF TAXABLE							
						-	-		
Type: C=Concentration, D=Depletio	n, RM=Reduc	ed Matrix, CS=	Covered	d or Coate	d Sand Gr	ains. "Lo	rs for Prob	Pore Lining. Iematic Hyc	m=matrix. Iric Soils ³ :
Historol (A1)	Sa	ndy Reday (Si	5)	cu.)		2 cr	n Muck (A10))	
Histosof (A1)	54	inned Matrix (56) S6)			Red	Parent Mat	erial (TF2)	
Black Histic (A3)		amy Mucky Mi	neral (F1) (except	MLRA 1)	Ven	Shallow Da	ark Surface (TF12)
Hydrogen Sulfide (A4)	LO	amy Gleved M	atrix (F2)		Oth	er (Explain i	n Remarks)	1
Depleted Below Dark Surface (A	11) De	pleted Matrix ((F3)	e					
Thick Dark Surface (A12)	X Re	dox Dark Surf	ace (F6)			³ Indicato	rs of hydrop	hytic vegeta	lion and
Sandy Mucky Mineral (S1)	De	pleted Dark Si	urface (F	7)		wetla	nd hydrolog	y must be pr	esent,
Sandy Gleyed Matrix (S4)	Re	dox Depressio	ons (F8)	1		unles	s disturbed	or problemat	ic.
estrictive Layer (if present):					1999 (Alexandre) - Alexandre) - A				2
Туре								14	
Depth (inches)						Hydric Soil	Present?	Yes	No
emarks:									
		11 62 2 2		1-10-2010-00-00-00-00-00-00-00-00-00-00-00-00-					-
DROLOGY		19 42 		para ang sa mang sa ma Eu	21. 21. 21.	:- :- H			-
DROLOGY (etland Hydrology Indicators:	autired check	all that apply)		E.	(1999) 	Secon	dary Indicat	ors (2 or mo	e required)
DROLOGY Tetland Hydrology Indicators:	equired, check	all that apply) Water-Staine	ad Leave	s (B9) (ex	cept	<u>Secon</u>	dary Indicate	ors (2 or more	e required)
DROLOGY Vetland Hydrology Indicators: Timary Indicators (minimum of one re Surface Water (A1) High Water Table (A2)	equired, check	all that apply) Water-Staine MLRA 1	ed Leave	s (B9) (ex	cept	<u>Secon</u> W	dary Indicate ater-Stained 4A, and 4F	ors (2 or moi I Leaves (B9 3)	r <u>e required)</u>) (MLRA 1, 2
Vetland Hydrology Indicators: rimary Indicators (minimum of one re Surface Water (A1) High Water Table (A2)	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B	ed Leave 2, 4A, ar	rs (B9) (ex nd 4B)	cept	<u>Secon</u> W	dary Indicate ater-Stained 4A, and 4E ainage Path	ors (2 or moi I Leaves (B9 3) erns (B10)	re required)) (MLRA 1, 2
VDROLOGY Vetland Hydrology Indicators: mimary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inve	ed Leave 2, 4A, ar 11) rtebrates	rs (B9) (ex nd 4B) (B13)	cept	<u>Secon</u> W Di	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season M	ors (2 or moi I Leaves (B9 3) erns (B10) /ater Table (J	re required)) (MLRA 1, 2 C2)
/DROLOGY /etland Hydrology Indicators: nimary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) (Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen St	ed Leave 2, 4A, an (11) rtebrates	rs (B9) (ex nd 4B) (B13) or (C1)	cept	<u>Secon</u> W Dr Dr Sr	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W sturation Vis	ors (2 or moi I Leaves (B9 3) erns (B10) /ater Table (ible on Aeria	re required)) (MLRA 1, 2 C2)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi	ed Leave 2, 4A, an (11) rtebrates ulfide Odd	s (B9) (ex nd 4B) (B13) or (C1) es along I	cept	<u>Secon</u> W Dr Dr Sa s (C3) Gr	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W aturation Vis	ors (2 or mor I Leaves (B9 3) erns (B10) /ater Table (ible on Aeria osition (D2)	re required)) (MLRA 1, 2 C2) I Imagery (C
PROLOGY Vetland Hydrology Indicators: mmary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mator Crust (B4)	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of	ed Leave 2, 4A, ar 11) rtebrates ulfide Odd zosphere Reduced	s (B9) (ex nd 4B) (B13) or (C1) es along Li	cept iving Root	<u>Secon</u> W Dr Dr Sa s (C3) G	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W sturation Vis comorphic P allow Aquit	ors (2 or mor I Leaves (B9 3) erns (B10) /ater Table (ible on Aeria osition (D2) ard (D3)	r <u>e required)</u>) (MLRA 1, 2 C2) I Imagery (C
Processing (Provide the second state of the se	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron 5	ed Leave 2, 4A, ar 11) rtebrates ulfide Odd zosphere Reduced	s (B9) (ex nd 4B) (B13) or (C1) es along Li l Iron (C4) n in Tilled	cept ving Root	<u>Secon</u> W Dr Sa s (C3) Gr St	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W ituration Visi comorphic P allow Aquita	ors (2 or mor I Leaves (B9 3) erns (B10) /ater Table (r ible on Aeria losition (D2) ard (D3) est (D5)	r <u>e required)</u>) (MLRA 1, 2 C2) I Imagery (C
Processes Processes Proc	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen SL Oxidized Rhi Presence of Recent Iron F	ed Leave 2, 4A, ar 11) rtebrates Ilfide Odd zosphere Reduced Reduction	s (B9) (ex nd 4B) (B13) or (C1) es along Li i Iron (C4) n in Tilled	cept iving Roots Soils (C6)	<u>Secon</u> W Dr Sa s (C3) Gr Sf FA	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W ituration Visi comorphic P nallow Aquita GC-Neutral T	ors (2 or mor I Leaves (B9 3) erns (B10) /ater Table (ible on Aeria losition (D2) ard (D3) jest (D5) aunde (D5)	re required)) (MLRA 1, 2 C2) I Imagery (C
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen SL Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Evolo	ed Leave 2, 4A, ar 11) rtebrates Ilfide Odd zosphere Reduced Reduced Reduction tressed F	s (B9) (ex nd 4B) (B13) or (C1) es along Li H Iron (C4) n in Tilled Plants (D1)	cept iving Roots Soils (C6) (LRR A)	<u>Secon</u> W Dr Sa s (C3) Gr Sf F4 Ra	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W turation Visi comorphic P nallow Aquita C-Neutral T nised Ant Mc	ors (2 or mon l Leaves (B9 3) erns (B10) /ater Table (i ible on Aeria iosition (D2) ard (D3) fest (D5) punds (D6) (i	r <u>e required)</u>) (MLRA 1, 2 C2) I Imagery (C LRR A)
PROLOGY etland Hydrology Indicators: imary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, ar (11) rtebrates Ilfide Odd zosphere Reduced Reduced Reduction tressed F in in Rem	es (B9) (ex nd 4B) (B13) or (C1) es along Li Hron (C4) n in Tilled Plants (D1) narks)	cept iving Roots Soils (C6) (LRR A)	<u>Secon</u> W Dr Sa s (C3) Ga St Ra Fr	dary Indicati ater-Stained 4A, and 4E ainage Pattu y-Season W turation Visi comorphic P hallow Aquita C-Neutral T hised Ant Mo ost-Heave H	ors (2 or mor l Leaves (B9 3) erns (B10) /ater Table (bble on Aeria osition (D2) ard (D3) est (D5) punds (D6) (I hummocks (I	<u>e required)</u>) (MLRA 1, : C2) I Imagery (C _RR A))7)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf	equired_check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, ar 111) rtebrates ulfide Odd zosphere Reduced Reduction tressed F in in Rem	s (B9) (ex nd 4B) (B13) or (C1) es along Li l Iron (C4) n in Tilled Plants (D1) narks)	cept iving Roots Soils (C6) (LRR A)	<u>Secon</u> W Dr Sa s (C3) Ga St Ra Fr	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W seomorphic P nallow Aquita kC-Neutral T nised Ant Mc ost-Heave H	ors (2 or mon I Leaves (B9 3) erns (B10) /ater Table (ible on Aeria osition (D2) ard (D3) fest (D5) punds (D6) (I lummocks (I	r <u>e required)</u>) (MLRA 1, 2 C2) I Imagery (C LRR A) D7)
Provide the second state of the second state o	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, ar 11) rtebrates ulfide Odd zosphere Reduced Reduced Reduced Fin in Rem	s (B9) (ex nd 4B) (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1) narks)	cept iving Root Soils (C6) (LRR A)	<u>Secon</u> W Dr Sa s (C3) Gu X FA Ra Fr	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W aturation Visi comorphic P allow Aquita AC-Neutral T aised Ant Mo ost-Heave H	ors (2 or moi I Leaves (B9 3) /ater Table (r ible on Aeria losition (D2) ard (D3) rest (D5) punds (D6) (I lummocks (I	<u>re required)</u>) (MLRA 1, 2 C2) I Imagery (C LRR A) 07)
YDROLOGY retland Hydrology Indicators: immary Indicators (minimum of one regeneration of the second	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen SL Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, ar 11) rtebrates ulfide Odd zosphere Reduced Reduced Reduction tressed F in in Rem es)	s (B9) (ex nd 4B) (B13) or (C1) es along Li l Iron (C4) n in Tilled Plants (D1) narks)	cept Ving Root Soils (C6) (LRR A)	Secon W Dr Sa Sa s (C3) Ga Sf FA Fr	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W ituration Visi comorphic P allow Aquita GC-Neutral T ised Ant Mo ost-Heave H	ors (2 or mor I Leaves (B9 3) erns (B10) /ater Table (r ible on Aeria losition (D2) ard (D3) est (D5) bounds (D6) (I lummocks (E	<u>re required)</u>) (MLRA 1, 2 C2) I Imagery (C LRR A))7)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one restrict) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Vater Table Present? Yes	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen SL Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, ar 11) rtebrates ulfide Odd zosphere Reduced Reduced Reduction ressed F in in Rem 25) es) as)	s (B9) (ex nd 4B) (B13) or (C1) es along L l Iron (C4) n in Tilled Plants (D1) narks) 2-	cept Ving Roots Soils (C6) (LRR A)	Secon W Dr Sa s (C3) Gr X FA Ra Fr	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W ituration Visi comorphic P nallow Aquita G-Neutral T nised Ant Mo ost-Heave H	ors (2 or mon I Leaves (B9 3) erns (B10) /ater Table (i ible on Aeria losition (D2) ard (D3) iest (D5) bunds (D6) (I lummocks (E	re required)) (MLRA 1, 2 C2) I Imagery (C LRR A))7)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one regeneration of the second	equired_check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen SL Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, ar 11) rtebrates Ilfide Odd zosphere Reduced R	s (B9) (ex nd 4B) (B13) or (C1) es along L i Iron (C4) n in Tilled Plants (D1) narks) 2_	cept Soils (C6) (LRR A)	<u>Secon</u> W Dr Sa s (C3) Gr X F4 Ra Fr	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W ituration Visi comorphic P fallow Aquita C-Neutral T dised Ant Mc ost-Heave H Present?	ors (2 or mon Leaves (B9 3) erns (B10) /ater Table (i ible on Aeria iosition (D2) ard (D3) fest (D5) punds (D6) (I lummocks (E	<u>re required)</u>) (MLRA 1, 2 C2) I Imagery (C _RR A))7)
YDROLOGY Yetland Hydrology Indicators: nimary Indicators (minimum of one regord Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Stater Table Present? Yes Ater Table Present? Yes Sturation Present? Yes Sturation Present? Yes Scribe Recorded Data (stream gauge	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, ar 11) rtebrates ulfide Odd zosphere Reduced Reduced Reduction tressed F in in Rem es) es) tos, prev	s (B9) (ex nd 4B) (B13) or (C1) es along Li l Iron (C4) n in Tilled Plants (D1) narks) 2-	cept Soils (C6) (LRR A) Wetlar	Secon Secon Dr Dr Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W turation Visi comorphic P allow Aquita C-Neutral T tised Ant Mo ost-Heave H Present?	ors (2 or moi I Leaves (B9 3) Perns (B10) /ater Table (r ible on Aeria losition (D2) ard (D3) rest (D5) punds (D6) (I lummocks (I Yes Y	<u>re required)</u>) (MLRA 1, 2 C2) I Imagery (C _RR A))7) No
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one regenering) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Yes Id Observations: rface Water Present? Yes turation Present? Yes cludes capillary fringe) scribe Recorded Data (stream gauge	equired. check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, an 111) rtebrates ulfide Odd zosphere Reduced Reduction tressed F in in Rem ess) ess) tress tressed F in in Rem ess) tress tressed F in in Rem	rs (B9) (ex nd 4B) (B13) or (C1) es along L I Iron (C4) n in Tilled Plants (D1) narks) 2_ J	cept iving Roots Soils (C6) (LRR A) Uvetlar ections), if	Secon W Dr Sa s (C3) Ga Sf Ra Fr Ra Fr Mathematical Fr	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W turation Vis eomorphic P hallow Aquita KC-Neutral T hised Ant Mc pst-Heave H Present?	ors (2 or mon Leaves (B9 3) erns (B10) /ater Table (i ible on Aeria osition (D2) ard (D3) fest (D5) punds (D6) (I lummocks (D Yes Y	re required)) (MLRA 1, 2 C2) I Imagery (C _RR A))7) _ No
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one regenering) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Ves Vater Table Present? Yes Scribe Recorded Data (stream gauge marks:	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, an (11) rtebrates ulfide Odd zosphere Reduced Reduction tressed F in in Rem (25)((25)	s (B9) (ex nd 4B) (B13) or (C1) es along Li l Iron (C4) n in Tilled Plants (D1) narks) 2 / vious inspe	cept iving Roots Soils (C6) (LRR A) Wetlar	Secon W Dr Sa s (C3) Gd Sf Ra Fr Ra Fr Matheward State Fr	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W ituration Visi comorphic P nallow Aquita iconorphic P nallow Aquita iconorphic iconorphic iconorphic iconorphic iconorphic iconorphic iconorphic i	ors (2 or mou Leaves (B9 3) erns (B10) /ater Table (i ible on Aeria cosition (D2) ard (D3) est (D5) bunds (D5) (I lummocks (I Yes Y	re required)) (MLRA 1, 2 C2) I Imagery (C _RR A))7) _ No
YDROLOGY Vetland Hydrology Indicators: nimary Indicators (minimum of one regenering and second seco	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, ar 11) rtebrates ulfide Odd zosphere Reduced Reduction tressed F in in Rem es) es) es) tos, prev	s (B9) (ex nd 4B) (B13) or (C1) es along Li i Iron (C4) n in Tilled Plants (D1) narks) 2_ j	cept Soils (C6) (LRR A) Wetlar	Secon W Dr Sa Sa Sf X FA Ra Fr hd Hydrology available	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W ituration Visi comorphic P allow Aquita G-Neutral T ised Ant Mo ost-Heave H Present?	ors (2 or moi I Leaves (B9 3) erns (B10) /ater Table (i ible on Aeria losition (D2) ard (D3) est (D5) bunds (D5) (I lummocks (I Yes	re required)) (MLRA 1, 2 C2) I Imagery (C _RR A))7) _ No
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one regenering of the second o	equired, check	all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or St Other (Explai	ed Leave 2, 4A, ar 11) rtebrates ulfide Odd zosphere Reduced Reduction ressed F in in Rem es) es) es) tos, prev	s (B9) (ex nd 4B) (B13) or (C1) es along Li l Iron (C4) n in Tilled Plants (D1) narks) 2 - J	cept Soils (C6) (LRR A) Wetlar	Secon Secon Dr Dr Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W ituration Visi comorphic P allow Aquita GC-Neutral T dised Ant Mo ost-Heave H	ors (2 or moi I Leaves (B9 3) erns (B10) /ater Table (r ible on Aeria losition (D2) ard (D3) est (D5) bunds (D5) (l lummocks (E	<u>re required)</u>) (MLRA 1, 2 C2) I Imagery (C _RR A))7)

We state.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region
Project/Site: HECM City/County McKinley ville /Humbddt sampling Date: 11/19/21
Applicant/Owner: GAD for Mary Keeps Develop. State: CA Sampling Point (1) TGU
Investigator(s): K. Mc Donald, M. Schwarz Section, Township, Range: 55, TGN, RIE
Landform (hillslope, terrace, etc.): Millslope Local relief (concave, convex, none): Convex Slope (%). 20
Subregion (LRR): A Lat: 40.93421499 Long: 124.0980432 Datum: Wh584
Soil Map Unit Name: Arcuta and Carly Monntain, 2-9% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes 📈 No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No	Is the Sampled Area within a Wetland?	Yes No	
Remarks: Top of slow	pe			2 10 - 2 10 - 2 10 - 2

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) 1. 2. 3. 4	Absolute Dominant Indicator <u>% Cover</u> Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata
Sapling/Shrub Stratum (Plot size:)	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
		Total % Cover of: Multiply by:
2		OBL species x 1 =
4		FACW species x 2 =
5		FAC species $\underline{99} \times 3 = \underline{297}$
Harth Stratum (Plot size: 1,002)	= Total Cover	FACU species x 4 =
1. Aascostis Stolonifere	52 Y FAC	Column Totals: 100 (A) 302 (B)
2 Hoters lanatus	30 Y FAC	Prevalence Index - P/A - 3.17
3 Trifolium repens	is FAC	Hydrophytic Vegetation Indicators
4 Lotus corniculat US	2 FAC	1 - Rapid Test for Hydrophytic Vegetation
5 Leveanthemun Vulgare		Z - Dominance Test is >50%
6	-	N 3 - Prevalence Index is ≤3.0'
7 8		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹
10		Problematic Hydrophytic Vegetation' (Explain)
11		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	<u> </u>	be present, unless disturbed or problematic.
1		Hydrophytic
2	<u> </u>	Vegetation
% Bare Ground in Herb Stratum	= Total Cover	Present? Yes <u>No </u>
Remarks:	and and a second se	

SOIL

Keehn 11/19/21

Sampling Point: WIT6-U

Profile Description: (Describe to the	e depth needed to docu	ment the indicator	r or confirm	n the absence of in	dicators.)
(inches) Color (moist)	Ked	ox Features	1.002	Texture	Remarke
0-8 104R311 10				1 44 mg	Kentaks
0.11 .0.00714	44			Contra	
0-14 101N/4 1			-	Sandy LOG	m
				<u> </u>	
	2 				
Weiter Construction and			-		
Type: C=Concentration D=Depletion	PM=Reduced Matrix C	S=Covered or Cost	ad Sand Gr	aine ² l ocation	PL-Pore Lining M-Matrix
Hydric Soil Indicators: (Applicable 1	to all LRRs, unless othe	rwise noted.)	eu Sanu Gra	Indicators for	Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		2 cm Muc	k (A10)
Histic Epipedon (A2)	Stripped Matrix	(S6)	1	Red Parer	nt Material (TF2)
Black Histic (A3)	Loamy Mucky	Mineral (E1) (excen	MIRA 1)	Very Shall	ow Dark Surface (TE12)
Hydrogen Sulfide (A4)	Loamy Gleved	Matrix (E2)		Other (Ex	blain in Remarks)
Hydrogen Sunde (A4)	Loany Geyeu	(E2)		(LA)	San in Kemarka)
Depieted Below Dark Surface (A1	1) Depieted Matrix	(F3)		Jundicatory of h	udees budie verstellen med
Thick Dark Surface (A12)	Redox Dark Su	nace (Fb)		Indicators of r	lydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark	Surface (F7)		wetland hyd	Irology must be present,
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)		unless distu	rbed or problematic.
Restrictive Layer (if present):			÷	3.8 2	
Type:	·····		Se	Hydric Soil Prese	nt2 Vas No X
Depar (inches).				riyane contriese	
YDROLOGY	an a		-		see see the
Primary Indicators (minimum of one reg	uired; check all that apply	0		Secondary In	ndicators (2 or more required)
Surface Water (A1)	Water-Stai	ned Leaves (B9) (e)	cept	Water-S	tained Leaves (B9) (MLRA 1. 2
	MI DA	1 2 4A and 4B)			nd 4B)
High Water Table (A2)		(D.4.4)			D-11
Saturation (A3)	Salt Crust	(611)		Drainage	e Patterns (B10)
Water Marks (B1)	Aquatic Inv	ertebrates (B13)		Dry-Sea	son Water Table (C2)
Sediment Deposits (B2)	Hydrogen S	Sulfide Odor (C1)		Saturatio	on Visible on Aerial Imagery (CS
Drift Deposits (B3)	Oxidized R	hizospheres along L	iving Roots	(C3) Geomor	phic Position (D2)
Algal Mat or Crust (B4)	Presence of	f Reduced Iron (C4)	Shallow	Aquitard (D3)
Iron Deposits (B5)	Becent Iror	Reduction in Tilled	Soils (C6)	FAC-Net	utral Test (D5)
from Deposits (D3)	Recent inc.	Stressed Plants (D1	IN (I PR A)	Paired /	nt Mounds (D6) (I BB A)
_ Surface Soil Cracks (Bo)	Stuffied of	Stressed Flants (D)		Raiseu A	(IL MOUNDS (DB) (LRR A)
Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	(B7) Other (Exp ce (B8)	ain in Remarks)		Frost-He	ave Hummocks (D7)
eld Observations:		an an far an	1		an ar - transferration and a state of the second state of the seco
urface Water Present? Yes	No X Depth (inc	hes):	4		
/ater Table Present? Yes	No X Depth (inc	hes):			
aturation Bresent? Ver	No X Depth (inc	hes):	Wetlan	d Hydrology Prese	ont? Yes No Y
aturation riesentr res	1		actions) if	available	14
ncludes capillary fringe) escribe Recorded Data (stream gauge)	monitoring well, aerial p	hotos, previous insp	ections), it		
ncludes capillary fringe) escribe Recorded Data (stream gauge,	monitoring well, aerial p	hotos, previous insp	ections), in		
emarks:	monitoring well, aerial p	hotos, previous insp			
emarks:	monitoring well, aerial p	hotos, previous insp			6
emarks:	monitoring well, aerial p	hotos, previous insp			le e
emarks:	monitoring well, aerial p	hotos, previous insp		a a v S S S	

trojectistic Kechny City/Courty Kite Sampling Date 111 [9] 21 opplication/comer G.N.D. F. Mary, Eechny Davall State CA Sampling Date 111 [9] 21 opplication/comer M.D.D.A.M. Schutt Section Township, Range SS, TZAN, Et LE State CA Sampling Date (1) [11] [11] [11] [11] [11] [11] [11] [1	WETLAND DETERMINATION DATA FORM – Western Mou	untains, Valleys, and Coast Region
period in the stratum (Piot size	Project/Site Keelon City Court McKIL	11. 11. 1.114 - 11. 11. 11. 11. 11. 11. 11. 11. 11. 1
westgator(s) K. M.D.Dervid M. Schuuht Setten, Township, Range, S.S., TZAN, P.J.E. androm bilistope, tegrace, etc.) billstope Local relief (concure, convex, none) M.D.C.C. Signe (%), S.S. ubdregion (LRR) Lat. HO, 3372230 Long -124, 0.937551 Datum, (MS.B.H. ve climatic / hydrologic conditions on the site typical for this time of year? Yes No	Applicant/Owner GAD fre Maar Keels Dead	Sure Handorar Sampling Date 11/11/2
And another thilsloge, torgan, etc. Another toruship, Range S. (Inc. Convex, none) Sope (K), S. Solid Map Unit Name Another toruship, Range S. (Inc. Convex, none) None Sope (K), S. Solid Map Unit Name Another toruship, Range S. (Inc. Convex, none) None None None Solid Map Unit Name Another toruship, Range S. (Inc. Convex, none) None None None None see dimatic / hydrologic conditions on the site hydrol for this time of year? Yes No (Inc. explain my answers in Remarks.) No SUMMARY OF FINDINGS - Attach site maps showing sampling point locations, transects, important features, etc. Hydrophyte/Vegetation Present? Yes No Super Solid Present? Yes No is the Sampled Area No Is the Sampled Area Wetland Hydrologic Present? Yes No is the Sampled Area No Is the Sampled Area Vetland Hydrologic Present? Yes No is the Sampled Area No Is the Sampled Area Vetland Hydrologic Present? Yes No is the Sampled Area No Is the Sampled Area Vetland Hydrologic Present? Yes No is the Sampled Area No Is the Sampled	Investigatoristi K. McDenald M Schungt and	State Of Sampling Point CITIFC
Late Hole Concluse, Convex, nonely NCL/NE Stope (%), Social relation r	Landform (hillstone torsee atc) la AKLOOR	ange: 57, 160, FIC
Undergroup (Left) Lat Lat <td>Subracian (I DD)</td> <td>convex, none) MGAR Slope (%) 15</td>	Subracian (I DD)	convex, none) MGAR Slope (%) 15
Bold Mp Unit Name CHARA CHARA <td>Subregion (LRR) $_$ Lat $\underline{-70.53+2250}$</td> <td>Long: -129.095751 Datum: W3584</td>	Subregion (LRR) $_$ Lat $\underline{-70.53+2250}$	Long: -129.095751 Datum: W3584
<pre>ve dentation</pre>	Soil Map Unit Name: MC2+2 3 (Andy mat of 2-9% Slopes	NWI classification:
vev Vegetalion Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No vev Vegetalion Soil or Hydrology naturally problemate? (if needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No wethan Hydrology Present? Yes No Remarks No is the Sampled Area within a Wetland? No Vestant Hydrology Present? Yes No	Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	(If no, explain in Remarks.)
vere Vegetation	Are Vegetation, Soil, or Hydrology significantly disturbed? Are	"Normal Circumstances" present? Yes V No No
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Remarks No Is the Sampled Area within a Wetland? Yes No Remarks No Is the Sampled Area within a Wetland? Yes No Remarks No Is the Sampled Area within a Wetland? Yes No Remarks Noth Side Cast of Sampling point locations, transects, important features, etc. Remarks No Indicator Dominance Test worksheet: No Tree Stratum (Plot size Indicator Dominant Indicator Nome of Dominant Species Across All Strata: (B) Septing/Shub Stratum (Plot size Indicators Indicators Indicators 1 Indicators Species x3 = FACU species x4 = Indicators 2 Indicators Indicato	Are Vegetation, Soil, or Hydrology naturally problematic? (If new second se	eeded, explain any answers in Remarks.)
Hydrobylic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes Yes No Wetland Hydrology Present? Yes Vetland Hydrology Present? Vetland Hydrology Hy	SUMMARY OF FINDINGS – Attach site map showing sampling point I	ocations, transects, important features, etc.
Hydro Sol Present? Yes No is the sample area No Remarks No is the sample area Yes No Remarks Nothin a Wetland? Yes No Yes No Minima Wetland? Yes No Yes No Minima Wetland? Yes No Yes No Species? No No (A) Yes No Species? No Yes (A) Yes No Species? No (A) (B) Yes No Species? X1 = Species? X1 = Species? X1 = Species? <t< td=""><td>Hydrophytic Vegetation Present? Yes No</td><td></td></t<>	Hydrophytic Vegetation Present? Yes No	
Vectorial hydrology Fresent/ Yes No Remarks Noth Side east of screpus suble //EGETATION - Use scientific names of plants. Tree Stratum (Plot size	Hydric Soil Present? Yes Vo within a Wetla	nd? Yes No
Xecth Side east of Sarpus Sudle //EGETATION - Use scientific names of plants. Tree Stratum (Plot size	Remarke	
//EGETATION - Use scientific names of plants. Tree Stratum (Plot size	North side east of scirpus si	vile
VEGETATION – Use scientific names of plants. Tree Stratum (Plot size		
Incestratum (Plot size Absolute Dominant Indicator % Cover Species? Status 1 That Are OBL, FACW, or FAC (A) 2 Total Number of Dominant Species (A) 3	VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot size	Absolute Dominant Indicator	Dominance Test worksheet:
1	Tree Stratum (Plot size:) <u>% Cover_Species?</u> Status	Number of Dominant Species
2		That Are OBL, FACW, or FAC: (A)
3.	2	Total Number of Dominant
* = Total Cover Percent of Dominant Species (A/B) Saping/Shrub Stratum (Plot size:	3	Species Across All Strata: (B)
Sapting/Shrub Stratum (Plot size		Percent of Dominant Species
1	Sapling/Shrub Stratum (Plot size:)	That Are OBL, FACW, or FAC: (A/B)
2	1	Prevalence Index worksheet:
3	2	OBI species y1 =
4	3	FACW species x2 =
5	4	FAC species x 3 =
Herb Stratum (Plot size M^2	5	FACU species x 4 =
1 JUNCWS Mesper us 1.5 FACU Column Totals (A) (B) 2 Panunculus repense 1.5 FACU Column Totals (A) (B) 3 Carey opporte 1.5 FACU Column Totals (A) (B) 3 Carey opporte 1.5 FACU Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 4 Feestoca 1.6 FACU FACU Prevalence Index is >50% -1 -1 Rapid Test for Hydrophytic Vegetation -2 Dominance Test is >50% -3 -9 -5 Wetation Non-Vascular Plants' -	Herb Stratum (Plot size: M ²) = Total Cover	UPL species x 5 =
2 Prevalence Index = B/A =	1 JUNCUS MESPERIUS 15 FACH	Column Totals (A) (B)
3 Carey apount? 4 Cestuca acundinacle? 5 Hypochaecus raducata 6 Turfalum reperies 7 Accestisstalarifera 8 Plantago (ancolata) 9	2 RADUDCULUSTEDERS IS EAC	Prevalence Index = B/A =
4 Gestuca acuidinacle 18	3 Carey about 2 OBL	Hydrophytic Vegetation Indicators:
5. Hypochaeris radicata 12. Cominance Test is >50% 6. Trifedium reperior 3. Prevalence Index is \$30' 7. Accestisstolarifera 32. Y 8. Plantago lancolata 32. Y 10 5. Wetland Non-Vascular Plants' 11 95. = Total Cover Woody Vine Stratum (Plot size: 95. = Total Cover 1	4 Festura arundinacez 18 Y FAL	1 - Rapid Test for Hydrophytic Vegetation
6. Thitfolumarcpers 7. Accestisstolanifera 8. Plantage lanceolati 9. Accestisstolanifera 10	5 Hypochaeris radicata 12 EAU	2 - Dominance Test is >50%
7 Accessfissfol@rife@s 20 Y EAX 8 Plantage lancedati 20 Y EAX 9	6 Thitolum repers	3 - Prevalence Index is ≤3 0 ¹
8 Plantage (anceolation) 9	1 Agestisstolaritera 20 y FAL	4 - Morphological Adaptations ¹ (Provide supporting
9.	8 Plantage lancelati	5 - Wetland Non-Vascular Plants ¹
10	9	Problematic Hydrophytic Vegetation ¹ (Explain)
11 95 = Total Cover Woody Vine Stratum (Plot size:) 95 = Total Cover 1		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:) Hydrophytic 1 Hydrophytic 2.		be present, unless disturbed or problematic.
1	Woody Vine Stratum (Plot size:)	
2	1	Hydrophytic /
% Bare Ground in Herb Stratum = Total Cover NO	2	Vegetation Procent? Yes I No
% Bare Ground in Herb Stratum	= Total Cover	
LCIIIdit2	% Bare Ground in Herb Stratum	·····
	ITCINGING.	

SOIL

1/ 1			
Wechn	11/1	15 18	5

Sampling Point: WIT7-W

Depth Matrix	Redox Fea	atures			
(inches) Color (moist) %	Color (moist)	% Type	Loc ²	Texture	Remarks
2-4 104×3/2 10	2	-		Coam	<u>6</u>
1-14 104N/2 90	7.548.4/6 1	0 C	m	Liam	Service and the second get any to characterize particular to participation of the second second second second s
		-			and the second
			-	-	
	-		-	<u></u>	
-					i an
Type: C=Concentration, D=Depletion, F	RM=Reduced Matrix, CS=Co	vered or Coate	d Sand Gr	ains ² Local	ion: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise	noted.)		Indicators	for Problematic Hydric Soils':
Histosol (A1)	Sandy Redox (S5)			2 cm I	Auck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)			Red P	arent Material (TF2)
Black Histic (A3)	Loamy Mucky Minera	al (F1) (except	MLRA 1)	Very S	Section Dark Surface (TF12)
nyarogen Sullide (A4)	Loamy Gleyed Matrix	x (F2)		Other	(Explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface	(F6)		³ Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surfa	(F7)		wetland	hydrology must be present
Sandy Gleved Matrix (S4)	Redox Depressions	(F8)		unless	disturbed or problematic
Restrictive Laver (if present):		(and a prostandou
Type					
Depth (inches):	And and a state of the second s			Hydric Soil D	respect 2 Var V No
ocput (mones).				I I Jane Son P	
(DROLOGY					
YDROLOGY Vetland Hydrology Indicators:					
YDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one requ	pired; check all that apply)			Second	ary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one requ	nired; check all that apply)	Leaves (B9) (e	xcept	<u>Second</u>	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestion Surface Water (A1) High Water Table (A2)	uired; check all that apply) Water-Stained L MLRA 1, 2, 4	Leaves (B9) (e 4A, and 4B)	xcept	<u>Second</u>	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, \$A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3)	uired; check all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11)	Leaves (B9) (e 4A, and 4B))	xcept	<u>Second</u> Wa Dra	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10)
YDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one requination (A1) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ired; check all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Invertet	Leaves (B9) (e 4A, and 4B)) prates (B13)	xcept	<u>Second</u> Wa Dra Drg	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2)
YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one request Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	uired; check all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Invertet Hydrogen Sulfid	Leaves (B9) (e 4A, and 4B)) prates (B13) 1e Odor (C1)	xcept	<u>Second</u> Wa Dra Dry Sat	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one request Surface Water (A1) (High Water Table (A2) (Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ired; check all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Invertet Hydrogen Sulfid Oxidized Rhizos	Leaves (B9) (e 4A, and 4B)) brates (B13) de Odor (C1) spheres along	xcept Living Roo	<u>Second</u> Wa Dra Dry Sat	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 pmorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: trimary Indicators (minimum of one request Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ired; check all that apply) Water-Stained I MLRA 1, 2, 4 Salt Crust (B11) Aquatic Invertet Hydrogen Sulfid Oxidized Rhizos Presence of Res	Leaves (B9) (e 4A, and 4B)) brates (B13) de Odor (C1) spheres along duced Iron (C4	xcept Living Roo	Second Wa Dra Dry Sat ots (C3) Gec Sha	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 pmorphic Position (D2) illow Aquitard (D3)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one request Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ired; check all that apply) — Water-Stained I MLRA 1, 2, 4 — Salt Crust (B11) — Aquatic Invertet — Hydrogen Sulfid — Oxidized Rhizos — Presence of Rec — Recent Iron Rec	Leaves (B9) (e 4A, and 4B)) brates (B13) 1e Odor (C1) spheres along duced Iron (C4 duction in Tilled	xcept Living Roo I) d Soils (C6	<u>Second</u> Wa Dra Dry Sat ots (C3)Geo Sha Sha	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one request Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ired; check all that apply) — Water-Stained I MLRA 1, 2, 4 — Salt Crust (B11) — Aquatic Invertet — Hydrogen Sulfid — Oxidized Rhizos — Presence of Re- — Recent Iron Rec — Stunted or Stres	Leaves (B9) (e 4A, and 4B)) brates (B13) fe Odor (C1) spheres along duced iron (C4 duction in Tilled ssed Plants (D	xcept Living Roo I) d Soils (C6 1) (LRR A)	<u>Second</u> Wa Dra Dry Sat ots (C3) Geo Sha Sha Sha Sha Sha Rai	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one request Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery	ired; check all that apply) — Water-Stained L MLRA 1, 2, 4 — Salt Crust (B11) — Aquatic Invertet — Hydrogen Sulfid — Oxidized Rhizos — Presence of Rei — Recent Iron Rec — Stunted or Stres (B7) — Other (Explain in	Leaves (B9) (e 4A, and 4B)) brates (B13) de Odor (C1) spheres along duced Iron (C4 duction in Tilled ssed Plants (D n Remarks)	xcept Living Roo) d Soils (C6 1) (LRR A)	<u>Second</u> Wa Dra Dry Sat ots (C3) Geo Sha () Sha () Rai Fro	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicators: trimary Indicators (minimum of one reque Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surfac	uired: check all that apply) — Water-Stained L MLRA 1, 2, 4 — Salt Crust (B11) — Aquatic Invertet — Hydrogen Sulfid — Oxidized Rhizos — Presence of Rei — Recent Iron Rec — Stunted or Stres (B7) — Other (Explain in e (B8)	Leaves (B9) (e 4A, and 4B)) brates (B13) de Odor (C1) spheres along duced iron (C4 duction in Tilled ssed Plants (D n Remarks)	xcept Living Roo) d Soils (C6 1) (LRR A	<u>Second</u> Wa Dra Dry Satu ots (C3) Geo Sha bits (C3) FAC) Rai Fro	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 pmorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
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YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one request Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Vegetated Concave S	ired; check all that apply) — Water-Stained I MLRA 1, 2, 4 — Salt Crust (B11) — Aquatic Invertet — Hydrogen Sulfid — Oxidized Rhizos — Presence of Rei — Recent Iron Rec — Stunted or Stres (B7) Other (Explain in e (B8) No Depth (inches) No Depth (inches) No Depth (inches)	Leaves (B9) (e 4A, and 4B)) brates (B13) de Odor (C1) spheres along duced iron (C4 duction in Tilled ssed Plants (D n Remarks)	Living Roo D Soils (C6 1) (LRR A)	→ Second → Wa → Dra → Dra → Dry → Sat → Sat → Sha → Fro → Fro → Fro	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 pmorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7) Present? Yes X No
YDROLOGY Yrimary Indicators (minimum of one requinance) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surfact Ield Observations: urface Water Present? Yes /ater Table Present? Yes /ater Table Present? Yes /ater Table Present? Yes	ired; check all that apply) — Water-Stained I MLRA 1, 2, 4 — Salt Crust (B11) — Aquatic Invertet — Hydrogen Sulfid — Oxidized Rhizos — Presence of Re- — Recent Iron Rec — Stunted or Stres (B7) Other (Explain in e (B8) No Depth (inches) No Depth (inches) No Depth (inches)	Leaves (B9) (e 4A, and 4B)) brates (B13) de Odor (C1) spheres along duced iron (C4 duction in Tilled ssed Plants (D n Remarks)	Living Roo) d Soils (C6 1) (LRR A) Weth	→ Second → Wa → Dra → Dry → Sat → Sat → FAC → Fro → Fro and Hydrology I	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 pmorphic Position (D2) ullow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7) Present? Yes X No
YDROLOGY Vetland Hydrology Indicators: 'rimary Indicators (minimum of one reque 	ired; check all that apply) — Water-Stained I MLRA 1, 2, 4 — Salt Crust (B11) — Aquatic Invertet — Hydrogen Sulfid — Oxidized Rhizos — Presence of Rei — Recent Iron Red — Stunted or Stress (B7) — Other (Explain life e (B8) — No Depth (inches) _ No Depth (inches) _ No Depth (inches) _ No Depth (inches) _ No Depth (inches)	Leaves (B9) (e 4A, and 4B)) brates (B13) fe Odor (C1) spheres along duced Iron (C4 duction in Tilled ssed Plants (D n Remarks)	Living Roo) d Soils (C6 1) (LRR A) Wetl: pections).	→ Second → Wa → Dra → Dry → Saturn → Sta → Sha → FAC → FAC → Fro → Annote the second seco	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 proorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7) Present? Yes No
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YDROLOGY Vetland Hydrology Indicators: 'rimary Indicators (minimum of one requestion of the end of	ired; check all that apply) — Water-Stained I MLRA 1, 2, 4 — Salt Crust (B11) — Aquatic Invertet — Hydrogen Sulfid — Oxidized Rhizos — Presence of Rei — Recent Iron Rec — Stunted or Stress (B7) — Other (Explain in e (B8) _ No Depth (inches) _ No Depth (inches)	Leaves (B9) (e 4A, and 4B)) brates (B13) de Odor (C1) spheres along duced iron (C4 duction in Tilled ssed Plants (D n Remarks)	Living Roo J Soils (C6 1) (LRR A) Wetla pections),	Second Wa Dra Dry Satu Sta 	Ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, 44, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (CS pmorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7) Present? Yes X No
YDROLOGY Vetland Hydrology Indicators: 'rimary Indicators (minimum of one request Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Vegetated Concave S	ired; check all that apply) — Water-Stained I MLRA 1, 2, 4 — Salt Crust (B11) — Aquatic Invertet — Hydrogen Sulfid — Oxidized Rhizos — Presence of Rei — Recent Iron Red — Stunted or Stress (B7) — Other (Explain life e (B8) _ No Depth (inches) _ No Depth (inches)	Leaves (B9) (e 4A, and 4B)) brates (B13) te Odor (C1) spheres along duced iron (C4 duction in Tilled ssed Plants (D n Remarks)	Living Roo J Soils (C6 1) (LRR A) Wetla pections),	Second Wa Dra Dry Satu Sha bits (C3) Geo Sha FAC) Rai Fro and Hydrology I if available:	ary Indicators (2 or more required) ler-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (CS pmorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7) Present? Yes X No

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region
Project/Site: Keehn City/County McKinley ville Humbold & Sampling Date 11/1921
Applicant/Owner_GHD for Mary Keehn State: CA Sampling Point WIT I-U
Investigator(s): K. Mc Dunzld, M. Schwarz Section, Township, Range: 55 T6N R1E
Landform (hillslope, terrace, etc.) LISIOPE Local relief (concave, convex, none) CONEX Slope (%): 15
Subregion (LRR) A Lat: 40.3372230 Long: -124,0975751 Datum: WG384
Soil Map Unit Name: Arezta and Candy mot, 2-9% sails NWI classification: nal
Are climatic / hydrologic conditions on the site typical for this time of year? Yes V No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No //
Hydric Soil Present? Yes No Is the Sampled Area within a Walland?
Wetland Hydrology Present? Yes No V
Remarks: Tongue of upland along convex slope
VEGETATION – Use scientific names of plants.
Tree Stratum (Plot size: Absolute Dominant Indicator Dominance Test worksheet: Mumber of Dominant Species Status Number of Dominant Species Number of Dominant Species

2	
3	A)
4	B)
Sapling/Shrub Stratum (Plot size: Prevalence Index worksheet: 1	A/B)
1.	********
2	
3.	
4.	
5. = Total Cover FACU species x4= Herb Stratum (Plot size: 1 m²) = Total Cover UPL species x5= 1. Accost is staticate is Accost is staticate is Accost is 2. Hypochae (is raticate is and colored at a colo	
Herb Stratum (Plot size: 1 m²) = Total Cover UPL species x 5 = 1. Accost is stolenificata 35 Y FAC Column Totals: (A) 2. Hypochaeccis raticata 1G FAC 3. Plantage lanceolata 20 Y FAC Prevalence Index = B/A = 4. Cotos corniculatus 2 5. Banunculus report 2	
1. Accost is state if a 35 Y FAC Column Totals:(A) 2. Hypochaer is raticata if a GACU Prevalence Index = B/A = 3. Plantage lance lata 20 Y FAC Hydrophytic Vegetation Indicators: 4. Cotus rependence 2 5. Banunculus rependence 2 2. 2	
2 Hypochaeris raticata iG EACU Prevalence Index = B/A = 3 Plantage lancrolata 20 Y EACU Hydrophytic Vegetation Indicators: 4 Lotus corniculatus 2	(B)
 <u>A Lotus conditionation</u> <u>Banunculus repension</u> <u>Conditionation</u> <u>Conditionationation</u> <u>Conditionationation</u> <u>Conditionationationation</u> <u>Conditionationationation</u> <u>Conditionationationation</u> <u>Conditionationationationation</u> <u>Conditionationationationation</u> <u>Conditionationationationationationationation</u>	
4 LotUS COMPLETED 2 1 - Rapid Test for Hydrophytic Vegetation 5 Banunculus report 2 2 - Dominance Test is >50%	
5. Banunculus reper 2 2. Dominance Test is >50%	
6 <u>Festuca annalnavez 5</u> <u>3-Prevalence Index is \$30'</u>	
7 4 - Morphological Adaptations' (Provide supported at a in Remarks or on a separate sheet)	ting
5 - Welland Non-Vascular Plants'	
Problematic Hydrophytic Vegetation ¹ (Evplain)	
1 Indicators of bydric soil and wetland bydriclory mu	
be present, unless disturbed or problematic.	a.
Woody Vine Stratum (Plot size:)	
1 Hydrophytic /	
Vegetation	(II)
% Bare Ground in Herb Stratum 20	
Remarks	

S

OIL				U-	echu	`	11/19/21	s	ampling Poin	t_W/T7-
Profile Desc	cription: (Describe to	the depth r	needed to docu	ment the ind	licator of	confirm	the absence	of indicate	ors.)	
Depth	Matrix		Redo	ox Features					252	
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc ²	Texture		Remarks	
0-5	104R313	/00	and the second s	-	<u>14</u>	-	Loam			
5-14	104R311	100		-	-		1 AGM			
	101.0/7	100 _								
								-		
10-1-				-						
,										
			14							
and the second	• ••••••••••••••••••••••••••••••••••••									
			antes in the second							
'Type: C=C	Concentration, D=Deple	etion, RM=Re	educed Matrix, C	S=Covered of	or Coated	Sand Gra	ains ² Loc	ation: PL=	Pore Lining,	M=Matrix
Hydric Soil	Indicators: (Applica	ble to all LR	Rs, unless othe	erwise noted	.)		Indicator	s for Prot	plematic Hyd	ric Soils ³ :
Histoso	ol (A1)		Sandy Redox	(S5)			2 cm	Muck (A1	0)	
Histic E	pipedon (A2)		Stripped Matri	x (S6)			Red	Parent Ma	terial (TF2)	
Black H	Histic (A3)	_	Loamy Mucky	Mineral (F1)	(except l	MLRA 1)	Very	Shallow D	ark Surface (TF12)
Hydrog	en Sulfide (A4)	18	Loamy Gleyed	Matrix (F2)			Othe	r (Explain	in Remarks)	
Deplete	ed Below Dark Surface	(A11)	_ Depleted Matr	ix (F3)			3 .			92 W
Thick D	Dark Surface (A12)		Redox Dark S	urface (F6)			Indicator	s of hydro	phytic vegeta	tion and
Sandy I	Mucky Mineral (S1)	ior 🚈	_ Depleted Dark	Surface (F7)			wetlar	nd hydrolog	gy must be pr	esent,
Sandy	Gleyed Matrix (S4)		_ Redox Depres	sions (F8)			unless	s disturbed	or problemat	IC.
Restrictive	Layer (if present):									
Type:									-	V
Depth (ir	nches):					(-), · · · · · · · · · · · · · · · · · · ·	Hydric Soil	Present?	Yes	_ No
Remarks:										
YDROLO	DGY					19 I	2		2	ang s
Wetland Hy	ydrology Indicators:	1				- (j. 1				
Primary Ind	licators (minimum of or	ne required; o	check all that app	oly)			Secon	dary Indica	ators (2 or mo	ore required)
Surface	e Water (A1)		Water-St	ained Leaves	(B9) (ex	cept	W	ater-Staine	ed Leaves (B	9) (MLRA 1, 2,
High W	Vater Table (A2)		MLRA	A 1, 2, 4A, an	d 4B)			4A, and	4B)	
Saturat	tion (A3)		Salt Crus	st (B11)			D	rainage Pa	tterns (B10)	
Water I	Marks (B1)		Aquatic I	nvertebrates	(B13)		D	ry-Season	Water Table	(C2)
Valer I	ent Denosite (B2)		Hvdroae	n Sulfide Odd	r (C1)		S	aturation V	isible on Aeri	al Imagery (C9)
Seume			Oxidized	Rhizosphere	s along L	iving Roo	ts (C3) G	eomorphic	Position (D2)
- Drift De	eposits (D3)		Presence	of Reduced	Iron (C4))	s	hallow Aqu	iitard (D3)	1000
Algal M	nat or Crust (B4)		Percent la	on Reduction	in Tilled	Soils (C6) E	AC-Neutra	Test (D5)	1.10
Iron De	eposits (B5)		Recent in	or Stressed D	lante (D1) (I RR A)		aised Ant	Mounds (D6)	(LRR A)
Surface	e Soil Cracks (B6)		Stunted (JI SUESSEU P	iants (Di	(LINC A)	— "			(

Frost-Heave Hummocks (D7)

Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: No Depth (inches): Yes . Surface Water Present? Yes _____ No Depth (inches): Water Table Present? Wetland Hydrology Present? Yes No _ Depth (inches): No_ Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

TELEVID DETERMINATION DATATO	RM – Western Mount	tains, Valleys, and Coast Region
ect/site: _ heeho	City/County, McKinl	ewille/Handeldt Sampling Date: 11/19/2
icant/Owner GHO Ar Man Kooka De	nel	State: CA Sampling Point (1) TB-1
alignation 1/ M. D. Id ASIL		CE TIM RAF
signor(s) c, mc vinzin, prochance	_ Section, Township, Rang	ge:
form (hillslope, terrace, etc.): _plan	_ Local relief (concave, co	onvex, none): <u>non</u> Slope (%): ()
region (LRR): Lat	40,9327843	Long: -124.6973352 Datum: 4438
Map Unit Name: Worsik - Arlyndz comple	×, 6-29, slop.	5 NWI classification:
climatic / hydrologic conditions on the site typical for this time of	year? Yes K No	(If no, explain in Remarks.)
Vegetation Soil or Hydrology significant	tly disturbed? Are "N	Normal Circumstances" present? Yes V
Vegetation Soil or Hydrology paturally	problematic? //f.nee	ded explain any answere in Remarks)
regenator, our, or riverology naturally	problematie? (if nee	acu, explain any answers in remarkery
IMMARY OF FINDINGS – Attach site map showing	ng sampling point lo	cations, transects, important features, etc.
ydrophytic Vegetation Present? Yes No	_	
ydric Soil Present? Yes No	Is the Sampled	Area
/etland Hydrology Present? Yes No	- within a Wetland	d? Yes No
emarks		
	·	
EGETATION – Use scientific names of plants.		
Absolu	ute Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size:) % Con	ver Species? Status	Number of Dominant Species
*		That Are OBL, FACW, or FAC:(A)
		Total Number of Dominant
		Species Across All Strata:(B)
I		Percent of Dominant Species
Sanling/Shrub Stratum (Plot size	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1		Prevalence Index worksheet:
2		Total % Cover ofMultiply by:
3		OBL species x 1 =
4		FACW species x 2 =
F		FAC species x 3 =
5	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 1, M ²)		UPL species x 5 =
1 Festura annalinacea 30	S Y FAC	Column Totals: (A) (B)
2 Agrostis stolenifera (2	5 Y FAC	Brouglance Index - B/A -
3 Lotus corniculatus	EAC	Hydrophytic Vegetation Indicators:
4. Plantage lancoolata 1	FAU	1 - Ranid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is <30%
7	and an and a second sec	A Mombelegical Adaptations //Devide succession
8		data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹
10		Problematic Hydrophytic Vegetation ¹ (Explain)
11		¹ Indicators of hydric soil and wetland hydrology must
9	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		
1	ing (Hydrophytic
		Vegetation
2.	and the second	
2	= Total Cover	Present? Yes No
2	= Total Cover	Present? Yes V No

	e depth needed to document the indicator or confirm the absence of indicators.)
Depth Matrix	Redox Features
inches) Color (moist) %	Color (moist) % Type' Loc' Texture Remarks
0-6 104163/2 10	0 Siltloan
-14 104R3/29	0 7.54R 4/4 10 C m Silt Loam
Anterior and a second	
na na sana na s	
and the second	
Type: C=Concentration, D=Depletion	, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location. PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable	to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils":
Histosol (A1)	Sandy Redox (S5) 2 cm Muck (A10)
Black Histic (A3)	Supped Matrix (S6) Red Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Gleved Matrix (F2) Other (Explain in Remarks)
Depleted Below Dark Surface (A1	1) Depleted Matrix (F3)
Thick Dark Surface (A12)	Redox Dark Surface (F6) ³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7) wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8) unless disturbed or problematic.
Type	
Depth (inches)	
Leon Inchest	
Remarks:	
Peper (incres):	
IYDROLOGY Wetland Hydrology Indicators:	
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	equired: check all that apply)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1)	
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) High Water Table (A2)	equired; check all that apply) Secondary Indicators (2 or more required)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3)	equired; check all that apply) Secondary Indicators (2 or more required)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	required; check all that apply) Secondary Indicators (2 or more required)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	equired; check all that apply) Secondary Indicators (2 or more required)
Verify (incres): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	Induct Soil Present // Tes // No equired; check all that apply) Secondary Indicators (2 or more required)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	equired; check all that apply) Secondary Indicators (2 or more required)
Depth (incres): Remarks: Wetland Hydrology Indicators: Primary Indicators (minimum of one re	equired; check all that apply) Secondary Indicators (2 or more required)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	Equired; check all that apply) Secondary Indicators (2 or more required)
Vertiand Hydrology Indicators: Primary Indicators (minimum of one re	Agained Soil Present? Yes A No Required; check all that apply) Secondary Indicators (2 or more required)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sur	Agained in the second and the secon
Depth (incres): Remarks: Primary Indicators (minimum of one regent in the second seco	equired, check all that apply) Secondary Indicators (2 or more required)
IVDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	Imparic soil Present // Tes // No Impart Soil Present // No
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	Imparic soil Present // Tes // No Impart Soil Present // Tes // No
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	required, check all that apply) Secondary Indicators (2 or more required)
Depth (incres). Remarks: Remarks: Primary Indicators (minimum of one regeneration (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surfice Water Present? Yes Sutar Table Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge	required; check all that apply) Secondary Indicators (2 or more required)
Depth (incres). Remarks: Remarks: Primary Indicators (minimum of one re	required; check all that apply) Secondary Indicators (2 or more required)

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WETLAND DETERMINATION DA		Western Mour	ntains, Valleys, and Coast Region
Project/Site: KEELM	Citv/C	ounty Mickil	1600:110/Humbeld Eampling Date: 11/19/21
Applicant/Owner: 6HD for MARY Keel	h Devel.		State: CA Sampling Point: WI T8-L
Investigator(s) IC McDonald M. Schn	127 Section	on Townshin Ran	DOB S 5 TON RIE
Landform (billslope terrace etc.)		I relief (concave, c	source none): (conv(CX Slope (%)) 3
Subregies (I BD):	Lat 40 93	7 74842	Long =124 A973557 Datum 66584
Sublegion (LRR)		270/201	Long <u>127.017555</u> Datum <u>1000</u>
Soil Map Unit Name: UCUNSIEN - Arryna a	Complex	0-0-05	NVI classification: <u>NOTE</u>
Are climatic / hydrologic conditions on the site typical for this	time of year? Y	'es No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly distur	bed? Are "I	Normal Circumstances" present? Yes V No
Are Vegetation, Soil, or Hydrology n	aturally problema	atic? (If nee	eded, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map	showing sam	npling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		le the Sameled	Arma /
Hydric Soil Present? Yes No	∘-√]	within a Wetlan	d? Yes No
Wetland Hydrology Present? Yes No	∘√		
Remarks: Small convex uplan	id with	in large	rwetland
		0	
		and the second se	
VEGETATION – Use scientific names of plan	ts.		
Tree Stratum (Plot size:)	% Cover Spe	cies? Status	Dominance Test worksheet:
1			That Are OBL, FACW, or FAC: (A)
2			
3			Species Across All Strata (B)
4.			
	= To	tal Cover	That Are OBL, FACW, or FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size:)		51	Prevalence Index worksheet:
11.			Total % Cover of Multiply by:
2	. <u></u>		OBL species x 1 =
3	1.0. 		FACW species x 2 =
4			FAC species $B5 \times 3 = 255$
5			FACU species $0 \times 4 = 40$
Hach Stratum (Plateize: L.A.)	= To	tal Cover	UPL species x 5 =
1 Agon tis stalogifera	80 Y	FAC	Column Totals: 95 (A) 295 (B)
2 Plantice lance data	10	CALU	Dravalance lader = D/A = 3 []
2 Tatrage an unacer	~	EAC	Prevalence Index = B/A =
A Later and detail	2	CAC	1. Rapid Test for Hydrophylic Vegetation
4 <u>Cores romitizioses</u>			Z 2. Dominance Test is >50%
5		3	\mathbf{N}_{3} . Provolence Index is <3.0 ¹
7			A Morphological Adaptations ¹ (Provide supporting
2	• ••••••••••••••••••••••••••••••••••••		data in Remarks or on a separate sheet)
0			5 - Wetland Non-Vascular Plants ¹
10	0.5		Problematic Hydrophytic Vegetation' (Explain)
11			Indicators of hydric soil and wetland hydrology must
	95 = Tot	al Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size)		021 8	
1		1 (189 g) 1 (199 g)	Hydrophytic
2			Vegetation
	= Tol	al Cover	Present (Yes No V
% Bare Ground in Herb Stratum			
Remarks: Denni nated by FAC	Speci.	is .	des -

OIL				V			11 -1		and the second se		
Profile Description	: (Describe f	to the dept	h needed to d	ocument th	e indicator	or confirm	the abse	nce of ind	icators.)		
Depth	Matrix			Redox Featu	res		120				
inches) Co	lor (moist)		Color (mois	0%	Type`		< ril	1	Rei	marks	
2-9 10	<u>1K2/2</u>	100					TIL	coam	17		-
9-13 104	R313	90	7.5425	16 10		m	Loai	m/511	Alsa i	~	
						1		1			
									and the second second		
		-				-					
						•	and and a state of the state of		ow we want the state		
Type C=Concentr	ation, D=Depl	etion, RM=	Reduced Matr	x. CS=Cover	red or Coat	ed Sand Gr	rains.	Location	PL=Pore Li	ning, M=Ma	atrix.
ydric Soil Indicat	ors: (Applica	able to all L	RRs, unless	otherwise n	oted.)		India	ators for	Problemati	c Hydric S	oils ³ :
Histosol (A1)			Sandy Red	lox (S5)				2 cm Muck	(A10)		
Histic Epipedor	n (A2)		Stripped N	latrix (S6)			· _	Red Paren	t Material (T	F2)	
_ Black Histic (A3	3)		Loamy Mu	cky Mineral ((F1) (excep	t MLRA 1)	· · · · · ·	/ery Shallo	ow Dark Sur	face (TF12)
Hydrogen Sulfic	de (A4)		Loamy Gle	yed Matrix (I	F2)			Other (Exp	lain in Rem	arks)	
_ Depleted Below	V Dark Surface	e (A11)	Depleted N	Matrix (F3)	6)		3 lodi	otors of h		anatalian a	
Sandy Mucky M	Aineral (S1)		Redux Dal	ark Surface	(F7)		India	ators or n	varopnytic v	be present	na
Sandy Gleved I	Matrix (S4)		Redox De	pressions (F8	3)		ur	less distu	rbed or prob	plematic	•
estrictive Layer (if present):				.,	and Bernadamidiane Bar	1				N A
Туре										100,000	(/)
Depth (inches):							1				10
emarks:	hroma	To	o hish	R e d	ox T	os De	Hydric S	Soil Prese	nt? Yes_	N	<u>~</u>
emarks:	hroma	To	o hìsh	R ed	ox T	06 De	Hydric S	Soil Prese	nt? Yes_	N	<u> </u>
(DROLOGY	Indicators:	a To	o hish	/ Red	ox T	os De	Hydric S	Soil Prese	nt? Yes	N	<u> </u>
(DROLOGY /etland Hydrology rimary Indicators (i Surface Water	y Indicators:	ne required	o hish	/ Red	0× T	os De	Hydric S	condary Ir	nt? Yes_	or more rec	p <u>uired)</u>
(DROLOGY (etland Hydrology rimary Indicators (i Surface Water (High Water Tel	y Indicators: minimum of or (A1)	ne required	check all that Wate	Red	0 x T	o 6 De	Hydric S	condary Ir Water-S	nt? Yes_ ndicators (2 tained Leav	or more rec res (B9) (ML	<u>uired)</u>
Primarks: (DROLOGY retland Hydrology rimary Indicators (i Surface Water (i High Water Tab Saturation (iA3)	y Indicators: minimum of or (A1) ile (A2)	ne required	check all that Wate Mi Salt G	apply) -Stained Lea .RA 1, 2, 4A	0 ¥ T aves (B9) (r , and 4B)	o 6 De	Hydric S	condary Ir Water-S 4A, a	nt? Yes_ ndicators (2 tained Leav nd 4B)	or more rec es (B9) (ML	<u>uired)</u> RA 1, 2,
emarks: (DROLOGY letland Hydrology imary Indicators (r _ Surface Water (_ High Water Tab _ Saturation (A3) Water Marks (B	y Indicators: minimum of or (A1) ile (A2)	ne required	check all that Wate Salt C Salt C	2 Ped apply) -Stained Lea .RA 1, 2, 4A rust (B11)	0 × T aves (B9) (c , and 4B)	os De	Hydric S	condary Ir Water-S 4A, a Drainagu	nt? Yes_ ndicators (2 tained Leav nd 4B) e Patterns (1	or more rec es (B9) (ML B10)	<u>uired)</u> RA 1, 2,
emarks: /DROLOGY /etland Hydrology rimary Indicators (r _ Surface Water (_ High Water Tab _ Saturation (A3) _ Water Marks (B _ Sediment Depo	y Indicators: minimum of or (A1) ile (A2) 1) sits (B2)	ne required	check all that Wate Salt C Aquat	<i>Ped</i> apply) -Stained Lea .RA 1, 2, 4A Grust (B11) ic Invertebra	0 × T aves (B9) (d , and 4B) tes (B13) Oder (C1)	os De	Hydric 5	condary Ir Water-S 4A, a Drainage Saturation	nt? Yes_ ndicators (2 tained Leav nd 4B) e Patterns (1 son Water 1 Son Water 1	or more rec es (B9) (ML B10) Table (C2)	<u>quired)</u> RA 1, 2,
emarks: (DROLOGY fetland Hydrology rimary Indicators (f Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (f	y Indicators: minimum of or (A1) Je (A2) 1) sits (B2) 33)	ne required	check all that Wate Wate Salt C Aqual Hydro Hydro	apply) -Stained Lea -RA 1, 2, 4A -rust (B11) ic Invertebra gen Sulfide (0 × T aves (B9) (c , and 4B) les (B13) Odor (C1)	except	Hydric S ep Se	condary Ir Water-S 4A, a Drainage Saturatio	ndicators (2 tained Leav nd 4B) e Patterns (1 son Water 1 on Visible or	or more rec es (B9) (ML B10) Table (C2) n Aerial Ima	<u>quired)</u> RA 1, 2,
emarks: DROLOGY etland Hydrology imary Indicators (n Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Algal Mat or Cru	y Indicators: minimum of or (A1) ble (A2) 1) sits (B2) 33) ust (B4)	ne required	check all that check all that Water MI Salt C Aqual Hydro Oxidia Prese	apply) -Stained Lea .RA 1, 2, 4A frust (B11) ic Invertebra igen Sulfide (red Rhizosph nce of Redu	0 ¥ T aves (B9) (d , and 4B) tes (B13) Odor (C1) heres along ced Iron (C	except	Hydric 5	condary Ir Water-S 4A, a Drainage Dry-Sea Saturatio Geomor Shallow	ndicators (2 tained Leav nd 4B) e Patterns (1 son Water 1 on Visible or phic Positio Acuitad (D	or more rec es (B9) (ML B10) Table (C2) n Aerial Ima n (D2) (2)	<u>quired)</u> .RA 1, 2,
emarks: (DROLOGY fetland Hydrology fimary Indicators (f Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Algal Mat or Cru Iron Deposits (E	y Indicators: minimum of or (A1) ule (A2) 1) sits (B2) 33) ust (B4) 15)	ne required	check all that check all that Wate Mi Salt C Aqual Hydro Oxidia Prese Recei	apply) -Stained Lea .RA 1, 2, 4A Grust (B11) ic Invertebra igen Sulfide (red Rhizosph nce of Reduu at Iron Reduc	o x T aves (B9) (c , and 4B) tes (B13) Odor (C1) heres along ced Iron (C ction in Tille	except	Hydric 5	condary Ir Water-S 4A, a Drainage Saturatio Geomor Shallow FAC-Ne	ndicators (2 tained Leav nd 4B) e Patterns (I son Water 1 on Visible or phic Positio Aquitard (D	or more rec es (B9) (ML B10) Table (C2) n Aerial Ima n (D2) (3)	<u>uired)</u> .RA 1, 2,
Permarks: Perma	y Indicators: minimum of or (A1) ile (A2) 1) sits (B2) 33) ust (B4) 15) acks (B6)	ne required	check all that check all that Wate Mi Salt C Aqual Hydro Oxidia Prese Recent Sturte	apply) -Stained Lea .RA 1, 2, 4A Grust (B11) ic Invertebra igen Sulfide (red Rhizosph nce of Reduc nt Iron Reduc ed or Stresse	0 × T aves (B9) (c , and 4B) tes (B13) Odor (C1) heres along ced Iron (C ction in Tille	except	Hydric 5	condary Ir Water-S 4A, a Drainage Dry-Sea Saturatio Geomor Shallow FAC-Ne Raised	ndicators (2 tained Leav nd 4B) e Patterns (I son Water 1 on Visible or phic Positio Aquitard (D utral Test (I ant Mounds	or more rec es (B9) (ML B10) Table (C2) n Aerial Ima n (D2) (3) (D6) (LBB	<u>uired)</u> .RA 1, 2, .gery (C9)
Algal Mat or Cru Surface Soil Cra Jord Deposits (E Surface Soil Cra Iron Deposits (E Surface Soil Cra Inundation Visib	y Indicators: minimum of or (A1) vile (A2) (A1) sits (B2) 33) ust (B4) 15) acks (B6) vile on Aerial In	nagery (B7)	check all that check all that Wate Mi Salt C Aqual Hydro Oxidia Prese Recent Stunto Other	apply) -Stained Lea RA 1, 2, 4A Grust (B11) ic Invertebra gen Sulfide (red Rhizosph nce of Reduc ht Iron Reduc ed or Stresse (Explain in F	0 × T aves (B9) (c , and 4B) les (B13) Odor (C1) heres along ced Iron (C ction in Tille ed Plants (E Remarks)	except Living Roo 4) cd Soils (C6 D1) (LRR A)	Hydric 5	condary Ir Water-S 4A, a Drainage Dry-Sea Saturatio Geomor Shallow FAC-Ne Raised / Frost-He	ndicators (2 tained Leav nd 4B) e Patterns (I son Water 1 on Visible or phic Positio Aquitard (D utral Test (I Ant Mounds	or more rec es (B9) (ML B10) Table (C2) n Aerial Ima n (D2) (3) (D6) (LRR (C7)	<u>uired)</u> .RA 1, 2, .gery (C9)
emarks: (DROLOGY fetland Hydrology rimary Indicators (r Surface Water (a High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Algal Mat or Cru Iron Deposits (E Surface Soil Cra Inundation Visib Sparsely Vegeta	y Indicators: minimum of or (A1) ble (A2) (A1) sits (B2) 33) ust (B4) 15) acks (B6) le on Aerial In ated Concave	nagery (B7) Surface (B	check all that check all that Wate Mil Salt C Aqual Hydro Oxidia Prese Recer Stunto Other 8)	apply) -Stained Lea .RA 1, 2, 4A frust (B11) ic Invertebra igen Sulfide (red Rhizosph nce of Redun th Iron Reduc ed or Stresse (Explain in F	0 × T aves (B9) (d , and 4B) tes (B13) Odor (C1) heres along ced Iron (C ction in Tille ed Plants (E Remarks)	except Living Roo 4) ed Soils (C6 01) (LRR A)	Hydric 5	Condary Ir Water-S 4A, a Drainage Dry-Sea Saturatio Geomor Shallow FAC-Ne Raised A Frost-He	ndicators (2 tained Leav nd 4B) e Patterns (1 son Visible or phic Positio Aquitard (D utral Test (C Ant Mounds eave Humm	or more rec res (B9) (ML B10) Table (C2) n Aerial Ima n (D2) (3) D5) (D6) (LRR (D6) (LRR	<u>auired)</u> RA 1, 2, Ingery (C9)
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Image Second Secon	y Indicators: minimum of or (A1) ule (A2) (A1) sits (B2) (A1) sits (B2) sits	nagery (B7) Surface (B s N s N gauge, mor	check all that check all that Wate Mi Salt C Aqual Hydro Oxidia Prese Recer Stunte Other B) O Dept O Dept O Dept O Dept O Dept	/ Red apply) -Stained Lea .RA 1, 2, 4A crust (B11) ic Invertebra gen Sulfide (red Rhizosph nce of Reduc th Iron Reduc ed or Stresse (Explain in F h (inches): h (inches): h (inches):	o x T aves (B9) (4 , and 4B) tes (B13) Odor (C1) heres along ced Iron (C ction in Tille ed Plants (E Remarks)	except Living Roo 4) ad Soils (C6 01) (LRR A) wetta spections),	Hydric S ep ots (C3)	condary Ir Water-S 4A, a Drainage Dry-Sea Saturatio Geomor Shallow FAC-Ne Raised / Frost-He	nt? Yes ndicators (2 tained Leav nd 4B) e Patterns (1 son Water 1 on Visible or phic Positio Aquitard (D utral Test (I Ant Mounds eave Humm	or more rec res (B9) (ML B10) Table (C2) In Aerial Ima n (D2) (3) (D6) (LRR ocks (D7)	<u>auired)</u> .RA 1, 2, .rgery (C9) A)
Algal Mater Vegeta Source Values Source S	y Indicators: minimum of or (A1) ile (A2) (A1) sits (B2) 33) ust (B4) 35) acks (B6) ile on Aerial In ated Concave : ent? Ye (? Ye ye nge) Data (stream g	nagery (B7) Surface (B s N s N gauge, mor	check all that check all that Wate Mil Salt C Aqual Hydro Oxidia Prese Recent Stunto Other B) Dept Dept Dept Dept	<i>I Ped</i> apply) -Stained Lea RA 1, 2, 4A Grust (B11) ic Invertebra icgen Sulfide (red Rhizosph nce of Reduct th Iron Reduct ed or Stresse (Explain in F h (inches): h (inches): h (inches):	0 × T aves (B9) (c , and 4B) tes (B13) Odor (C1) heres along ced Iron (C ction in Tille ed Plants (E Remarks)	except Living Roo (4) (Living Roo (4) (1) (LRR A) (1) (LRR A) (1) (LRR A) (1) (LRR A)	Hydric S	condary Ir Water-S 4A, a Drainage Dry-Sea Saturatio Geomor Shallow FAC-Ne Raised J Frost-He	nt? Yes_ ndicators (2 tained Leav nd 4B) e Patterns (1 son Water 1 on Visible or phic Position Aquitard (D utral Test (I Ant Mounds eave Humm	or more rec res (B9) (ML B10) Fable (C2) n Aerial Ima n (D2) (3) (D6) (LRR ocks (D7)	<u>auired)</u> RA 1, 2, Igery (C9)
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WETLAND DETERMINATION DATA FORM – Western Mo	untains, Valleys, and Coast Region
Project/Site: Leehin	ala 100 CN [21/2/2]
Applicant/Owner: 6HD for Mary Keyb, Devel	ATTERVOLD, CA Sampling Date 1 24 2121
Investigator(s): 16. MC Donald IM Schowed Section Towned	State: Sampling Point:
Landform (hillslope terrace etc.)). (DSCO)	ange: <u>35, 16, 12</u>
Subregion (LRR): A Local relief (concave,	convex, none) <u>COCAVE</u> Slope (%).
Soil Man Linit Name: 40147 K C- 1	_ Long: -169,098205 Datum: 46589
Are climatic (bydrologic conditions on the state of the	NWI classification: None
Are Vegetation	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are	"Normal Circumstances" present? Yes No
Are vegetation, Soil, or Hydrology naturally problematic? (If n	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No Is the Sampler	d Area
Vetland Hydrology Present? Yes Ves Within a Wetla	nd? Yes V No
Kondiks.	
VEGETATION – Use scientific names of plants.	••••••••••••••••••••••••••••••••••••••
Absolute Dominant Indicator	Dominance Test worksheet
Tree Stratum (Plot size:) <u>% Cover</u> Species? Status	Number of Dominant Species
1	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
4	Species Across All Strata:
= Total Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	That Are OBL, FACW, or FAC: (A/B)
1	Total % Cover of Multion by
2	OBL species x1 =
3	FACW species x 2 =
5	FAC species x 3 =
= Total Cover	FACU species x 4 =
Herb Stratum (Plot size:)	UPL species x 5 =
1 Lotus coniculation 10	Column Totals: (A) (B)
2 Festucia annances 20 1 FAC	Prevalence Index = B/A =
1 Disticular 10 Y LAC	Hydrophytic Vegetation Indicators:
5 Flamage Tanutorat	1 - Rapid Test for Hydrophytic Vegetation
6.	2 - Dominance Test is >50%
7	4 - Morphological Adaptations ¹ (Provide supporting
8	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation ¹ (Explain)
^{11.}	Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	providentiality,
1	Hydrophytic
2.	Vegetation
= Total Cover	Present? Yes V No
% Bare Ground in Herb Stratum	
INCLUSION STREET	
	3

Danih Danih	Matrix		Dodu	E Contine	alcator (or comm		dicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks	
2-6	104R2/1	100					Loom		
6-14	1042 2/1	90	754 4/6	C	m	10	Loam	n an	
				-					
				å			<u></u>		
						3	-		
Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, C	S=Covered	or Coate	d Sand Gr	ains. ² Location	PL=Pore Lining, M=Mati	rix.
Type: C=Co Hydric Soil Ir	ncentration, D=Depl ndicators: (Applica	etion, RM= able to all	Reduced Matrix, C LRRs, unless othe	S=Covered rwise note	or Coate d.)	d Sand Gr	ains. ² Location Indicators fo	PL=Pore Lining, M=Mati r Problematic Hydric Soi	rix. Is ³ :
Type: C=Co Hydric Soil Ir Histosol (ncentration, D=Depl ndicators: (Applica (A1)	etion, RM= able to all	EREduced Matrix, C LRRs, unless othe Sandy Redox (Stripped Matrix	S=Covered rwise note S5)	or Coated d.)	d Sand Gr	ains. ² Location Indicators fo 2 cm Muc Red Pare	<u>PL=Pore Lining, M=Mati</u> r Problematic Hydric Soi k (A10) nt Material (TE2)	rix. Is ³ :
Type: C=Co Hydric Soil Ir Histosol (Histic Epi Black His	ncentration, D=Depl ndicators: (Applica (A1) pedon (A2) tic (A3)	etion, RM= able to all	Reduced Matrix, C LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky	S=Covered rwise note S5) (S6) Mineral (F1)	or Coate d.)	d Sand Gr	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha	PL=Pore Lining, M=Matur Problematic Hydric Soi (A10) nt Material (TF2) Iow Dark Surface (TF12)	rix. Is ³ :
Type: C=Co Hydric Soil Ir Histosol (Histic Epi Black His Hydroger	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) titic (A3) in Sulfide (A4)	etion, RM= able to all	Reduced Matrix, C LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed	S=Covered rwise note S5) (S6) Mineral (F1) Matrix (F2)	or Coate d.) (except	d Sand Gr MLRA 1)	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex	PL=Pore Lining, M=Matr r Problematic Hydric Soi (k (A10) nt Material (TF2) Now Dark Surface (TF12) plain in Remarks)	rix. Is ³ :
' <u>Type: C=Co</u> Hydric Soil Ir Histosol (Histic Epi Black His Hydroger Depleted	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) tic (A3) n Sulfide (A4) Below Dark Surface	etion, RM= able to all e (A11)	Reduced Matrix, C LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky I Loamy Gleyed Depleted Matrix	S=Covered rwise notes S5) (S6) Mineral (F1) Matrix (F2) x (F3)	or Coater d.) (except	d Sand Gr MLRA 1)	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex	PL=Pore Lining, M=Matr r Problematic Hydric Soi k (A10) nt Material (TF2) llow Dark Surface (TF12) plain in Remarks)	rix. Is ³ :
Type: C=Co Hydric Soil Ir Histosol (Histic Epi Black His Hydroger Depleted Thick Dar	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) tic (A3) n Sulfide (A4) Below Dark Surface rk Surface (A12)	etion, RM= able to all e (A11)	 Reduced Matrix, C. LRRs, unless other Sandy Redox (Stripped Matrix Loamy Mucky I Loamy Gleyed Depleted Matrix Redox Dark Su 	<u>S=Covered</u> rwise note S5) (S6) Mineral (F1) Matrix (F2) x (F3) urface (F6)	<u>or Coater</u> d.) (except	d Sand Gr MLRA 1)	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex ³ Indicators of	PL=Pore Lining, M=Matr r Problematic Hydric Soi k (A10) nt Material (TF2) llow Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and	rix. Is ³ :
Type: C=Co Hydric Soil Ir Histosol (Histic Epi Black His Hydrogen Depleted Thick Dar Sandy Mu	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) tic (A3) n Sulfide (A4) Below Dark Surface rk Surface (A12) ucky Mineral (S1)	etion, RM= able to all e (A11)	 Reduced Matrix, C. LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky I Loamy Gleyed Depleted Matrix Redox Dark SL Depleted Dark 	S=Covered rwise notes S5) (S6) Mineral (F1) Matrix (F2) k (F3) urface (F6) Surface (F6)	or Coater d.) (except	d Sand Gr MLRA 1)	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex ³ Indicators of wetland hy	PL=Pore Lining, M=Mate r Problematic Hydric Soi k (A10) nt Material (TF2) llow Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and drology must be present, when er problematic	rix. Is ³ :
'Type: C=Co Hydric Soil Ir Histosol (Histic Epi Black His Hydroger Depleted Thick Dar Sandy Mi Sandy Gl	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) itic (A3) n Sulfide (A4) Below Dark Surface rk Surface (A12) ucky Mineral (S1) eyed Matrix (S4)	etion, RM= able to all e (A11)	 Reduced Matrix, C. LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matrix Redox Dark SL Depleted Dark Redox Depress 	S=Covered rwise note S5) (S6) Mineral (F1) Matrix (F2) x (F3) rrface (F6) Surface (F7) sions (F8)	or Coater d.) (except	d Sand Gr	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex ³ Indicators of wetland hy unless dist	PL=Pore Lining, M=Mature r Problematic Hydric Soi k (A10) nt Material (TF2) llow Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and drology must be present, urbed or problematic.	rix. Is ³ :
'Type: C=Co Hydric Soil Ir Histosol (Histic Epi Black His Hydroger Depleted Thick Dar Sandy Mi Sandy Gi Restrictive Li	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) titic (A3) in Sulfide (A4) Below Dark Surface rk Surface (A12) ucky Mineral (S1) eyed Matrix (S4) ayer (if present):	etion, RM= able to all e (A11)	EReduced Matrix, C LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress	S=Covered rwise noted S5) (S6) Mineral (F1) Matrix (F2) x (F3) urface (F6) Surface (F6) Surface (F8)	or Coater d.) (except	d Sand Gr	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex ³ Indicators of wetland hy unless dist	PL=Pore Lining, M=Mature r Problematic Hydric Soi (k (A10) nt Material (TF2) low Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and drology must be present, urbed or problematic.	rix. Is ³ :
'Type: C=Coi Hydric Soil Ir — Histosol (— Histic Epi — Black His — Hydroger — Depleted — Thick Dar — Sandy Mi — Sandy Gl Restrictive Li Type: Depth (incl	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) ttic (A3) n Sulfide (A4) Below Dark Surface rk Surface (A12) ucky Mineral (S1) eyed Matrix (S4) ayer (if present): hes):	etion, RM= able to all e (A11)	 Reduced Matrix, C LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matrix Redox Dark SL Depleted Dark Redox Depress 	S=Covered rwise noted S5) ((S6) Mineral (F1) Matrix (F2) k (F3) urface (F6) Surface (F7) sions (F8)	or Coater d.) (except	d Sand Gr	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex ³ Indicators of wetland hy unless dist	PL=Pore Lining, M=Matri r Problematic Hydric Soi (k (A10) nt Material (TF2) low Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and drology must be present, urbed or problematic. ent? Yes X No	rix. Is ³ : d
'Type: C=Co Hydric Soil Ir Histosol (Histic Epi Black His Hydroger Depleted Thick Dar Sandy Mi Sandy Gi Restrictive Li Type: Depth (incl Remarks:	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) titic (A3) in Sulfide (A4) Below Dark Surface rk Surface (A12) ucky Mineral (S1) eyed Matrix (S4) ayer (if present): hes):	etion, RM= able to all e (A11)	 Reduced Matrix, C LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress 	S=Covered rwise noted S5) (S6) Mineral (F1) Matrix (F2) x (F3) urface (F6) Surface (F7) sions (F8)	or Coater d.) (except	d Sand Gr	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex ³ Indicators of wetland hy unless dist	PL=Pore Lining, M=Maturer Problematic Hydric Soi (k (A10) Int Material (TF2) Ilow Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and drology must be present, urbed or problematic. ent? Yes X No	rix. Is ³ : d
'Type: C=Co Hydric Soil Ir Histosol (Histic Epi Black His Depleted Thick Dar Sandy Mi Sandy Gl Restrictive Li Type: Depth (incl Remarks:	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) titic (A3) in Sulfide (A4) Below Dark Surface rk Surface (A12) ucky Mineral (S1) eyed Matrix (S4) ayer (if present):	etion, RM= able to all e (A11)	 Reduced Matrix, C LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress 	S=Covered rwise noted S5) (S6) Mineral (F1) Matrix (F2) x (F3) Inface (F6) Surface (F7) Sions (F8)	or Coate d.) (except	d Sand Gr	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex ³ Indicators of wetland hy unless dist	PL=Pore Lining, M=Maturer Problematic Hydric Soi (k (A10) Int Material (TF2) Ilow Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and drology must be present, urbed or problematic. ent? Yes X No	rix. Is ³ :
'Type: C=Co Hydric Soil Ir Histosol (Histic Epi Black His Depleted Thick Dar Sandy Mi Sandy Gl Restrictive Li Type: Depth (incl Remarks:	ncentration, D=Depl ndicators: (Applica (A1) ipedon (A2) titic (A3) in Sulfide (A4) Below Dark Surface rk Surface (A12) ucky Mineral (S1) eyed Matrix (S4) ayer (if present):	etion, RM= able to all e (A11)	EReduced Matrix, C LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress	S=Covered rwise noted S5) (S6) Mineral (F1) Matrix (F2) x (F3) urface (F6) Surface (F7) sions (F8)	or Coate d.) (except	d Sand Gr	ains. ² Location Indicators fo 2 cm Muc Red Pare Very Sha Other (Ex ³ Indicators of wetland hy unless dist	PL=Pore Lining, M=Maturer Problematic Hydric Soi (k (A10) Int Material (TF2) Ilow Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and drology must be present, urbed or problematic. ent? Yes X No	rix. Is ³ :

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (except High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) X Geomorphic Position (D2) Co Arca Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Wetland H	// Hydrology Present? Yes <u>}</u> No
Remarks: Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available Remarks: Description hydric So, 1/ Topographic P	ilable: losi, tian

A Made And

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region
Project/Site: Kechn City/County McKin/eguille/Humboldt Sampling Date 12/22
Applicant/Owner 640 for Mary Keehn Devel. Stale A Sampling Point W179-U
investigator(s): K McDons W, M. Schurrz Section, Township, Range 55, T6N, RIE
Landform (hillslope, terrace, etc.) Lillslope Local relief (concave, convex, none): 0012 Slope (%): 5
Subregion (LRR): Lat: 40,9337733 Long -129,0782033 Datum 2013.01
Soil Map Unit Name: Arc2+2 and Condy Mountain 2-9% 5/0015 NWI classification: Mone
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No V Is the Sampled Area

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	Is the Sampled Area within a Wetland?	Yes	No
Remarks:		1		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant Species Across All Strata (B)
4		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1		• ••••••••••••••••••••••••••••••••••••	Total % Cover of: Multiply by:
2.			OBL species x 1 =
3.	anar (anartar anartar anartar		FACW species x 2 =
4			FAC species x 3 =
5			FACU species x 4 =
1		= Total Cover	UPI species x 5 =
Herb Stratum (Plot size: 10/1)	100	CNCL	Column Totals (A) (B)
1 Plantago lanceoista	- 12	- FRO	
2 Leontodon sayatilis	-15	- X FALL	Prevalence Index = B/A =
3 Hypochaeris radicata	-0-	FACU	Hydrophytic Vegetation Indicators:
A Accestis staloniterz	45	Y CAC	1 - Rapid Test for Hydrophytic Vegetation
5 Provoculus repens	10	= AC	2 - Dominance Test is >50%
Sundhurstrichmachilonse	1	CAC	3 - Prevalence Index is ≤3 0 ¹
7. EPSTUCA a rundinacea	2	- YAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8.	and the supervised states of the supervised st		5 - Wetland Non-Vascular Plants ¹
9.	allar paparistation conversion		Problematic Hydrophytic Vegetation ¹ (Explain)
10			Ledisaters of hiddia soil and wotland hydrology must
11.			be present, unless disturbed or problematic.
	82	= Total Cover	
Woody Vine Stratum (Plot size:)			5. N S
1.			Hydrophytic
2		-	Present2 Yes No
% Bare Ground in Herb Stratum		= Total Cover	
Remarks:	waldeling and the second s	4	

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Western Mountains, Valleys, and Coast - Version 2.0

			see some en en
OIL	1/20/00 17/7/71 5	1	a Sampling Point WIT
Profile Description: (Describe to the d	enth peeded to document the indicator or confirm	the abcor	vea of indicators)
Dooth Matrix	Padey Fastures	the abser	ice of indicators.)
inches) Color (moist) %	Color (moist) % Type Loc ²	Texture	Remarks
0-7 1048312 100)	Loan	Y
7 15 1018312 - 100		1	
7-13 109K)/27 100		Loam	
		-	
		- Andrew Collins and an or other states of the	
waanaanaa amaanaa (waanaanaa (waanaanaa		- 1/2	
	ne metalente manifester and and an and a second		nine (searche -instanget joutness).
Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ²	Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indic	ators for Problematic Hydric Soils":
Histosol (A1)	Sandy Redox (S5)	2	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	F	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	_ \	/ery Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	_ (Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
Thick Dark Surface (A12)	Redox Dark Surface (F6)	Indic	ators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	W	etland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	ur	nless disturbed or problematic.
Restrictive Layer (if present):			
Туре:			k
Depth (inches)	· · · · · · · · · · · · · · · · · · ·	Hydric S	Soil Present? Yes No
Remarks		- Autorite	
			-
YDROLOGY			
Wetland Hydrology Indicators:	7		
Primary Indicators (minimum of one requ	ired, check all that apply)	<u>Se</u>	condary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation (A3)	Sait Crust (B11)	3	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
Sediment Deposite (B2)	Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C
Sediment Deposits (D2)	Ovidized Rhizospheres along Living Root	ts (C3)	Geomorphic Position (D2)
_ Drin Deposits (B3)	Oxidized initizespheres along Living Noor		Shallow Aquitard (D3)
Algal Mat or Crust (B4)	Presence of Reduced from (C4)	-	

Recent Iron Reduction in Tilled Soils (C6)

Stunted or Stressed Plants (D1) (LRR A)

____ Other (Explain in Remarks)

 Yes
 No
 Y
 Depth (inches):

 Yes
 No
 Y
 Depth (inches):

 Yes
 No
 Y
 Depth (inches):

 Yes
 No
 Y
 Depth (inches):

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

Remarks

Iron Deposits (B5)

Field Observations:

Saturation Present? (includes capillary fringe)

Surface Water Present? Water Table Present?

Surface Soil Cracks (B6)

Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes ____

____ Raised Ant Mounds (D6) (LRR A)

No ×

___ Frost-Heave Hummocks (D7)

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

Project/Site: We Are Vo	City/County: M derburyle /Hm Co Sampling Date: 9/15/22
Applicant/Owner: many kedn Development	State: <u>∠A</u> Sampling Point: <u>∪P −1D</u>
Investigator(s): M. Schware, Klundgen	Section, Township, Range: <u>55, T6N, R1E</u>
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): Slope (%):
Subregion (LRR): A	6.9343 Long-124.09715 Datum:
Soil Map Unit Name: Arcata + Candymantain sits	NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	-
Hydric Soil Present? Yes No	Is the Sampled Area
Wetland Hydrology Present? Yes No	- NO
Remarks:	
VEGETATION – Use scientific names of plants.	

Tree Stratum (Plot size:) 1)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
2 3				Total Number of Dominant Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size:)		= Total Co	over	Percent of Dominant Species That Are OBL, FACW, or FAC: $2/5 = 40\%$ (A/B)
1.				Prevalence Index worksheet:
2				Total % Cover of:Multiply by:
3				OBL species x 1 =
S		-		FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
Herb Stratum (Plot size:		= Total Co	over	UPL species x 5 =
1. Agrostis stolonifera	15	4	PAC	Column Totals: (A) (B)
2. Princila vulgans	20	Y	FACU	Prevalence Index = B/A =
3. Hypochaeris Ladicata	15	4	FACU	Hydrophytic Vegetation Indicators:
4. Lotus comiculatus	<u> </u>		FAC	1 - Rapid Test for Hydrophytic Vegetation
5. plantago lanceolata	10	4	FACU	2 - Dominance Test is >50%
6. Festive perennis	30	1	FAC	3 - Prevalence Index is ≤3.0 ¹
7				 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11		-		¹ Indicators of hydric soil and wetland hydrology must
	90	= Total Co	vor 45	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	10		18	
1.				Hydrophytic
2				Vegetation
% Bare Ground in Herb Stratum _ \ つ		= Total Co	ver	Present? Yes <u>No </u>
Remarks:				

SOIL	9/15/22 We Are L	Sampling Point: Up - 10
Profile Description: (Describe to the dep	oth needed to document the indicator or confir	m the absence of indicators.)
Depth Matrix	Redox Features	_
(inches) Color (moist) %	<u>Color (moist)</u> % <u>Type¹</u> Loc ²	Texture Remarks
0-6 104 K 3/3 100	etter etter etter	Siltloam
6-13 104R 5/6 100	ditter gant ditter	Sandy Loan
1		2
'Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sand C	Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soli Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Solis :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Black Histic (A3)	Stripped Matrix (So)	Red Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Gleved Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No 🗶
Remarks:	· · · · · · · · · · · · · · · · · · ·	
2		
Dur in dur		
Dusin an	ainge Jwall	
1003 10 010	ainge Swall	
HYDROLOGY	ainge Swall	
HYDROLOGY	ainge Swall	
HYDROLOGY Wetland Hydrology Indicators:	ainge Swall	
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d; check all that apply)	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	d: check all that apply) Water-Stained Leaves (B9) (except	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2 ,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	<u>Secondary Indicators (2 or more required)</u> <u> </u>
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13)	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	 Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro	 Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) posts (C3) Geomorphic Position (D2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4)	 Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) pots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require 	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 1 7) Other (Explain in Remarks)	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 1 7) Other (Explain in Remarks) B8)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) pots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 26) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require 	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR / 7) Other (Explain in Remarks) B8)	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d: check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) pots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 26) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d: check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) pots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d: check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) S6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ttand Hydrology Present? Yes No
IDUS INCLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d: check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) S6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ttand Hydrology Present? Yes No
IDING INCLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	d: check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Sots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ttand Hydrology Present? Yes No
IDUS INCLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d: check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Shallow Aquitard (D3) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ttand Hydrology Present? Yes No
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d: check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) pots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d: check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Shallow Aquitard (D3) Shallow Aquitard (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) tland Hydrology Present? Yes No , if available:
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d: check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) S6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) tland Hydrology Present? Yes No ///////////////////////////////////

 $r_{\rm eff} = q^{\rm eff} + q^{\rm eff} (r_{\rm eff})$

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

Project/Site: we are up	City/County: mckinlaprile/Hm Co Sampling Date: 9/15/22
Applicant/Owner: May Kechn Development	State: CA Sampling Point: UP-11
Investigator(s): Mischwarz, K.Lundgren	Section, Township, Range: SS, TGN, R1E
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): <u>home</u> Slope (%): <u>0-3</u>
Subregion (LRR): A Lat:	0.93434 Long: <u>-124.0994</u> Datum:
Soil Map Unit Name: Arcata & Candymontain S.	oils, 0-27- ages NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (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	
Hydric Soil Present? Yes No	Is the Sampled Area
Wetland Hydrology Present? Yes No	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				
3				Species Across All Strata:
1			· · · · · · · · · · · · · · · · · · ·	
4				Percent of Dominant Species
Capling/Chruh Stratum (Distaire)		= Total Co	over	That Are OBL, FACW, or FAC: 275-40% (A/B)
				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBI species v1=
3				
4				FACVV species
5.				FAC species x 3 =
		= Total Co		FACU species x 4 =
Herb Stratum (Plot size:)				UPL species x 5 =
1. Rumex acctosella	15	1	FAC	Column Totals: (A) (B)
2. Leucanthemin rula ane	25	4	UPL	Prevalence index = B/A =
3. Hupochaeric radicata	5		FACU	Hydrophytic Vegetation Indicators:
1 Athostis stolen, fera	15	Y	FAC	1 Danid Test for Hydrophytic Vegetation
5 The land of the	7	J	FACIL	
3. THERIUM REPERS			The	2 - Dominance Test is >50%
6. toa annua	50	1	FAC	3 - Prevalence Index is ≤3.0 ¹
7	-			4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
····	2-1	T 1.10	42.5	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	0 F	= Total Co	ver	
			1.1.1	
			·	Hydrophytic
2				Present2 Ves No
2	= Total Cover			
% Bare Ground in Herb Stratum				
Remarks:				

SOIL			9/15/22	We Are	Un	MS Sampling Point: UP-11		
Profile Des	cription: (Describ	e to the dep	th needed to docu	ment the indicato	r or confirm t	the absence of indicators.)		
Depth	Matrix		Redo	x Features				
(inches)	Color (moist)	%	Color (moist)	<u>%</u> Type ¹	Loc ²	Texture Remarks		
0-6	104R313	100	<u> </u>			Siltloam		
6-14	104R313	100	-	and the second s		Sil+ Goam		
	10 10 10							
						······································		
	-							
		8						
¹ Type: C=C	oncentration D=De	nletion RM:	Reduced Matrix CS	S=Covered or Coat	ted Sand Grai	ns ² Location: PL=Pore Lining M=Matrix		
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless othe	rwise noted.)		Indicators for Problematic Hydric Soils ³ :		
Histosol	(A1)		Sandv Redox (S5)		2 cm Muck (A10)		
Histic E	pipedon (A2)		Stripped Matrix	(S6)		Red Parent Material (TF2)		
Black H	istic (A3)		Loamy Mucky M	Mineral (F1) (exce	pt MLRA 1)	Very Shallow Dark Surface (TF12)		
Hydroge	en Sulfide (A4)		Loamy Gleyed	Matrix (F2)		Other (Explain in Remarks)		
Deplete	d Below Dark Surfa	ice (A11)	Depleted Matrix	(F3)		3 distance of the desired of the second statement of t		
INICK D	ark Surface (A12)		Redox Dark Su	nace (F6) Surface (E7)		Indicators of hydrophytic vegetation and		
Sandy (Reved Matrix (S4)		Depieted Dark	sions (F8)		upless disturbed or problematic		
Restrictive	Layer (if present):	11			T			
Type:	, , , ,							
Depth (in	ches).					Hydric Soil Present? Yes No X		
Remarke:				No. 10 August 1				
		a di seconda di second						
HYDROLO	GY							
wetland Hy	drology indicators	;:						
Primary India	cators (minimum of	one required	; check all that appl	<u>y)</u>		Secondary Indicators (2 or more required)		
Surface	Water (A1)		Water-Sta	ined Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,		
High VVa	High Water Table (A2) MLRA 1, 2, 4A, and 4B)					4A, and 4B)		
Saturation	on (A3) Iorko (B1)		Sait Crust	(BII) (ortobratos (B12)		Drainage Patterns (BT0)		
	nt Deposite (B2)		Aquatic III	Sulfide Odor (C1)		Saturation Visible on Aerial Imageny (C9)		
Drift Der	(B3)			Sunde Odor (CT)	a Livina Roots	(C3) Geomorphic Position (D2)		
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aguitard (D3)								
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5)						FAC-Neutral Test (D5)		
Surface	Soil Cracks (B6)		Stunted or	Stressed Plants (I	D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)		
Inundati	on Visible on Aerial	Imagery (B7) Other (Exp	plain in Remarks)	, , ,	Frost-Heave Hummocks (D7)		
Sparsely	Vegetated Concav	ve Surface (E	38)					
Field Obser	vations:							
Surface Wat	er Present?	Yes I	No K Depth (ind	ches):				
Water Table	Present?	YesI	No Y Depth (inc	ches):				
Saturation P	resent?	Yes I	No Depth (inc	ches):	Wetlan	d Hydrology Present? Yes No 🗡		
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								

Appendix C Site Photographs



Photo 1. Looking north from the southern edge of the PSB.



Photo 2. The northeastern edge of the PSB, showing the Coastal Willow Alliance backed by the Sitka Spruce Alliance behind it.



Photo 3. Viewing the southern edge of the PSB near Mill Creek.



Photo 4. Facing west in the center of the PSB.


Photo 5. Viewing a swale in the center of the PSB facing North.



Photo 6. Viewing more hydrophytic vegetation within Wetland 1, present on the upper slope.



Photo 7. Viewing a swale at the base of the slope within Wetland 1.



Photo 8. Dormant Coastal Willow Alliance SNC within the riparian corridor of Mill Creek.



Photo 9. SNCs Coastal Willow Alliance backed by Sitka Spruce Alliance within the riparian corridor of Mill Creek.



Photo 10. Mill Creek in late January, 2022.

Appendix D Rapid Assessment Datasheets

Combined Vegetation Rapid Assessment and Relevé Field Form (Revised March 27, 2018)

A Charles

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A.			
For Office Use:	Final database #:	Final vegetation type:	Alliance
I. LOCATIONAL	ENVIRONMENTAL	DESCRIPTION	circle: Relevé or (RA)
Database #:	Date:	Name of recorde	r: belsey McDonald
MAJORA	19/14/2	Other surveyors	
werness	UID:	Location Name:	Werrup /Keehn Development
GPS name: <u>Ac co</u> UTME	<u></u> UTN	For Relevé	only: Bearing ^o , left axis at ID point of Long / Short side Zone: 11 NAD83 GPS error: ft./ m./ PDOP
Decimal degrees:	LAT		LONG
GPS within stan	d? Yes / No If No	o, cite from GPS to stand: dis	stance (m) bearing ° inclination °
and record: Base	point ID	Projected UTMs	: UTME UTMN
Camera Name: (F Other photos:	hove Cardinal	photos at ID point: NE	SW 12,29m
Stand Size (acres) Exposure, Actual	* NE NW	Plot Area (m²): 100 / SE (SW) Flat Variable	Plot Dimensions x m RA Radius <u>~</u> m e Steepness, Actual °: 0° (1-5°) > 5-25° > 25
Topography: M Geology code:	acro: top upper Soil Tex	mid lower bottom	Micro: convex flat concave undulating Upland or Wetland/Riparian (circle one)
% Surface cover: H20: BA Ster	(I ms:25 Litter:30	Incl. outcrops) (>60cm diam) Bedrock: Boulder:	(25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud) Stone: Cobble: Gravel: Fines: 8 =100%
% Current year b Fire evidence: Ye	ioturbation	Past bioturbation present?	? Yes / No % Hoof punch section. including date of fire. if known.
FA point	at NE C	aner.	
Disturbance code	/ Intensity (L,M,H): _		_//"Other"/
II. HABITAT DE	SCRIPTION		
Tree DBH : <u>T1</u> (< Shrub: <u>S1</u> seedlin	1" dbh), <u>T2</u> (1-6" dbh),	T3 (6-11" dbh), T4 (11-24" d	bh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)
Desert Riparian T	ig (<3 yr. old), <u>32</u> your	ig (<1% dead), <u>S3</u> mature (1.	-25% dead), <u>S4</u> decadent (>25% dead)
Sector Device Million States	<12" plant http://www.size.org/ /ree/Shrub: 1 (<2ft. stu	ng (<1% dead), <u>\$3</u> mature (1- 'ht.) cm ht.), 2 (2-10ft. ht.), 3 (10	-25% dead), <u>S4</u> decadent (>25% dead) -20ft. ht.), 4 (>20ft. ht.)
Desert Palm/Joshu	 (12" plant http: <u>H2</u> (12") 'ree/Shrub: 1 (<2ft. strain a Tree: 1 (<1.5" base 	ng (<1% dead), <u>S3</u> mature (1- 'ht.) tem ht.), 2 (2-10ft. ht.), 3 (10 diameter), 2 (1.5-6" diam.), 3	-25% dead), <u>S4</u> decadent (>25% dead) -20ft. ht.), 4 (>20ft. ht.) 3 (>6" diam.)
Desert Palm/Joshu III. INTERPRET	(12" plant ht), <u>H2</u> (212" 'ree/Shrub: 1 (<2ft. st Ja Tree: 1 (<1.5" base	ng (<1% dead), <u>\$3</u> mature (1- 'ht.) tem ht.), 2 (2-10ft. ht.), 3 (10 diameter), 2 (1.5-6" diam.), 3	-25% dead), <u>S4</u> decadent (>25% dead) -20ft. ht.), 4 (>20ft. ht.) 3 (>6" diam.)
Desert Palm/Joshu III. INTERPRET/ Field-assessed veg	(12" plant htp: <u>H2</u> (212") 'ree/Shrub: 1 (<2ft. st ua Tree: 1 (<1.5" base <u>ATION OF STAND</u> etation Alliance name	$\frac{\log (<1\% \text{ dead})}{16} \cdot \frac{S3}{S3} \text{ matthre (1-1)} + \frac{S3}{10} \cdot \frac{S3}{10} + \frac{S3}{10} + \frac{S3}{10} \cdot \frac{S3}{10} + \frac{S3}{10$	-25% dead), <u>S4</u> decadent (>25% dead) -20ft. ht.), 4 (>20ft. ht.) 3 (>6" diam.) UCE FOREST Alliance
Desert Palm/Joshu III. INTERPRET/ Field-assessed veg Field-assessed Ass	(12" plant htp: <u>H2</u> (>12" 'ree/Shrub: 1 (<2ft. st ua Tree: 1 (<1.5" base <u>ATION OF STAND</u> etation Alliance name ociation name (option	$\frac{\log (<1\% \text{ dead})}{16} \cdot \frac{S3}{S3} \text{ mature (1-1)} + \frac{S3}{10} matu$	25% dead), <u>S4</u> decadent (>25% dead) -20ft. ht.), 4 (>20ft. ht.) 3 (>6" diam.) UCL FOREST Alliance
Desert Palm/Joshu III. INTERPRET Field-assessed veg Field-assessed Ass Adjacent Alliance	(3 yr. old), <u>Sz</u> youn (12" plant htp. <u>H2</u> (12") 'ree/Shrub: 1 (<2fl. st ua Tree: 1 (<1.5" base ATION OF STAND etation Alliance name ociation name (option s/direction:	$\frac{\log (<1\% \text{ dead})}{1\% \text{ dead}}, \frac{S3}{S3} \text{ mature (1-1)}$ $\frac{1}{100} \text{ term ht.}, 2 (2-10\text{ ft. ht.}), 3 (10)$ $\frac{1}{100} \text{ diameter}, 2 (1.5-6" \text{ diam.}), 3$ $\frac{1}{100} \text{ diameter}, 2 (1.5-6" \text{ diam.}), 3$ $\frac{1}{100} \text{ diameter}, 2 (1.5-6" \text{ diam.}), 3$	25% dead), <u>S4</u> decadent (>25% dead) -20ft. ht.), 4 (>20ft. ht.) 3 (>6" diam.) Uce forest Alliance Lens-Alnus rubra (S , Agrophis staloifer a (SL))
Desert Palm/Joshu III. INTERPRET/ Field-assessed veg Field-assessed Ass Adjacent Alliance	(3 yr. old), <u>Sz</u> youn (12" plant http: <u>H2</u> (22" plant http: <u>H2</u> (211 st) (211	$\frac{\log (<1\% \text{ dead})}{16} \cdot \frac{S3}{S3} \text{ mathre (1-1)} + 100 \text{ fm} + $	-25% dead), <u>S4</u> decadent (>25% dead) -20ft. ht.), 4 (>20ft. ht.) 3 (>6" diam.) Uce forest Alliance Lenis-Alnus rubra <u></u>
Desert Palm/Joshu III. INTERPRET/ Field-assessed veg Field-assessed Ass Adjacent Alliance Confidence in Alli	(3 yr. old), <u>Sz</u> youn (12" plant hu), <u>H2</u> (12" Tree/Shrub: 1 (<2ft. st ua Tree: 1 (<1.5" base ATION OF STAND etation Alliance name ociation name (option s/direction: <u>Saluk</u> ance identification: 1	$\frac{\log (<1\% \text{ dead})}{1\% \text{ dead}}, \frac{S3}{S3} \text{ mature (1-1)}$ $\frac{1}{10} \text{ tem ht.}, 2 (2-10\text{ ft. ht.}), 3 (10)$ $\frac{1}{10} \text{ diameter}, 2 (1.5-6" \text{ diam.}), 3$ $\frac{1}{10} \text{ diameter}, 3$	25% dead), <u>S4</u> decadent (>25% dead) -20fl. ht.), 4 (>20fl. ht.) 3 (>6" diam.) Uce forest Alliance Mens-Alnus rubra / / patchy distribution
Desert Palm/Joshu III. INTERPRET/ Field-assessed veg Field-assessed Ass Adjacent Alliance Confidence in Alli Phenology (E,P,L)	(12" plant htp: <u>H2</u> 12" 'ree/Shrub: T (<2ft. st ua Tree: 1 (<1.5" base <u>ATION OF STAND</u> etation Alliance name ociation name (option s/direction: <u>Salue</u> ance identification: 1 <u>: Herb</u> Shrub	$\begin{array}{r} ag (<1\% deadl, S3 mature (1- `ht.) icm ht.), 2 (2-10ft. ht.), 3 (10 : diameter), 2 (1.5-6" diam.), 3 e: S1HL3 Spr hal): Picea Sitc Cockeriana L (M) H Explain: Tree Other identi$	25% dead), <u>S4</u> decadent (>25% dead) -20ft. ht.), 4 (>20ft. ht.) 3 (>6" diam.) UCL Forest Alliance Lens-Alnus rubra /, Agrostis stolarifes a 15W patchy distribution ification or mapping information:

Combined Vegetation Rapid Assessment and Relevé Field Form (Revised March 27, 2018) SPECIES SHEET

Database #: LDEIFO01	SPECIES	SHEET
IV. VEGETATION DESCRIPTION	ALC: NO	
<u>% Cover</u> - Conifer tree / Hardwood tree: <u>()</u> / <u>U</u> <u>Height Class</u> - Conifer tree / Hardwood tree: <u>()</u> / <u>()</u> <u>Height classes:</u> 1=<1/2m, 2=1/2-1m, 3=1-2m, 4=2-	Regene Regene 5m, 5=5-10m,	% NonVasc cover: Total % Vasc Veg cover: 160 rating Tree: 1 Shrub: 5 Herbaceous: 5 erating Tree: 4 Shrub: 3 Herbaceous: 2 6=10-15m, $7=15-20m$, $8=20-35m$, $9=35-50m$, $10=>50m$
Stratum categories: T=Tree, A = SA % Cover Intervals for reference: r = trace, +	pling, E = SEe = <1%, 1-5%	dling, S = Shrub, H= Herb, N= Non-vascular , >5-15%, >15-25%, >25-50%, >50-75%, >75%
Stratum Species	% cover (C Final species determination
T Pices sitchensis	40	-
T Thurs dicata	20	
T Alous rubra	35	
T/S Econoria a avertiana	S	
T Eucalington aldrulus	5	
5 Salix Lockering	5	
5 Billors acminication	6	
5 Public Istuals	2	
S Ergen Juscipain	TT	
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5 Cotracaster	.5	
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H Carely shoutt	5	
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Combined Vegetation Rapid Assessment and Relevé Field Form (Revised March 27, 2018)

For Office Use:	Final database #:	Final vegetation type:	Alliance	
LLOCATIONAL	ENVIDONMENTAL	DESCRIPTION	Association	Lainelay Balayé av BA
Database #·	Date:	Name of recorder	Walso Man	11
Database #.	9/14/2	1 Other surveyors:	heber man	Alo
L)EIRCO	2 1112	L onet surveyors.	0	
		Location Name:	serrup	
GPS name: <u>Acro</u>	NB	For Relevé o	only: Bearing°, left axis at ID p	point of Long / Short side
UTME	UTN	IN	Zone: 11 NAD83	GPS error: ft./ m./ PDOP
Decimal degrees:	LAT ·		LONG	
GPS within stand	1? Yes / No If No	, cite from GPS to stand: dista	ance (m) bearing °	inclination °
and record: Base	point ID	Projected UTMs:	UTME	UTMN
Camera Name: 101	one Cardinal	hotos at ID point: NES	Sh) 12:56	
Other photos:	~			
Stand Size (acres) Exposure, Actual °	<1, 1-5, >5 P : NE NW	ot Area (m²): 100 / SE SW Flat Variable	Plot Dimensions x Steepness, Actual °:	_ m RA Radius <u>}</u> m 0° 1-5° > 5-25° > 25
Topography: Ma Geology code:	cro: top upper Soil Text	mid lower bottom	Micro: convex flat co	artan (circle one)
% Surface cover:	(In	al outcrope) (>60cm diam)	(25.60cm) (2.5.25cm) Time	m.7.5cm) (Incl cand mud)
H20: O BA Stem	s:50 Litter:30	Sedrock: Boulder:	Stone: Cobble: G	Gravel: Fines: 20 =100%
% Current year bio	oturbation P	ast bioturbation present?	Yes / No % Hoof pun	ch
Fire evidence: Yes	/ No (circle one) If y	s, describe in Site history se	ection, including date of fire, if k	nown.
Site history, stand a	ige, comments: Ch of Sitka	sprice don	z coastal will	low thickets
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Disturbance code / I	ntensity (L,M,H):		/"	Other" /
II. HABITAT DESC	CRIPTION			
Tree DRH . T1 (<1"	$(1-6)^{\circ}($	(6-11" dbh) T4 (11-24" dbh)	T5 (>24" dbb) T6 multi-lavere	d (T2 or T4 lower or to T6 > (00) and
Sheubi St coodling ((1-0) $(1-0)$ $(1-0)$ $(1-0)$ $(1-0)$	1% dead \$3 mature (1 255	, <u>10</u> (-24 doir), <u>10</u> munt-tayere	a (15 of 14 ayer under 15, >60% cover)
sirub: <u>Si</u> seeding (Syr. old), 32 young	-176 dead, <u>55</u> mature (1-25)	% dead), <u>54</u> decadem (~25% dea	(d)
Herbaceous: <u>H1</u> (<12	" plant ht . HZ (>12" ht)		
Desert Riparian Tre	e/Shrub: 1 (<2ft. stem	ht.), 2 (2-10ft. ht.), 3 (10-20)	ft. ht.), 4 (>20ft. ht.)	
Desert Palm/Joshua	Tree: 1 (<1.5" base di	meter), 2 (1.5-6" diam.), 3 (-	>6" diam.)	
II. INTERPRETAT	ION OF STAND			
Field-assessed vegeta	tion Alliance name:	Coastal W	illas Thicket	Alliance
Field-assessed Associ	iation name (optional)	·		
Adjacent Alliances/d	irection: Pices S	tchensis	NES. Agrostis	stalonifera (L)
Confidence in Allian	ce identification: L-	M H Explain: PA	tches on edu	ge of Sitka spracefor
henology (E,P,L): H	lerb Shrub	ree Other identifica	ation or mapping information	:
V ST PARTICIPAL CONTRACTOR	• 	and the second		

Databa	Combined Vegetation 1 se #: <u>LUEIRCO</u>	Rapid A (Revised M SPECIE	ssessment and Relevé Field Form farch 27, 2018) ES SHEET
IV. VE	GETATION DESCRIPTION	an a	
<u>% Cove</u> Height (Hei	<u>r</u> - Conifer tree / Hardwood tree: Class - Conifer tree / Hardwood tree: ght classes: 1=<1/2m, 2=1/2-1m, 3=1-2m, 4=2-5m	Reger Reger n, 5=5-10r	% NonVasc cover: Total % Vasc Veg cover: nerating Tree: Shrub: Herbaceous: nerating Tree: Shrub: Herbaceous:
	Stratum categories: T=Tree, A = SApli	ng, E = SE	Sedling, S = Shrub, H= Herb, N= Non-vascular
Stratum	Species	% cover	C Final species determination
5	Alous rubra	2	
S	Salix hockeriana	85	
5	RUDUSUSSIAUS	10	
Š	Rubus armeniacus	5	
H	Ranunculusiegen	Ĩ	
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#	Juncus hesperius		
H	Lotus compiculatus	.5	
Н	Agrostis Stolonifera	.5	
#	Anthoxantium coordium	.5	
H	Carex obnupta	.5	
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Appendix E NRCS Custom Soil Resources Report

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities. Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Humboldt County, Central Part, California

171—Worswick-Arlynda complex 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2ll1w Elevation: 0 to 810 feet

Mean annual precipitation: 60 to 75 inches Mean annual air temperature: 50 to 55 degrees F Frost-free period: 275 to 330 days Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Worswick and similar soils: 55 percent Arlynda and similar soils: 35 percent Minor components: 10 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Worswick

Setting

Landform: River valleys Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountainbase Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium derived from mixed sources

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material

A1 - 1 to 2 inches: silt loam

A2 - 2 to 4 inches: silt loam

Bwg - 4 to 9 inches: silt loam

Cg1 - 9 to 15 inches: loamy sand

Cg2 - 15 to 30 inches: gravelly loam

- Cg3 30 to 36 inches: silt loam
- Cg4 36 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 4 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: Occasional
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 5w Hydrologic Soil Group: B/D Ecological site: F004BX111CA - Redwood/western swordfernredwood sorrel, floodplains and terraces, loam Other vegetative classification: Forest Type IV, coastal (RNPF004CA)

Hydric soil rating: Yes

Description of Arlynda

Setting

Landform: River valleys Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountainbase Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium derived from mixed sources

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material *A - 1 to 2 inches:* silt loam *Bwg - 2 to 15 inches:* loam *Cg - 15 to 35 inches:* loam *2CAgb - 35 to 60 inches:* loam

Properties and qualities

Slope: 0 to 2 percent Depth to restrictive feature: More than 80 inches Drainage class: Very poorly drained Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr) Depth to water table: About 2 to 20 inches Frequency of flooding: NoneOccasional Frequency of ponding: Frequent Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 5w Hydrologic Soil Group: B/D Ecological site: F004BX111CA - Redwood/western swordfernredwood sorrel, floodplains and terraces, loam Other vegetative classification: Forest Type IV, coastal (RNPF004CA) Hydric soil rating: Yes

Minor Components

Bigtree

Percent of map unit: 5 percent Landform: Alluvial fans, terraces, fan remnants Landform position (two-dimensional): Backslope, toeslope Landform position (three-dimensional): Mountainbase Down-slope shape: Linear Across-slope shape: Linear Ecological site: F004BX111CA - Redwood/western swordfernredwood sorrel, floodplains and terraces, loam

Other vegetative classification: Forest Type IV, coastal (RNPF004CA) *Hydric soil rating:* No

Fluventic dystrudepts, loamy-skeletal

Percent of map unit: 5 percent Landform: Alluvial fans Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountainbase Down-slope shape: Linear Across-slope shape: Linear Ecological site: F004BX111CA - Redwood/western swordfernredwood sorrel, floodplains and terraces, loam Other vegetative classification: Forest Type IV, coastal (RNPF004CA) Hydric soil rating: No

225—Arcata and Candymountain soils, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2lmt0 Elevation: 10 to 290 feet Mean annual precipitation: 35 to 90 inches Mean annual air temperature: 52 to 55 degrees F Frost-free period: 275 to 325 days Farmland classification: Prime farmland if irrigated

Map Unit Composition

Arcata and similar soils: 50 percent Candymountain and similar soils: 35 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arcata

Setting

Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Marine deposits derived from mixed

Typical profile

A - 0 to 23 inches: fine sandy loam
AB - 23 to 37 inches: very fine sandy loam
Bw - 37 to 51 inches: fine sandy loam
C - 51 to 67 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): 1 Land capability classification (nonirrigated): 2s Hydrologic Soil Group: B Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam Hydric soil rating: No

Description of Candymountain

Setting

Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Marine deposits derived from mixed

Typical profile

A1 - 0 to 11 inches: fine sandy loam A2 - 11 to 19 inches: fine sandy loam Bt1 - 19 to 38 inches: fine sandy loam Bt2 - 38 to 48 inches: fine sandy loam BCt - 48 to 55 inches: sandy loam C - 55 to 63 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s Hydrologic Soil Group: B Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam Hydric soil rating: No

Minor Components

Urban land, residential

Percent of map unit: 4 percent Landform: Marine terraces Hydric soil rating: No

Timmons

Percent of map unit: 3 percent Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam Hydric soil rating: No

Halfbluff

Percent of map unit: 3 percent Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Ecological site: F004BX118CA - Sitka spruce-redwood/salal/ western brackenfern, marine terraces, marine deposits, fine sandy loam Hydric soil rating: No

Megwil,

Percent of map unit: 3 percent Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Ecological site: F004BX120CA - Redwood-Sitka spruce/California huckleberry-salmonberry/western swordfern-deer fern, marine terraces, loam Hydric soil rating: No

Talawa

Percent of map unit: 2 percent Landform: Marine terraces Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

226—Arcata and Candymountain soils, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2lmt1 Elevation: 10 to 310 feet Mean annual precipitation: 35 to 90 inches Mean annual air temperature: 52 to 55 degrees F Frost-free period: 275 to 325 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Arcata and similar soils: 50 percent Candymountain and similar soils: 35 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arcata

Setting

Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 27 inches: loam AB - 27 to 36 inches: loam Bw - 36 to 63 inches: sandy loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 2e

 Hydrologic Soil Group: B
 Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam
 Hydric soil rating: No

Description of Candymountain

Setting

Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 17 inches: fine sandy loam Bw - 17 to 55 inches: fine sandy loam C - 55 to 79 inches: loamy very fine sand

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: B Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam Hydric soil rating: No

Minor Components

Urban land, residential

Percent of map unit: 4 percent Landform: Marine terraces Hydric soil rating: No

Halfbluff

Percent of map unit: 4 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Ecological site: F004BX118CA - Sitka spruce-redwood/salal/ western brackenfern, marine terraces, marine deposits, fine sandy loam Other vegetative classification: Forest Type IV, coastal (RNPF004CA) Hydric soil rating: No

Megwil,

Percent of map unit: 3 percent Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Ecological site: F004BX120CA - Redwood-Sitka spruce/California huckleberry-salmonberry/western swordfern-deer fern, marine terraces, loam Hydric soil rating: No

Timmons

Percent of map unit: 2 percent Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam Hydric soil rating: No

Talawa

Percent of map unit: 2 percent Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Humboldt County, Central Part, California Survey Area Data: Version 7, Sep 6, 2021

Appendix F

Record of Climatological Observations and WETS Table

WETS Station: ARCATA EUREKA AP, CA

Requested years: 1971 -2022

Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall	
Jan	56.0	40.2	48.1	6.93	4.49	8.34	12	-	
Feb	55.7	39.8	47.7	6.75	4.00	8.20	11	-	
Mar	56.2	40.6	48.4	6.58	4.58	7.82	12	-	
Apr	57.3	42.4	49.8	3.92	2.47	4.73	9	-	
May	59.5	45.7	52.6	1.94	0.88	2.36	5	-	
Jun	62.3	48.2	55.3	0.92	0.31	1.06	2	-	
Jul	63.2	51.2	57.2	0.16	0.04	0.16	0	-	
Aug	64.1	51.1	57.6	0.19	0.05	0.22	0	-	
Sep	64.7	48.3	56.5	0.94	0.29	1.07	2	-	
Oct	63.0	44.9	53.9	3.09	1.14	3.73	5	-	
Nov	58.5	41.9	50.2	5.87	3.90	7.04	10	-	
Dec	55.5	39.5	47.5	8.76	5.29	10.62	13	-	
Annual:					39.22	50.47			
Average	59.7	44.5	52.1	-	-	-	-	-	
Total	-	-	-	46.05			81	-	

GROWING SEASON DATES

Years with missing data:	24 deg = 22	28 deg = 24	32 deg = 24
Years with no occurrence:	24 deg = 29	28 deg = 10	32 deg = 0
Data years used:	24 deg = 30	28 deg = 28	32 deg = 28
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	No occurrence	1/3 to 1/14: 376 days	3/27 to 11/26: 244 days
70 percent *	No occurrence	No occurrence	3/18 to 12/6: 263 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1945					M4.07	MT	0.01	M0.00	M0. 37	4. 60	13. 01	12. 89	34. 95
1946	5.01	6.44	5.31	M0.50									17. 26
1947													
1948													
1949													
1950													
1951													
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1998		14.12	8.13	2.33	4.51	0.24	0.06	0.02	0.	4.	16.		50.
									28	65	57		91
1999	5.80	12.28	9.94	2.42	2.31	0.06	0.01	0.25	0. 01	1. 53	8. 32	3. 66	46. 50
2000	12.80	8 67	3.09	3 78	2 77	1.08	0.02	0.02	0	3	4	2	43
2000	12.00	0.01	0.05	0.10	2.11	1.00	0.02	0.02	44	37	26	76	06
2001	3.92	4.53	2.21	3.07	0.99	1.00	0.17	0.23	0.	1.	9.	11.	39.
									41	78	54	41	26
2002	7.56	6.95	4.75	3.06	0.70	0.83	0.07	0.04	0. 19	0. 06	2. 36	22. 96	49. 53
2003	7.81	3.78	5.63	12.92	1.45	0.11	0.04	0.58	0.	0.	6.	12.	52.
			-						55	56	08	97	48
2004	6.71	9.07	2.59	2.07	1.14	0.07	0.11	0.70	0.	4.	1.	9.	38.
2005	5.54	2.16	6 1 2	6 55	4.86	4 10	0.10	0.14	03	98 2	0	12	89 56
2000	0.04	2.10	0.15	0.00	4.00	4.10	0.10	0.14	0. 17	3. 42	9. 38	99	50. 54
2006	11.94	5.97	10.63	4.50	1.48	0.56	0.08	0.10	0.	0.	9.	9.	55.
									17	70	50	68	31
2007	2.63	13.11	3.66	3.71	0.95	0.67	0.86	0.12	1. 03	5. 73	3. 23	7. 78	43. 48

2008	10.26	3.65	4.79	2.40	0.10	0.40	0.09	0.82	0. 18	1. 13	5. 08	10. 01	38. 91
2009	2.06	6.78	6.78	1.38	3.86	0.31	0.19	0.14	0. 63	2. 45	4. 34	5. 08	34. 00
2010	10.49	5.38	6.76	8.36	3.58	3.46	0.10	0.21	2. 00	5. 29	6. 35	12. 38	64. 36
2011	2.69	4.66	12.57	5.07	1.72	1.31	0.25	M0.05	M0. 37	5. 16	4. 64	3. 31	41. 80
2012	9.11	M2.12	12.65	5.66	1.08	2.41	0.76	0.08	0. 10	3. 55	6. 93	11. 06	55. 51
2013	2.94	2.00	3.47	2.24	1.88	0.78	0.00	0.10	4. 37	0. 05	1. 70	0. 98	20. 51
2014	2.16	7.90	8.85	1.84	1.05	0.73	Т	0.00	3. 23	5. 74	5. 11	9. 96	46. 57
2015	2.07	5.59	3.78	2.39	0.10	0.07	0.13	0.51	0. 59	1. 10	5. 30	18. 77	40. 40
2016	12.30	2.93	10.48	3.27	0.64	0.11	0.59	0.02	Т	12. 03	7. 20	8. 22	57. 79
2017	11.03	14.24	10.09	5.32	1.26	0.72	0.01	0.01	0. 73	1. 81	8. 55	2. 31	56. 08
2018	9.19	2.97	8.35	5.34	0.97	0.48	0.02	0.02	0. 32	0. 89	5. 68	5. 40	39. 63
2019	8.39	16.09	5.39	3.64	3.11	Т	0.02	0.46	3. 21	2. 08	2. 05	7. 88	52. 32
2020	9.26	1.01	2.80	2.11	5.66	0.53	MT	0.02	0. 77	0. 60	3. 27	5. 14	31. 17
2021	6.81	6.15	4.29	0.67	0.33	1.93	0.11	0.01	1. 68	5. 40	3. 79	6. 73	37. 90
2022	2.92	M0.00											2.92

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2022-02-08



Precipitation Data for Groundwater Monitoring

Precipitation data and rainfall measurements for the project site were taken from the National Oceanic Atmospheric Administration (NOAA) rain gage at the Eureka Weather Forecast Office (WFO) on Woodley Island. The Eureka NOAA rain gauge is the station nearest to the project site with sufficient historical data (at least 20 years) required to create an NRCS WETS table.

Table 1 presents NRCS WETS table data applicable to the project site for the 2023 water year. The NRCSWETS data includes the mean monthly below normal, normal, and above normal precipitation values forthe period of 1972 to 2022 (AgACIS 2023).

Precipitation (inches)										
Month	Below Normal	Normal	Above Normal							
January	3.59	5.98	7.25							
February	3.21	5.35	6.49							
March	3.74	5.53	6.61							
April	1.94	3.2	3.88							
Мау	0.73	1.57	1.91							
June	0.25	0.66	0.79							
July	0.05	0.17	0.18							
August	0.06	0.28	0.27							
September	0.19	0.8	0.88							
October	0.96	2.45	2.96							
November	3.25	5.26	6.36							
December	4.02	7.22	8.8							

 Table 1
 Eureka, California WETS table (1972-2022)

Rainfall data (as of February 24, 2023) for Eureka for the 2023 water year (October 1, 2022, to September 30, 2023) is shown in **Figure 1**. Below normal, normal, and above normal rainfall data from the WETS Table for Eureka are shown for comparison.



Figure 1 Eureka, California WY 2023 Precipitation and WETS graph





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Appendix D Botanical Memorandum Rev1



Technical Memorandum

October 10, 2022

То	Mary Keehn	Contact No.						
Copy to	Misha Schwarz, GHD Project Director	Email	marykeehncg@gmail.com					
From	Jane Cipra, GHD Botanist Project No. 12560473							
Project Name	We Are Up Proposed Development	We Are Up Proposed Development						
Subject	Rare Plant and Sensitive Natural Commu	unities Assessmer	t					

1. Introduction

This Technical Memorandum reports the results of complete protocol-level botanical surveys, site reconnaissance, vegetation classification, and habitat assessment, on behalf of We Are Up (Client), in support of the proposed We Are Up Proposed Development (Project) within the community of McKinleyville, California (Attachment A Figure 1). The surveys were conducted within the Project Study Boundary (PSB) as shown in Attachment A, Figure 2. GHD conducted seasonally appropriate floristic surveys on April 12 and June 2, 2022 for potentially occurring special status plants within the PSB (Table 1). A site visit was made on September 15, 2022 to assess habitat quality of a small area added in the northwest corner of the PSB resulting from a lot line adjustment after the initial floristic surveys were completed. The area encompassed by the expanded PSB is approximately 0.36 acres, most of which is comprised of regularly mowed field, and the remainder is gravel and paved surfaces. This technical memorandum summarizes all botanical and habitat studies conducted during the three site visits. No special status plants were detected onsite, and a complete plant list is included in Attachment B. Site photos can be found in Attachment C. Vegetation communities were identified and mapped in the Aquatic Resources Delineation completed March 1, 2022. Sensitive Natural Communities (SNC) on site include a 0.75-acre Sitka spruce (Picea sitchensis) stand which is considered a (S2), as well as 0.85-acres of coastal willow (Salix hookeriana) which has an SNC ranking of S3. Please see the Aquatic Resources Delineation Report for details, maps, and datasheets on these communities.

1.1 Location

The PSB consists of partially developed, and grassy and vegetated open space, just west of Grocery Outlet in McKinleyville, California (**Attachment A, Figure 1**). The PSB is bordered by residential areas to the North and West, and by Mill Creek to the South, and a forested lot to the East. The property is a generally flat to mildly sloped grassland field, with several small clumps of trees within, and bordered by trees to the South and West of the property.

2. Regulatory Setting

2.1 Federally Listed Species

Special status plant species under Federal jurisdiction include those listed as endangered, threatened, or as candidate species by the United States Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA).

2.2 State Listed Species

Special status plant species under California Department of Fish and Wildlife (CDFW) jurisdiction include the following:

- Endangered, Threatened, or Candidate plant species listed under the California Endangered Species Act (CESA)
- Plants listed as Rare under California Native Plant Protection Act (Fish & G. Code, § 1900 et seq.)
- California Rare Plant Ranking (CRPR) rare plants on the California Native Plant Society's (CNPS) Lists 1 and 2.

Plant species on CNPS Lists 1 and 2 are considered eligible for state listing as Endangered or Threatened pursuant to the California Fish and Game Code, and CDFW has oversite of these special status plant species as a trustee agency. Such species are considered during the CEQA process because they meet the definition of Threatened or Endangered under Sections 2062 and 2067 of the California Fish and Game Code. Plants on CNPS Lists 3 and 4 do not have formal protection under CEQA, but may merit consideration in certain circumstances. Additionally, locally significant plants (CEQA Guidelines, (§ 15125, subd. (c)), or as designated in local or regional plans, policies, or ordinances) are considered special status plant species (CDFW 2018).

2.3 Sensitive Natural Communities

Natural vegetation communities listed as Sensitive in the California Natural Diversity Database (CNDDB) and on the California Sensitive Natural Communities List are to be addressed within the CEQA review process (CDFW 2022a). Sensitive Natural Communities (SNCs) are classified at the Alliance level according to A Manual of California Vegetation (Sawyer et al. 2009). CDFW considers alliances with a NatureServe State Rank of S1 to S3 to be Sensitive Natural Communities, and therefore these alliances are considered during the CEQA process (CDFW 2022a).

3. Methods

3.1 Pre-Survey Investigations

A scoping list of CRPR plant species and habitats with recorded occurrences in the project vicinity was compiled prior to surveys on April 12, 2022 by consulting the CNDDB (CDFW 2022b), the CNPS Inventory of Rare and Endangered Vascular Plants (CNPS 2022), and U.S. Fish and Wildlife Service IPaC (USFWS 2022) (Table 1). The CNDDB RareFind database was also consulted for rare plant occurrences documented in the project vicinity.

The scoping list includes special-status plants with documented occurrences on the Arcata North USGS quadrangle and adjacent seven quadrangles (Crannell, Panther, Creek, Blue Lake, Korbel, Arcata South, Eureka, and Tyee City). The query yielded 22 special status plant species with CRPR rank of 1 or 2, including two state and federally endangered plants. All species were reviewed prior to the field survey and evaluated for their potential to occur at the site. Of the species identified during scoping, two have a high probability and one has a moderate probability of occurring within the study area, 28 have a low probability of occurring within the study area, 28 have a low probability of occurring within the study area, and 15 have no potential to occur onsite because they are restricted to coastal dunes, bluffs, or saltmarshes. Plants with a high to moderate potential to occur onsite include Howell's montia (*Montia howellii*, CRPR 2B.2), Siskiyou checkerbloom (*Sidalcea malviflora* ssp. *patula*, CRPR 1B.2) and coast checkerbloom (*Sidalcea oregana* ssp. *eximia*, CRPR 1B.2), which have been documented in similar disturbed fields and roadside edge habitats in suburban areas nearby.

CNDDB documented one Sensitive Habitat (classified according to Holland, 1986) within the 8-quad area: Northern Coastal Salt Marsh. This habitat type is not present in the PSB.

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Table 1 Potential for Special Status Plants to Occur in the PSB

Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
Angelica lucida	sea-watch	None	None	G5	S3	4.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps	No potential. No suitable habitat is present in the PSB.
Astragalus rattanii var. rattanii	Rattan's milk-vetch	None	None	G4T4	S4	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	No potential. No suitable habitat is present in the PSB.
Calamagrostis bolanderi	Bolander's reed grass	None	None	G4	S4	4.2	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest	Low potential. Marginally suitable habitat is present in the PSB. There are no known occurrences in the Project vicinity.
Cardamine angulata	seaside bittercress	None	None	G4G5	S3	2B.2	Lower montane coniferous forest, North Coast coniferous forest	No potential. No suitable habitat is present in the PSB.
Carex leptalea	bristle-stalked sedge	None	None	G5	S1	2B.2	Bogs and fens, Marshes and swamps, Meadows and seeps	Low potential. The nearest non-historic occurrence (from 2011) is 10 miles north of the PSB.
Carex praticola	northern meadow sedge	None	None	G5	S2	2B.2	Meadows and seeps	Low potential. This species has not been observed in the Humboldt Bay Area since 1915.
Castilleja litoralis	Oregon coast paintbrush	None	None	G3	S3	2B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub	No potential. No suitable habitat is present in the PSB.
Chrysosplenium glechomifolium	Pacific golden saxifrage	None	None	G5?	S3	4.3	North Coast coniferous forest, Riparian forest	No potential. No suitable habitat is present in the PSB.
Coptis laciniata	Oregon goldthread	None	None	G4?	S3?	4.2	Meadows and seeps, North Coast coniferous forest	Low potential. Marginally suitable habitat is present in the PSB. There are no known occurrences in the Project vicinity.

Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
Eleocharis parvula	small spikerush	None	None	G5	S3	4.3	Marshes and swamps	Low potential. Marginally suitable habitat is present in the PSB. There are no known occurrences in the Project vicinity.
Erythronium revolutum	coast fawn lily	None	None	G4G5	S3	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	No potential. No suitable habitat is present in the PSB.
Fissidens pauperculus	minute pocket moss	None	None	G3?	S2	1B.2	North Coast coniferous forest	No potential. No suitable habitat is present in the PSB.
Gilia capitata ssp. pacifica	Pacific gilia	None	None	G5T3	S2	1B.2	Chaparral, Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	Low potential. This species has not been observed in the Humboldt Bay Area since 1905.
Hesperevax sparsiflora var. brevifolia	short-leaved evax	None	None	G4T3	S3	1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie	No potential. No suitable habitat is present in the PSB.
Hosackia gracilis	harlequin lotus	None	None	G3G4	S3	4.2	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland	Low potential. Marginally suitable habitat is present in the PSB. There are no known occurrences in the Project vicinity.
Lasthenia californica ssp. macrantha	perennial goldfields	None	None	G3T2	S2	1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub	No potential. No suitable habitat is present in the PSB.
Lathyrus palustris	marsh pea	None	None	G5	S2	2B.2	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous	Low potential. The only known occurrence of this species in the Humboldt Bay Area is

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Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
							forest, Marshes and swamps, North Coast coniferous forest	an observation (from 2003) 12 miles south of the PSB.
Layia carnosa	beach layia	FE	CE	G2	S2	1B.1	Coastal dunes, Coastal scrub	No potential. No suitable habitat is present in the PSB.
Lilium kelloggii	Kellogg's lily	None	None	G3	S3	4.3	Lower montane coniferous forest, North Coast coniferous forest	No potential. No suitable habitat is present in the PSB.
Lilium occidentale	western lily	FE	CE	G1	S1	1B.1	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, North Coast coniferous forest	Low potential. Suitable habitat is present but this six-foot tall red lily is threatened by collection and known from few locations in the Humboldt bay area.
Listera cordata	heart-leaved twayblade	None	None	G5	S4	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	Low potential. Marginally suitable habitat is present.
Lycopodium clavatum	running pine	None	None	G5	S3	4.1	Lower montane coniferous forest (mesic) Marshes and swamps North Coast coniferous forest (mesic)	No potential. The PSB is outside of the elevational range for this species (150 – 4,020 feet).
Mitellastra caulescens	leafy-stemmed mitrewort	None	None	G5	S4	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	Low potential. Marginally suitable habitat is present.
Monotropa uniflora	ghost-pipe	None	None	G5	S2	2B.2	Broadleafed upland forest, North Coast coniferous forest	No potential. No suitable habitat is present in the PSB.

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Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
Montia howellii	Howell's montia	None	None	G3G4	S2	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools	Moderate potential. Suitable habitat is present.
Oenothera wolfii	Wolf's evening- primrose	None	None	G2	S1	1B.1	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	Low potential. Marginally suitable habitat is present.
Packera bolanderi var. bolanderi	seacoast ragwort	None	None	G4T4	S2S3	2B.2	Coastal scrub, North Coast coniferous forest	No potential. No suitable habitat is present in the PSB.
Piperia candida	white-flowered rein orchid	None	None	G3	S3	1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	No potential. No suitable habitat is present in the PSB.
Pityopus californicus	California pinefoot	None	None	G4G5	S4	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	No potential. No suitable habitat is present in the PSB.
Pleuropogon refractus	nodding semaphore grass	None	None	G4	S4	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	Low potential. Suitable habitat is present in the PSB. There are no known occurrences of this species in the Project vicinity.
Ribes laxiflorum	trailing black currant	None	None	G5?	S3	4.3	North Coast coniferous forest	No potential. No suitable habitat is present in the PSB.
Sidalcea malachroides	maple-leaved checkerbloom	None	None	G3	S3	4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	Low potential. Suitable habitat is present in the PSB; however, this species has not been observed in the McKinleyville Area since 1933.

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Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	None	None	G5T2	S2	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	High potential . Suitable habitat is present and there is a CNDDB occurrence (from 2005) approximately 1.4 miles north of the PSB.
Sidalcea oregana ssp. eximia	coast checkerbloom	None	None	G5T1	S1	1B.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	High potential . Suitable habitat is present and there is a CNDDB occurrence (from 2001) approximately 2.1 miles north of the PSB.
Silene scouleri ssp. scouleri	Scouler's catchfly	None	None	G5T4T5	S2S3	2B.2	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	Low potential. Marginally suitable habitat is present in the PSB.
Sulcaria spiralifera	twisted horsehair lichen	None	None	G3G4	S2	1B.2	Coastal dunes, North Coast coniferous forest	No potential. No suitable habitat is present in the PSB.
Viola palustris	alpine marsh violet	None	None	G5	S1S2	2B.2	Bogs and fens, Coastal scrub	Low potential. This species has not been observed in the Humboldt Bay Area since 1923.

Footnotes:

1 General habitat, and microhabitat column information, reprinted from CNDDB (October 2021).

2 Rankings from CNDDB (October 2021).

Column Header Categories and Abbreviations:

FESA Listing status under the federal Endangered Species Act (ESA)

FE Federal Endangered; FT = Federal Threatened; FC = Federal Candidate; FD = Federally Delisted

CESA Listing status under the California state Endangered Species Act (CESA)

SE State Endangered; SD = State Delisted; ST = State Threatened.

GRank: Global Rank from NatureServe's Heritage Methodology (NatureServe 2021) (ranking according to degree of global imperilment - G1 = Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors; G2 = Imperiled—At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors; G3 = Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors; G4 = Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors; G5 = Secure—Common; widespread and abundant. Subspecies/variety level: "Subspecies/varieties receive a T-rank attached to the G-rank. With the subspecies/varieties, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety" (CDFW 2021b); ? = " Denotes inexact numeric rank" (NatureServe 2021); Q = " Questionable taxonomy that may reduce conservation priority" (NatureServe 2021)

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SRank: State Rank from NatureServe's Heritage Methodology (NatureServe 2021) (ranking according to degree of imperilment in the state (California) - S1 = Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state; S2 = Imperiled— Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state; S3 = Vulnerable—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state; S4 = Apparently Secure—Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors; S5 = Secure—Common, widespread, and abundant in the state; SNR = State Not Ranked.

CRPR: CNPS rankings for rare plants (CNPS 2021) - 1A = Plants presumed extinct in California; 1B = Plants rare, threatened or endangered in California and elsewhere; 2 = Plants rare, threatened, or endangered in California, but more common elsewhere; 3 = Plants about which more information is needed (a review list); 4 = Plants of limited distribution (a watch list); n/a = not applicable; Threat Code extensions and their meanings: ".1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat); .2 – Moderately threatened in California (20-80% of occurrences threatened / moderate degree and immediacy of threat); .3 – Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat); .2 – Moderately threatened in California (CDFW 2021b).

Potential to Occur:

No potential: Habitat in and adjacent to the PSB is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Low potential: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found in the PSB.

Moderate potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found in the PSB.

High potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on in the PSB

Present: Detected or documented on-site.

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3.2 Floristic Surveys

GHD botanists Christian Hernandez and Jane Cipra conducted floristic surveys in April and June 2022 to cover the blooming period for all potentially occurring special status plants onsite. The special status plant survey followed Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and General Rare Plant Survey Guidelines by the Endangered Species Recovery Program (USFWS 2002). The special status plant survey was conducted by walking the site and identifying all plant species encountered to the lowest taxonomic level necessary for rare plant identification. Nomenclature follows The Jepson Manual (Baldwin et al 2012). GHD Botanist Christian Hernandez conducted the initial survey on April 12, 2022 and Jane Cipra conducted the second survey on June 2, 2022. The site assessment of the expanded PSB was conducted by GHD botanist Kolby Lundgren on September 15, 2022.

GHD Botanist Jane Cipra has an M.A. in Biology from Humboldt State University, with over fifteen years of experience conducting special status plant surveys. GHD Botanist Christian Hernandez has a degree in Environmental Science from Humboldt State University and two years of experience conducting biological and botanical surveys. GHD Botanist Kolby Lundgren has a degree in Botany from Humboldt State University and seven years of experience conducting biological and botanical surveys.

A list of species observed within the project area is provided (Attachment C).

4. Results

4.1 Special Status Plants

No special status plant species were observed onsite. The April 12 survey was timed to observe earlyspring blooming potentially occurring special status species. The following survey on June 2 was timed to observe later-blooming species. Seasonally appropriate floristic surveys were completed by qualified botanists according to protocol (CDFW 2018). The site conditions in the expanded PSB do not support quality habitat for those species listed with potential to occur in the Project footprint. Species in the expanded footprint were identifiable during the September 15, 2022 survey by a combination of vegetation, flowers, and fruit. No evidence of late blooming species with moderate to high potential to occur in the Project footprint (*Sidalcea* sp.) was detected. A pre-construction survey is recommended for the expanded PSB only, to confirm the presence or absence of early blooming species with moderate to high potential to occur in the Project footprint (*Montia howellii*), and no additional surveys for special status plant species are recommended for the remainder of the Project area.

5. Conclusion

Protocol-level floristic surveys for potentially occurring special status plants and investigations for sensitive habitats and potential wetlands onsite were completed on April 12 and June 2, 2022. An additional site assessment was made on September 15, 2022 for a small area of frequently disturbed habitat added to the PSB as apart of a lot line adjustment. No special status plants were detected onsite. The parcel contains pasture dominated by non-native grasses with Coastal Willow Thickets and Sitka Spruce stands around the northeastern and southeastern edge of the PSB. Highly invasive species including Scotch broom, English ivy, English holly, cape ivy, cotoneaster, and Himalayan blackberry.

5.1 Scope and limitations

This technical memorandum has been prepared by GHD for Mary Keehn. It is not prepared as, and is not represented to be, a deliverable suitable for reliance by any person for any purpose. It is not intended for circulation or incorporation into other documents. The matters discussed in this memorandum are limited to those specifically detailed in the memorandum and are subject to any limitations or assumptions specially set out.

5.2 Accessibility of documents

If this Technical Memorandum is required to be accessible in any other format this can be provided by GHD upon request and at an additional cost if necessary.

The opinions, conclusions and any recommendations in this memorandum are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this memorandum are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this memorandum.

6. References

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Attachments

Attachment A Figures



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Attachment B

Plant Species Observed

Scientific Name	Common Name	Family	Status
Carpobrotus edulis	iceplant	Aizoaceae	invasive non-native
Allium triquetrum	white flowered onion	Aliaceae	non-native
Amarillis belladona	naked ladies	Amaryllidaceae	non-native
Narcissus spp.	narcissus	Amaryllidaceae	non-native
Daucus carota	carrot	Apiaceae	non-native
Oenanthe sarmentosa	water parsley	Apiaceae	non-native
llex aquifolium	holly	Aquifoliaceae	invasive non-native
Zantedeschia aethiopica	calla lily	Aracaea	invasive non-native
Delairea odorata	Cape ivy	Araliaceae	invasive non-native
Hedera helix	English ivy	Araliaceae	invasive non-native
Achillea millefolium	yarrow	Asteraceae	native
Baccharis pilularis	coyote brush	Asteraceae	non-native
Chamomilla swaveolus	chamomile	Asteraceae	non-native
Cirsium vulgare	bullthistle	Asteraceae	invasive non-native
Erechtites sp.	fireweed	Asteraceae	non-native
Helminthotheca echioides	bristly oxtongue	Asteraceae	non-native
Hypochaeris radicata	hairy cats ear	Asteraceae	invasive non-native
Leontodon saxatilis	hawkbit	Asteraceae	non-native
Leucanthemum vulgare	ox eye daisy	Asteraceae	invasive non-native
Senecio vulgaris	common groundsel	Asteraceae	non-native
Sonchus asper	prickly sow thistle	Asteraceae	non-native
Symphyotrichum chilense	Pacific aster	Asteraceae	native
Taraxacum erythrospermum	red-seeded dandelion	Asteraceae	non-native
Tragopogon porrifolius	salsify	Asteraceae	non-native
Athyrium filix-femina	common ladyfern	Athyriaceae	native
Alnus rubra	red alder	Betulaceae	native
Brassica rapa	common mustard	Brassicaceae	invasive non-native
Raphanus raphinastrum	wild radish	Brassicaceae	non-native
Lonicera involucrata	coast twinberry	Caprifoliaceae	native
Cerastrium glomeratum	sticky chickweed	Caryophyllaceae	non-native
Crassula connata	pygmy stonecrop	Crassulaceae	non-native
Hesperocyparis macrocarpa	Monterey cypress	Cupressaceae	non-native
Sequoia sempervirens	coast redwood	Cupressaceae	native
Thuja plicata	western red cedar	Cupressaceae	native
Carex microptera	smallwing sedge	Cyperaceae	native
Carex obnupta	slough sedge	Cyperaceae	native

Scientific Name	Common Name	Family	Status
Eleocharis acicularis var. gracilescens	needle spikerush	Cyperaceae	native
Isolepis cernua	low bulrush	Cyperaceae	native
Scirpus microcarpus	small fruited bulrush	Cyperaceae	native
Pteridium aquilinum	brackenfern	Dennstaedtiaceae	native
Polystichum munitum	western sword fern	Dryopteridaceae	native
Equisetum telmateia	giant horsetail	Equisetaceae	native
Erica lusitanica	Spanish heather	Ericaceae	invasive non-native
Vaccinium ovatum	evergreen huckleberry	Ericaceae	native
Euphorbia lathyrus	caper spurge	Euphorbiaceae	non-native
Cytisus scoparius	Scotch broom	Fabaceae	invasive non-native
Lotus corniculatus	bird's foot trefoil	Fabaceae	non-native
Lotus peduncularis	big trefoil	Fabaceae	non-native
Medicago arabica	spotted medick	Fabaceae	non-native
Medicago polymorpha	burr clover	Fabaceae	non-native
Medicago sativa	alfalfa	Fabaceae	non-native
Trifolium dubium	lesser trefoil	Fabaceae	non-native
Trifolium repens	white clover	Fabaceae	non-native
Vicia sativa	spring vetch	Fabaceae	non-native
Erodium moschatum	whitestem filaree	Geraniaceae	non-native
Geranium dissectum	cutleaf geranium	Geraniaceae	non-native
Geranium molle	dove's foot geranium	Geraniaceae	non-native
Iris germanica	yellow bearded iris	Iridaceae	non-native
Sisyrinchium californicum	golden blue-eyed grass	Iridaceae	native
Juncus balticus	Baltic rush	Juncaceae	native
Juncus effusus	common bog rush	Juncaceae	native
Juncus effusus var. pacifica	Pacific rush	Juncaceae	native
Juncus hesperius	coast or bog rush	Juncaceae	native
Mentha pulegium	pennyroyal	Lamiaceae	invasive non-native
Mentha suaveolens	apple mint	Lamiaceae	non-native
Prunella vulgaris	self heal	Lamiaceae	native
Stachys chamissonis	hedge nettle	Lamiaceae	native
Veronica persica	wall speedwell	Lamiaceae	non-native
Linum bienne	flax	Linaceae	non-native
Modiola caroliniana	Carolina bristle mallow	Malvaceae	non-native
Morella californica	California wax myrtle	Myracaceae	native
Eucalyptus globulus	blue gum	Myrtaceae	invasive non-native
Epilobium ciliatum	northern willow herb	Onagraceae	non-native

Scientific Name	Common Name	Family	Status
Parentucellia viscosa	yellow glandweed	Orobanchaceae	non-native
Oxalis stricta	wood sorrel	Oxalidaceae	non-native
Abies grandis	grand fir	Pinaceae	native
Picea glauca	white spruce	Pinaceae	non-native
Picea sitchensis	Sitka spruce	Pinaceae	native
Digitalis purpurea	foxglove	Plantaginaceae	non-native
Plantago lanceolata	ribwort	Plantaginaceae	invasive non-native
Plantago major	broadleaf plantain	Plantaginaceae	non-native
Veronica scutellata	marsh speedwell	Plantaginaceae	non-native
Agrostis stolonifera	redtop	Poaceae	invasive non-native
Alopecurus aequalis	shortawn foxtail	Poaceae	native
Anthoxanthum odoratum	wweet vernal grass	Poaceae	invasive non-native
Avena sativa	common oat	Poaceae	non-native
Briza maxima	rattlesnake grass	Poaceae	non-native
Bromus catharticus	rescue grass	Poaceae	non-native
Bromus hordeaceus	soft chess	Poaceae	invasive non-native
Cynodon dactylon	Bermuda grass	Poaceae	invasive non-native
Dactylus glomeratus	orchard grass	Poaceae	non-native
Danthonia californica	California oatgrass	Poaceae	non-native
Danthonia decumbens	heath grass	Poaceae	non-native
Festuca arundinacea	Reed fescue	Poaceae	invasive non-native
Festuca bromoides	fescue	Poaceae	non-native
Festuca perennis	Italian rye grass	Poaceae	invasive non-native
Glyceria declinata	manna grass	Poaceae	non-native
Holcus lanatus	common velvetgrass	Poaceae	invasive non-native
Poa annua	annual blue grass	Poaceae	non-native
Poa pratensis	Kentucky bluegrass	Poaceae	non-native
Rumex acetosella	sheep sorrel	Polygonaceae	invasive non-native
Rumex obtusifolius	broadleaf dock	Polygonaceae	non-native
Ranunculus repens	crowfoot, creeping buttercup	Ranunculaceae	invasive non-native
Frangula purshiana	cascara sagrada	Rhamnaceae	native
Cotoneaster spp.	cotoneaster	Rosaceae	non-native
Fragaria vesca	wild strawberry	Rosaceae	native
Malus domestica	apple tree	Rosaceae	non-native
Malus fusca	western crabapple	Rosaceae	non-native
Physocarpus capitatus	ninebark	Rosaceae	non-native
Potentilla anserina	wilver weed cinquefoil	Rosaceae	native

Scientific Name	Common Name	Family	Status
Rosa californica	California wild rose	Rosaceae	native
Rubus armeniacus	Himalayan blackberry	Rosaceae	invasive non-native
Rubus ursinus	California blackberry	Rosaceae	native
Galium trifidum	three-petal bedstraw	Rubiaceae	non-native
Gallium aparine	cleavers	Rubiaceae	non-native
Maianthemum dilatatum	false lily of the valley	Ruscaceae	native
Salix hookeriana	coastal willow	Salicaceae	native
Salix lasiolepis	arroyo willow	Salicaceae	native
Scrophularia californica	California figwort	Scrophulariaceae	native
Viola adunca	western dog violet	Violaceae	native

Attachment C

Site Photographs



Photo 1. View northwest from the eastern end of the PSB showing the stand of redwood in the middle of the parcel.



Photo 2. View north of the barn and residence from the southern extent of the PSB.



Photo 3. View of arroyo willow at eastern edge of the PSB.



Photo 4. Cape ivy at the barn.



Photo 5. Understory of the redwoods in the center of the PSB.



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