APPENDIX C3

Aquatic Resources Delineation Report

AQUATIC RESOURCES DELINEATION REPORT MANCHESTER SUBSEA CABLES PROJECT, MENDOCINO COUNTY



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ICF. 2019. Aquatic Resources Delineation Report Manchester Subsea Cables Project, Mendocino County. February. Sacramento, CA. Prepared for RTI Infrastructure, Inc. This report presents the methods and results of a delineation of aquatic resources conducted for the Manchester Subsea Cables Project (Project) and provides technical documentation for delineated wetlands, non-wetland waters, and California Coastal Act (CCA) wetlands.

The Project occurs approximately 35 miles south of Fort Bragg and 5 miles north of Point Arena in southwestern Mendocino County. The Project parallels California State Route 1 (SR 1) for approximately 5 miles, with the Pacific Ocean immediately west of the Project. RTI Infrastructure, Inc. is proposing to install fiber optic infrastructure along SR 1 and adjacent properties (Figure 1); the fiber optic cables will eventually extend west on the ocean floor of the Pacific Ocean to Hong Kong, China, Australia, and the island of Guam.

Included in this report are delineated aquatic resources regulated under Sections 404 and 401 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and the CCA. The delineated aquatic resources described in the report consist of wetlands and non-wetland waters regulated by the U.S. Army Corps of Engineers (USACE) and CCA wetlands regulated by the California Coastal Commission (CCC).

The survey area covers 48 acres and encompasses all areas required to construct the project, including areas for access, storage, and staging of materials and equipment. The survey area consists of the road shoulders within the California Department of Transportation right-of-way (ROW) to the fence line for approximately 5 miles along both sides of SR 1, Kinney Road west of SR 1, the cable landing parcel west of SR 1, and three cable landing stations west of SR 1.

The field survey was conducted on June 26–28, September 29–30, and October 10–12, 2018 by ICF botanist/wetland ecologists using the routine on-site determination methods described in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the supplemental methods and indicators in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (U.S. Army Corps of Engineers 2010).

USACE jurisdictional non-wetland waters were mapped and delineated in accordance with indicators and guidance described in the USACE Regulatory Guidance Letter No. 05-05, dated December 7, 2005 (U.S. Army Corps of Engineers 2005) and the *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (Mersel and Lichvar 2014).

The Pacific Ocean is approximately 500 feet west of the survey area. Via desktop delineation, the upper elevational limit of tidal waters was delineated at the high tide line (HTL) per section 404 of the Clean Water Act. The HTL was estimated from high predicted tide in 2019 for the closest tidal station to the survey area, the Arena Cove Station (Station ID: 9416841) (National Oceanic and Atmospheric Administration 2019); the Arena Cove Station is approximately 7.1 miles south of the cable landing parcel, which is the portion of the survey area closest to the Pacific Ocean. The HTL was delineated at 7.5 feet above mean sea level. Per Section 10 of the Rivers and Harbors Act, the upper elevational limit of navigable waters was delineated at the reported mean high water (MHW) for the Arena Cove Station (National Oceanic and Atmospheric Administration 2019); the MHW is 5.2 feet above mean sea level. Topographic data were obtained from the U.S. Geological Survey (2017); the upper elevation limits of the HTL and MHW are depicted on Sheet 1 of Appendix A.

Within the survey area, 0.556 acre of potential waters of the United States was identified and mapped, comprising 0.101 acre of wetlands and 0.455 acre of non-wetland waters (Table 1).

This report was prepared to support the request for a preliminary jurisdictional determination from the USACE, San Francisco District. In accordance with the preliminary jurisdictional determination approach, all of these features were interpreted to be potentially jurisdictional under Section 404 of the Clean Water Act, and applicants waive or set aside questions regarding the jurisdictional status of wetlands and non-wetland waters, as described in *U.S. Army Corps of Engineers Regulatory Guidance Letter No. 16-01* (U.S. Army Corps of Engineers 2016).

ICF botanist wetland ecologists identified and mapped 0.584 acre of CCA wetlands in the survey area. CCA wetlands include features with evidence of wetland hydrology and one other wetland indicator (hydric soils or hydric vegetation) regulated by the USACE.

Table 1 reports waters of the United States and CCA wetlands delineated in survey area. All waters of the United States presented in this report also would qualify as waters of the state and CCA wetlands according to the CCC.

Aquatic Resource Type	Area (acres)
Waters of the United States	
Wetlands	
Emergent wetlands	0.101
Non-Wetland Waters	
Perennial stream	0.286
Intermittent stream	0.057
Ephemeral stream	0.015
Roadside ditch	0.057
Culverts	0.040
Total Waters of the United States	0.556
California Coastal Act Wetlands	
Emergent wetland	0.101
Seasonal wetland	0.036
Riverine wetland	0.447
Total California Coastal Act Wetlands	0.584

Table 1. Summary of Aquatic Resources in the Survey Area

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Acronyms and Abbreviations

°F	Fahrenheit
CCA	California Coastal Act
CCC	California Coastal Commission
CFR	Code of Federal Regulations
CLP	cable landing parcel
CLS	cable landing station
GPS	global positioning system
HDD	horizontal directional drilling
HTL	high tide line
LMH	landing manhole
MHW	mean high water
MSL	mean sea level
MWH	mean high water
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
Project	Manchester Subsea Cables Project
ROW	right-of-way
SR	State Route
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

This report presents the methods and results of a delineation of aquatic resources conducted for the Manchester Subsea Cables Project (Project) and provides technical documentation for delineated wetlands, non-wetland waters, and California Coastal Act (CCA) wetlands. RTI Infrastructure, Inc. is proposing to install fiber optic infrastructure along State Route 1 (SR 1) and adjacent properties (Figure 1); the fiber optic cables will eventually extend west on the ocean floor of the Pacific Ocean to Hong Kong, China, Australia, and the island of Guam.

Project Location

The Project is in Manchester in southern Mendocino County, California, approximately 35 miles south of Fort Bragg and 5 miles north of Point Arena (Figure 1). The Project parallels SR 1 for approximately 5 miles, with the Pacific Ocean west of the Project. The Project is in the Mallo Pass Creek and Point Arena U.S. Geologic Survey 7.5-minute quadrangles in Section (S) 1, Township (T) 13N, Range (R) 17 West, S18 T13N 16W, S19 T13N R16W, S12 T13N R17W, S13 T13N R17W, and S23 T13N R17W, S24 T13N R17W, S25 T13N R17W. The north end of the survey area is at approximate coordinates 39.014987° North, -123.688305 °West, and the south end is at 39.966263°North, -123.686974° West (WGS84/NAD83 datum).

Project Description

The proposed project involves installation of fiber optic cables and associated facilities and systems proposed for construction in fall 2019. The fiber optic cables will eventually extend west on the ocean floor of the Pacific Ocean to Hong Kong, China, Australia, and the island of Guam. The terrestrial components of the project would be constructed above the mean high water (MHW) level and include a landing manhole (LMH) on the cable landing parcel (CLP), staging areas, and underground conduit systems.

Landing Manhole. Four marine cables would be pulled into a LMH on the coastal terrace, east of the cliffs and bluffs, onto private land referred to as the *cable landing parcel*. Each cable would be routed through its own landing pipe. The landing pipes would be installed using horizontal directional drilling (HDD) under the bluff and beach. The LMH would provide access to the landing pipes and would be the point where the marine and terrestrial cables connect.

Staging Area. Two temporary staging areas would be established to park vehicles and store construction equipment. One staging area would be located at the CLP; the second staging area would be located near the town of Manchester.

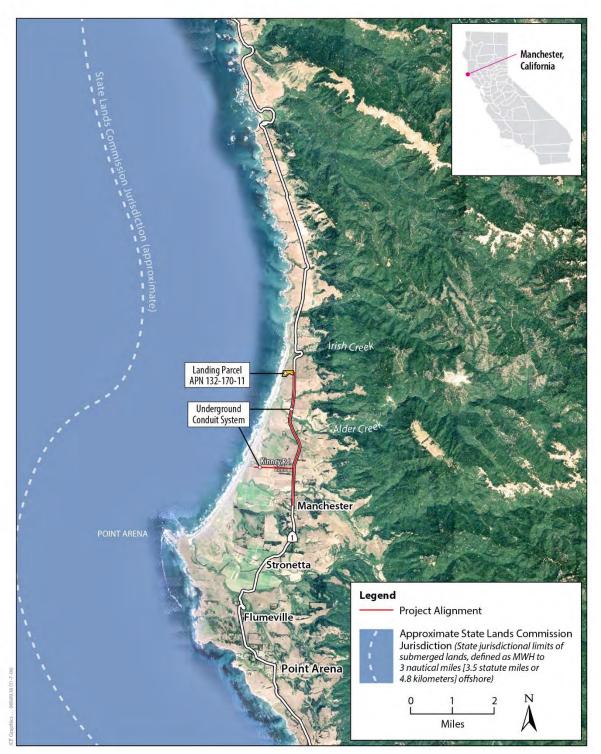


Figure 1-1 Project Location

Underground Conduit Systems. From the LMH, two underground conduit systems, each approximately 5 miles long, would be constructed—one on either side of SR 1. These conduit systems would connect the cable systems to a cable landing station (CLS) (Figure 1-2). The terrestrial conduit systems would be buried to a minimum depth of 3 feet and would include typical manholes (intermediate manholes) for maintenance access.

Existing Cable Landing Station (CLS). One of three existing CLSs (Figure 1-2) would house telecommunications and power equipment.

Intermediate Manholes. Precast concrete manholes would be placed at intervals of approximately 1,200 to 2,500 feet along the routes between the CLS and the LMH. The manholes are necessary to allow access to the underground conduit systems for cable installation and maintenance. Typically, the manholes would be approximately 4 feet square and 6 feet deep, with a cast-iron manhole cover 36 inches in diameter at grade level.

Conduit Installation. Conduit would be installed using both conventional trenching methods and trenchless construction technology. Conventional trenching involves the excavation of a trench system that is approximately 12–18 inches wide and 36–48 inches deep. Trenchless construction would be used to cross under streams (six watercourses have been identified along the alignment) and for installation of the terrestrial conduit system at other locations. Bores would be spaced approximately 300 feet apart and require bore entry and exit pits that measure approximately 4 feet wide by 8 feet long by 5 feet deep. Each pit also would require a work area of approximately 500 square feet.

If conditions are not conducive for trenchless construction at the creek crossings where bridges have been constructed, conduit would be secured to the bridge structure.

Post-Project Site Restoration. Upon completion of the project, all work and staging areas would be restored to pre-project conditions. Restoration would involve regrading areas to their original contours, installing erosion control material, and if necessary, seeding with a commercially available erosion-control native-seed mixture.

Introduction



Figure 1-2 Terrestrial Components

Survey Area

For the purpose of this study, the survey area covers 48 acres and encompasses all areas required to construct the project, including areas for access, storage, and staging of materials and equipment. The survey area consists of the road shoulders within the California Department of Transportation right-of-way (ROW) to the fence line for approximately 5 miles along both sides of SR 1, Kinney Road west of SR 1, the CLP west of SR 1, and the three CLSs. ICF botanists/wetland ecologists did not have access to the three CLSs; the "AT&T CLS" and "Level 3 CLS" are already developed and do not require wetland delineations. The property containing the "private CLS" supports managed nonnative annual grasslands and is unlikely to support aquatic resources. Because a protocol-level aquatic resources delineation was not conducted in the nonnative annual grassland; the private CLS will be surveyed in 2019, and a supplemental memo will be prepared.

Climate

Average annual rainfall in the vicinity of the Project is 41 inches (see WETS table in Appendix H) (Western Regional Climate Center 2018); precipitation data were sourced from the closest National Weather Service Station with sufficient data, the Fort Bragg 5N Weather Station (Station 06045). The survey area receives cool, wet winters and mild, foggy summers; rain falls primarily between December and March. The mean maximum annual air temperature is 60.6 Fahrenheit (°F), and the mean minimum annual temperature is 44.8°F. Coolest temperatures occur in December and January, and the warmest months are August and September (Western Regional Climate Center 2018). The length of the growing season (based on 32° F air temperature thresholds) is approximately 316 days.

Precipitation

Prior to the delineation, 33 inches of rain fell during the rainy season (October 2017 to April 2018) (National Oceanic and Atmospheric Administration 2018a, 2018b). Preceding the field surveys, rainfall for the months of June through September 2018 totaled approximately 0.3 inch, which is 17% of the average rainfall for those months.

Topography

The CLP is relatively flat, with elevations ranging between 169 and 181 feet above mean sea level (MSL). Along SR 1, the topography undulates between 29 feet and 195 feet above MSL, with topographic lows at the stream crossings. A topographic map is depicted on the Index Sheet of Appendix A.

Hydrology

The primary source of hydrology in the survey area is precipitation and runoff, which ultimately drain to the Pacific Ocean via Alder Creek, Brush Creek, Unnamed Stream 1, Unnamed Stream 2, Unnamed Stream 3, and Unnamed Stream 4. Outside and east of the survey area, Unnamed Stream 2 appears to be a tributary to Alder Creek and Unnamed Stream 4 appears to be a tributary to Brush Creek (Google Earth). Unnamed Streams 1–4 were denoted in the *Terrestrial Biological Resources Report for the Manchester Subsea Cables Project* (ICF 2019) because the streams are suitable habitat for special-status wildlife species.

The survey area is within the Big-Navarro-Garcia watershed (hydrologic unit code 18010108) (U.S. Geological Survey 2018). The survey area contains perennial streams, intermittent streams, ephemeral streams, and roadside ditches that drain to the Pacific Ocean.

Land Use

Land uses in and around the survey area consist of the California Department of Transportation ROW, privately owned open space, grazing lands, rural residential areas, and the town of Manchester.

Soils

The soil survey shows that 10 soil map units occur in survey area (Natural Resources Conservation Service 2018). A map of the soil map units is provided in Appendix C. Summary information on the characteristics of each map unit, including hydric components and local phases, is provided in Table 2. All but one soil map unit (Dystropepts, 30 to 75 percent slopes) includes hydric soil components.

Soil Map Unit	Map Symbol	Drainage Class	Landform	Hydric Component (C) or Minor Component (M)	Hydric Criteriaª
Biaggi loam, 0 to 5 percent slopes	105	Well drained	Marine terraces	Heeser (M) Flumeville (C) Cabrillo (M) Crispin(M) Mallopass (M) Windyhollow (M) Unnamed, gentler or steeper slopes (M)	- 2 - - - - - -
Cabrillo-Heeser complex, 0 to 5 percent slopes	117	Somewhat poorly drained (Cabrillo), somewhat excessively drained (Heeser)	Marine terraces	Biaggi (M) Crispin (M) Sirdrak (M) Unnamed, gentler slopes (M) Tropaquepts (C)	- - - 2
Crispin loam, 0 to 5 percent slopes	132	Well drained	Marine terraces	Flumeville (C) Biaggi (M) Cabrillo (M) Mallopass (M) Windyhollow (M) Unnamed, gentler or steeper slopes (M)	2 - - - - -
Dystropepts, 30 to 75 percent slopes	139	NA	Marine terraces	Abalobadiah (M) Vizcaino (M) Rock outcrop (M) Unnamed, gentler or steeper slopes (M) Unnamed, talus (M)	- - -
Flumeville clay loam, 0 to 5 percent slopes	144	Poorly drained	Marine terraces	Tropaquepts (C) Windyhollow (M) Cabrillo (M) Unnamed, steeper slopes (M)	2 - - -

Table 2. Soil Map Units in the Survey Area

RTI Infrastructure, Inc.

Soil Map Unit	Map Symbol	Drainage Class	Landform	Hydric Component (C) or Minor Component (M)	Hydric Criteriaª
Flumeville clay loam,	145	Poorly	Marine	Tropaquepts (C)	2
5 to 15 percent slopes		drained	terraces	Windyhollow (M)	-
				Cabrillo (M)	-
				Unnamed, steeper slopes (M)	-
Mallopass loam,	182	Moderately	Marine	Biaggi (M)	-
0 to 5 percent slopes		well drained	terraces	Windyhollow (M)	-
				Crispin (M)	-
				Flumeville (C)	2
				Tropaquepts (M)	-
				Unnamed, steeper slopes (M)	_
Stornetta fine sandy loam,	209	Moderately	Flood	Riverwash (C)	2
0 to 2 percent slopes		well drained	plains	Tropaquepts (C)	2
				Unnamed, flood plain (M)	-
Tropaquepts,	214	NA	Marine	Tregoning (C)	2
0 to 15 percent slopes			terraces	Shinglemill (C)	2
1 1				Aborigine (C)	2
				Blacklock (C)	2
Windyhollow loam,	225	NA	Marine	Flumville (C)	2
0 to 5 percent slopes			terraces	Mallopass (M)	-
				Biaggi (M)	-
				Unnamed, steeper slopes (M)	_

^a Hydric Criteria:

2. Map unit components in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, or Andic, Cumulic, Pachic, or Vitrandic subgroups that:

a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or

b. Show evidence that the soil meets the definition of a hydric soil.

Source: Natural Resources Conservation Service 2018.

Vegetation

The survey area is within the North Coast subregion of the California Floristic Province (Baldwin et al. 2012). Vegetation communities in the survey area consist of grasslands, coastal scrub, riparian scrub, riparian forest, and cypress stands. These vegetation communities support diverse assemblages of trees, shrubs, grass, and herbaceous species. Vegetation communities in the survey area are described in greater detail in the *Terrestrial Biological Resources Report for the Manchester Subsea Cables Project* (ICF 2019).

National Wetlands Inventory

The National Wetlands Inventory (NWI) provides maps and information on the status, extent, characteristics, and functions of wetland, riparian, deepwater, and related aquatic habitats in priority areas to promote the understanding and conservation of these resources. The mapping is provided at a scale of 1:24,000 and uses the U.S. Fish and Wildlife Service (USFWS) wetland definition, which differs from the USACE definition. USFWS requires one wetland parameter instead

of the three wetland parameters required by USACE. The NWI mapping shows the extent of wetlands and deep-water habitats that can be determined with the use of remotely sensed data dating from 1977 to present. The NWI mapping, therefore, cannot be used to delineate wetlands and other waters of the United States but can provide useful background information on the broad types of wetland and riparian vegetation communities in the survey area.

The NWI online describes eight mapped features within approximately 10 miles of the survey area (U.S. Fish and Wildlife Service 2018) (Appendix C). The eight mapped features are described below.

- Freshwater Emergent Wetlands, classified as PEM (palustrine emergent wetland), were mapped in grasslands near and in the survey area.
- Riverine habitats are wetland and deepwater habitats contained within a channel; riverine habitats do not include features dominated by vegetation or habitats with ocean-derived salt concentrations exceeding 0.5 parts per thousand. Riverine features were mapped in the deepwater stream crossings in and near the survey area.
- Freshwater ponds, classified as PUB (palustrine unconsolidated bottom) or PAB (palustrine aquatic bed), were mapped in topographic lows in the grasslands near the survey area.
- Lakes are classified as lacustrine (wetland and deepwater habitats with less than 30 percent vegetation cover); this habitat was mapped southwest of the town of Manchester.
- Estuarine and marine habitats were mapped in the intertidal areas west of the survey area.
- Estuarine and marine deepwater habitats were mapped in the subtidal areas west of the survey area.

Features mapped in the survey area include wetlands and non-wetland waters regulated by the USACE and CCA wetlands regulated by the CCC.

Sources of Information

The following sources of information were reviewed in conjunction with the field survey:

- Mallo Pass Creek and Point Arena U.S. Geological Survey 7.5-minute topographic quadrangles
- Google Earth aerial imagery (2018)
- NWI Maps (U.S. Fish and Wildlife Service 2018)
- National Resource Conservation Service soil survey (National Resources Conservation Service 2018)

Field Methods

ICF botanists/wetland ecologists conducted surveys of the survey area on the following dates in 2018:

- June 26–28: Margaret Widdowson and Devin Jokerst
- September 29–31: Margaret Widdowson and Sierra Spooner
- October 10–12: Margaret Widdowson and Jordan Mayor

ICF botanists/wetland ecologists surveyed and mapped aquatic features up to the ocean bluffs on the CLP, as safety permitted, and to the fence line in the ROW.

ICF botanist/wetland ecologists used resource-grade global positioning system (GPS) units, Trimble Geo-XT and an iPad with a R1 antennae, both with sub-meter accuracy, supplemented with aerial photograph interpretation, to map sampling points, boundaries of aquatic resources, and culvert locations. The GPS data were downloaded, differentially corrected, and superimposed onto a 2016 aerial photograph and edited as necessary to generate the delineation maps for USACE-regulated features in Appendix A and CCC-regulated features in Appendix B. Representative photographs were taken in the survey area (Appendix F), and their locations are shown on the maps in Appendix A and Appendix B. A list of plant species observed in the survey area was compiled, and the scientific name and wetland indicator status of each species are provided (Lichvar et al. 2016) (Appendix G).

Delineation Methods for Waters of the United States

Wetlands

ICF botanists/wetland ecologists mapped wetlands using the routine on-site determination methods described in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Environmental

Laboratory 1987) supplemented by the guidance and indicators in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (U.S. Army Corps of Engineers 2010).

In accordance with the 1987 Manual and the 2010 regional supplement, ICF botanists/wetland ecologists collected and recorded data on vegetation, soil, and hydrology at sampling points located to describe wetlands and determine the location of the wetland/upland boundary (Appendix D).

Non-Wetland Waters

The boundaries of non-tidal, non-wetland waters (streams) were delineated at the ordinary high water mark (OHWM) as defined in 33 Code of Federal Regulations (CFR) 328.3. The OHWM represents the limit of potential USACE jurisdiction over non-tidal waters (e.g., streams, ponds) in the absence of adjacent wetlands (33 CFR 328.04). The OHWM was identified in the field and mapped following the methods in USACE's Regulatory Guidance Letter 05-05 (U.S. Army Corps of Engineers 2005) and guidance in *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (Mersel and Lichvar 2014). Data on representative stream segments, including characteristics used to determine the presence and location of the OHWM, were collected and recorded on OHWM data sheets for Brush Creek, Alder Creek, and several other streams (Appendix E).

Approximately 500 feet west of the survey area, the Pacific Ocean is both a tidal non-wetland water and a navigable water. The boundary for tidal non-wetland waters (Pacific Ocean) was delineated at the high tide line (HTL) per Section 404 of the Clean Water Act. The boundary of navigable waters was delineated at the mean high water (MWH) per Section 10 of the Rivers and Harbors Act; Section 10 gives USACE regulatory and permitting authority over work in, over, or under navigable waters. A desktop jurisdictional analysis was conducted to map the upper elevation limits of tidal non-wetland waters and navigable waters in the survey area. The upper elevation limits of tidal nonwetland waters was estimated from the maximum predicted annual tide provided for the Arena Cove tidal station (Station ID: 9416841) in 2019 (National Oceanic and Atmospheric Administration 2019) The maximum predicted annual tide, which was used to estimate the HTL, was 7.5 feet above MSL. The Arena Cove Station is approximately 7.1 miles south of the CLP, which is the portion of the survey area closest to the Pacific Ocean. The upper elevation limits for navigable waters was established based on the MHW elevation of 5.2 feet above MSL reported for the Arena Cove Station (National Oceanic and Atmospheric Administration 2019). Topographic data were obtained from the U.S. Geological Survey (2017); the upper elevation limits of the HTL and MHW are depicted on Sheet 1 of Appendix A.

Methods and standards conform to the USACE San Francisco District's Information Requested for Verification of Corps Jurisdiction (U.S. Army Corps of Engineers, San Francisco District 2016) and Revised Map and Drawing Standards for the Pacific Division Regulatory Program Delineations (U.S. Army Corps of Engineers, South Pacific Division 2016).

Delineation Methods for California Coastal Act Wetlands

The survey area is within the Coastal Zone; the Mendocino County Coastal Development Permit Regulations (Chapter 20.532) regulates development in the Coastal Zone in accordance with the CCA. The CCC and associated Mendocino County Coastal Development Permit Regulations (Chapter 20.532) require coastal zone wetlands to have evidence of wetland hydrology in addition to one other wetland parameter regulated by USACE (County of Mendocino Planning & Building Services 2006; California Coastal Commission 2011). Data forms for CCA wetlands are in Appendix D, and their locations are shown on the maps in Appendix B. Initial interpretation of CCA features, as depicted on the data forms, considered all features with any one wetland parameter regulated by the USACE to be a CCA feature; however, the Mendocino County Department of Planning & Building Services memorandum (*Wetland Exception – Ditches Memorandum*) dated August 7, 2006, specifies that wetland hydrology must be present in addition to one other wetland parameter regulated by the USACE. In total, 0.566 acre of potential waters of the United States were identified and mapped in the survey area, consisting of 0.101 acre of wetlands and 0.455 acre of non-wetland waters (Appendix A). The following waters of the United States were mapped in the survey area: emergent wetlands and non-wetland waters, comprised of perennial streams, intermittent streams, ephemeral streams, and roadside ditches.

CCA wetlands include all wetlands and non-wetland waters regulated by the USACE, excluding two roadside ditches that were excavated from uplands and only convey stormwater runoff (County of Mendocino Planning & Building Services 2006). As noted earlier, CCA wetlands must demonstrate evidence of wetland hydrology and one other feature regulated by the USACE. A total of 0.584 acre of CCA wetlands was delineated in the survey area (Appendix B). The following CCA wetlands were mapped in the survey area: emergent wetlands, seasonal wetlands, and riverine wetlands.

Appendices A and B depict the locations of aquatic features mapped in the survey area and the location of the sampling points, which correspond with the wetland dataforms in Appendix D. Appendix F includes representative photographs of mapped features, which are cross-referenced to the waters of the United States reported in Table 3 and CCA wetlands reported in Table 4. Appendix G includes a list of plants observed in the survey area, along with their scientific name, common name, and wetland indicator status (Lichvar et al. 2016).

U.S. Army Corps of Engineers Jurisdictional Features

In total, 0.566 acre of potential waters of the United States was identified and mapped in the survey area, comprising 0.101 acre of wetlands and 0.455 acre of non-wetland waters. These features consist of 9 emergent wetlands, 5 perennial streams, 4 intermittent streams, 2 ephemeral streams, 7 roadside ditches, and 12 culverts. There are some gaps in the numbering sequence of data forms. Described below, the types of wetland and non-wetland waters are listed in Table 3 and shown on the maps in Appendix A. The results and the mapped extent of delineated features depicted in Appendix A are subject to verification by the USACE, San Francisco District.

RTI Infrastructure, Inc.

Feature Type and Name	Clean Water Act Jurisdiction (acres)	Cowardin Typeª	Average Width (feet)	Sampling Point Number	Photo Number
Wetlands					
Emergent Wetlands					
EW-1	0.006	PEM1	N/A	29, 30	3
EW-2	0.012	PEM1	N/A	33	3
EW-3	0.011	PEM1	N/A	27	3
EW-4	0.020	PEM1	N/A	6, 7, 10	9, 10, 11
EW-5	0.010	PEM1	N/A	16	14
EW-6	0.020	PEM1	N/A	-	14
EW-7	0.012	PEM1	N/A	21	17
EW-8	< 0.001	PEM1	N/A	-	-
EW-9	0.010	PEM1	N/A	41	30
Subtotal	0.101	-			
Non-Wetland Waters					
Perennial Stream					
PS-1	0.004	R2UB1	2	-	16
PS-2a	0.007	R2UB1	2	-	_
PS-2b	0.001	R2UB1	2	-	_
PS-3	0.128	R2UB1	70	5	18, 19, 20, 21
PS-4	0.134	R2UB1	75	7	31, 32, 33
PS-5a	0.010	R2UB1	6	8	34
PS-5b	0.002	R2UB1	6	-	34
Subtotal	0.286	_			
Intermittent Stream					
IS-1	0.002	R4SB3	10	1, 2	8
IS-2a	0.011	R4SB3	1	6	22, 24
IS-2b	< 0.001	R4SB3	2	6	_
IS-3	0.035	R4SB3	4	-	23
IS-4a	0.008	R4SB3	2	-	27
IS-4b	0.001	R4SB3	3	_	28, 29
Subtotal	0.057		-		-, -
Ephemeral Stream					
ES-1	0.014	R4SB3	6	3	_
ES-2	0.001	R4SB3	2	4	_
Subtotal	0.015	_			

Table 3. Potential Clean Water Act Jurisdictional Features Mapped in the Survey Area

RTI Infrastructure, Inc.

Feature Type and Name	Clean Water Act Jurisdiction (acres)	Cowardin Typeª	Average Width (feet)	Sampling Point Number	Photo Number
Roadside Ditch	(acres)	Type	lieetj	Number	Number
D-1a	0.017	R4SB3	2	_	5,6
D-1a D-1b	0.017	R4SB3	2	_	5, 0 7
D-10 D-2	0.010	R4SB3 R4SB3	2	-	, 10
D-2 D-3	0.004	R4SB3 R4SB3	2	-	10
D-3 D-4	0.003	R4SB3 R4SB3	2 1	-	-
D-4 D-5	0.011	R4SB3	1	_	_
D-5 D-6	0.004	R4SB3	1	_	_
D-0 D-7	0.002	R4SB3 R4SB3	2	-	- 35
Subtotal	0.000	- 143D3	2	-	33
Culverts	0.037				
C-1	0.002	R4SB3	3		
C-2	0.002	R4SB3 R4SB3	3	-	-
C-3	0.003	R4SB3	3 2	-	-
C-3 C-4	0.003	R4SB3	2	-	-
C-4 C-5	0.003	R4SB3	2	-	-
			2	-	-
C-6 C-7	0.002	R4SB3	2 3	-	-
C-8	0.002 0.012	R4SB3	3 5	-	-
C-9		R4SB3		-	-
	0.002	R4SB3	3	-	-
C-10	0.004	R4SB3	3	-	-
C-11	0.002	R4SB3	2	-	-
C-12	0.003	R4SB3	3	-	-
Subtotal	0.040				

^a Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979).

PEM1 = Palustrine, Emergent, Persistent.

R2UB1 = Riverine, Lower Perennial, Unconsolidated Bottom, Cobble-Gravel.

R4SB3 = Riverine, Intermittent, Streambed, Cobble-Gravel.

Wetlands

Emergent wetlands were mapped in topographic lows in the CLP and ROW. A total of 0.101 acre of emergent wetlands was mapped in the survey area.

The following vegetation alliances were mapped as emergent wetlands in the survey area: slough sedge swards (*Carex obnupta* alliance), common velvet grass - sweet vernal grass meadows (*Holcus lanatus-Anthoxanthum odoratum* alliance), water-parsley marshes (*Oenanthe sarmentosa* alliance), a soft rush marsh (*Juncus effusus* alliance), a common monkey flower seep (*Erythranthe guttata* alliance), and a small-fruit bulrush marsh (*Scirpus microcarpus* alliance). Dominant species observed

in the emergent wetlands of the survey area include the following: slough sedge (*Carex obnupta*; OBL¹), common velvet grass (*Holcus lanatus*; FAC), sweet vernal grass (*Anthoxanthum odoratum*; FACU), water-parsley (*Oenanthe sarmentosa*; OBL), soft rush (*Juncus effusus*; FACW), common monkey flower (*Erythranthe guttata*; OBL), and small-fruit bulrush (*Scirpus microcarpus*; OBL). The emergent wetlands were classified as PEM1: palustrine, persistent, emergent wetlands (Cowardin et al. 1979) because they are dominated by perennial, herbaceous hydrophytic plants.

Emergent wetlands mapped in the survey are characterized by the following sampling points: 6, 7, 10, 16, 21, 29, 30, 33, and 41; uplands adjacent to the emergent wetlands are characterized by sampling points: 8, 9, 17, 18, 22, 23, 31, 32, 34, 35, 36, and 42. Emergent wetland EW-9 (sampling point 21, Appendix D) occurs below the OHWM of a potential intermittent stream that was flowing into a culvert (C-4) at the time of the September survey; this feature was mapped as a wetland because it had 85 percent cover of hydrophytic plant species.

Soils observed in the emergent wetlands displayed hydric soil indicator Redox Dark Surface (Hydric Soil Indicator F6); soil textures were loam, gravely-loam, clay-loam, clay and sandy-clay.

Emergent wetlands had the following primary wetland hydrology indicators: Sediment Deposits (Wetland Hydrology Indicator B2), Drift Deposits (wetland hydrology indicator B3), Algal Mat or Crust (B4), Surface Water (A1), High Water Table (A2), and Saturation (A3). The emergent wetlands had the following secondary wetland hydrology indicators: Water-Stained leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), FAC-Neutral Test (D5), Dry-Season Water Table (C2), and Saturation Visible on Aerial Imagery (C9).

Emergent wetlands EW-1 and EW-2 were presumed to be seasonally saturated and/or ponded but did not display wetland hydrology during the delineation surveys, which occurred during the dryseason (wetland hydrology in the western mountains, valleys and coast region can be naturally problematic when surveyed during the dry-season [U.S. Army Corps of Engineers 2010]). Described in sampling points 29 and 30, emergent wetland EW-1 occurs in a topographic depression on the CLP and was dominated by Pacific aster (*Symphyotrichum chilense*) (FAC) and common velvet grass, and had hydric soils (Photograph 3, Appendix F). ICF botanists/wetland ecologists assumed that wetland hydrology was present during the rainy season, based on the presence of perennial hydrophytic plants in a topographic position that concentrates and ponds water. Upland sampling point 32, adjacent to EW-2, was dominated by FAC and FACU plants and did not have hydric soils. Also mapped on the CLP, emergent wetland EW-2 (sampling point 33) occurs downslope of EW-1 and demonstrated similar wetland indicators (dominance of hydrophytic vegetation and hydric soils); hydrology was assumed present during the wet-season. Located south of Kinney Road, EW-9 is dominated by perennial hydrophytic plants, had hydric soils (Redox Dark Surface), and wetland hydrology was assumed present during the rainy season (sampling point 41, Appendix D; Photograph 30, Appendix F).

¹ Lichvar et al. 2016

OBL: Obligate wetland plants - almost always occur in wetlands.

FACW: Facultative wetland plants - usually occur in wetlands but may occur in non-wetlands.

FAC: Facultative wetland plants – occur in wetlands and non-wetlands.

FACU: Facultative upland plants - usually occur in non-wetlands but may occur in wetlands.

UPL: Upland plants – almost never occur in wetlands.

Five types of non-wetland waters were mapped in the survey area: perennial stream, intermittent stream, ephemeral stream, roadside ditch, and culvert. The following OHMW characteristics were observed and used to determine the location of the OHWM: break-in slope, scour, the presence of bed and bank, sediment sorting, and changes in soil and vegetation. Unnamed Stream 2 did not surface in the survey area, and acreages are not reported. Ultimately, the non-wetland waters flow directly to the Pacific Ocean or are tributaries to streams that drain to the Pacific Ocean.

Perennial Streams

Alder Creek (PS-3) and Brush Creek (PS-4) are perennial streams that cross the survey area. Other perennial streams mapped in the survey area consist of PS-1, PS-2a and PS-2b, and Unnamed Stream 4 (PS-5a and PS-5b). Perennial streams flow year-round in a typical year. Groundwater is the main source of water, supplemented by rainwater during the wet season. The perennial streams are classified as R2UB1 (riverine, lower perennial, unconsolidated bottom, cobble-gravel) (Cowardin at al. 1979).

During the September survey, Alder Creek was flowing in the low-flow channel, and the substrate below the OWHM consisted of gravel and cobble (Photos 18 through 21, Appendix F). The canopy is dominated by red alder (*Alnus rubra*; FAC) and Sitka willow (*Salix sitchensis*; FACW). Observed OHWM characteristics were scour, sediment sorting, and changes in soil and vegetation. Alder Creek was on average 70 feet wide between OWHMs and covered 0.128 acre in the survey area.

Brush Creek was flowing during the September survey and supported a canopy of red alder and arroyo willow (*Salix lasiolepis*; FACW) (Photos 31 through 33, Appendix F). The perennial stream had a sharp break-in slope (> 60°) at the OWHM; below the OWHM, Brush Creek had two low-flow channels approximately 10 feet wide. ICF botanists/wetland ecologists observed the following OWHM characteristics in Brush Creek: shelving, scour, and sediment sorting, and changes in soil and vegetation. Brush Creek was on average 75 feet wide between OHWMs and covered 0.134 acre in the survey area.

Draining into a culvert south of Unnamed Stream 2, PS-1 and PS-2a converge on the eastside of SR 1 and drain westward into a culvert that feeds to PS-2b; all of the features had an average width of 2 feet.

Unnamed Stream 4 consists of PS-5a on the eastside of SR 1 flowing westward through a culvert to PS-5b (Photograph 34, Appendix F); the segments were on average 6 feet wide between OHWMs, and the canopy on the eastside of SR 1 was dominated by arroyo willow.

Intermittent Streams

Four intermittent streams, covering 0.057 acre, were mapped in the survey area, including Unnamed Stream 1 (IS-1), PS-2a and PS-2b, Unnamed Stream 3 (IS-3), and IS-4a and IS4b. Intermittent streams flow for a length of time each year, typically during the wet season, but dry up over the summer months. In addition to rain water, groundwater provides water for stream flow. The intermittent streams are classified as R4SB3 (riverine, intermittent, streambed, sand) (Cowardin at al. 1979). The intermittent streams are tributaries to streams that flow to the Pacific Ocean or flow directly to the Pacific Ocean. Unnamed Stream 1 (IS-1) is 10 feet wide on average between OWHMs, and the canopy is dominated by arroyo willow (*Salix lasiolepis;* FACW), with a moderate (30–60°) break-in slope at the OHWM. Unnamed Stream 1 did not surface on the west side of SR 1, which prevented full assessment of the feature.

Unnamed Stream 3 (IS-3) is 4 feet wide on average between OWHMs. The canopy is dominated by shining willow (*Salix lasiandra*; FACW) and Sitka willow. Intermittent streams IS-2a and IS-2b are tributaries to Unnamed Stream 3.

Intermittent stream IS-4a is on average 2 feet wide between OWHMs and parallels the south side of Kinney Road before draining through a culvert to IS-4b on the north side of Kinney Road; IS-4b is on average 2 feet wide between OHWMS.

Ephemeral Streams

The survey contained two ephemeral streams covering 0.015 acre. Ephemeral streams have flowing water during, and for a short time after, rainfall in a typical year. Rain water is the only source of water for stream flow in ephemeral streams, which are typically above the water table year-round. The vegetation on the banks of the ephemeral streams typically included California blackberry (*Rubus ursinus*; FACW), poison-oak (*Toxicodendron diversilobum*; FAC), and bracken fern (*Pteridium aquilinum* var. *pubescens*; FACU). The ephemeral streams are classified as R4SB3 (riverine, intermittent, streambed, sand) (Cowardin at al. 1979).

Roadside ditches

The survey area contains seven roadside ditches covering 0.057 acre. Roadside ditches were mapped if they had a distinct bed and bank or other OHWM characteristics, although sometimes the indicators were weak and discontinuous. The roadside ditches are classified as R4SB3 (riverine, intermittent, streambed, sand) (Cowardin at al. 1979). The roadside ditches drain into culverts, and ultimately flow to streams that are tributaries to the Pacific Ocean.

Culverts

Culverts in the survey area convey flows from stream segments and roadside ditches under SR 1. The flows are carried ultimately to the Pacific Ocean. Culverts are shown on the maps in Appendix A and are included in Table 3.

California Coastal Commission Jurisdictional Features

The following aquatic resources were mapped as potential CCA features: 9 emergent wetlands, 3 seasonal wetlands, and 28 riverine wetlands. The CCA wetlands delineated in the survey area are listed in Table 4 and depicted in Appendix B. The results and mapped extent of CCA wetlands depicted in Appendix B are subject to verification by the CCC North Coast District.

Feature Type and Name	CCC Jurisdiction (acres)	Cowardin Typeª	Average Width (feet)	Sampling Point Number	Photo Number
Emergent Wetlands	(deres)	Турс	(icet)	Number	Itumber
EW-1	0.006	PEM1	_	29, 30, 31	3
EW-2	0.012	PEM1	_	33	3
EW-3	0.011	PEM1	_	27	3
EW-4	0.020	PEM1	_	6, 7, 10	9, 10, 11
EW-5	0.010	PEM1	_	16	14
EW-6	0.020	PEM1	_	_	14
EW-7	0.012	PEM1	_	21	17
EW-8	< 0.001	PEM1	_	_	_
EW-9	0.010	PEM1	_	41	30
Subtotal	0.101	_			
Seasonal Wetlands					
SW-1	0.016	PEM2	_	2	13
SW-2	0.005	PEM2	_	_	_
SW-3	0.015	PEM2	_	_	_
Subtotal	0.036	_			
Riverine Wetlands					
Perennial Stream					
PS-1	0.004	R2UB1	2	-	16
PS-2a	0.007	R2UB1	2	-	_
PS-2b	0.001	R2UB1	2	-	_
PS-3	0.128	R2UB1	70	5	18, 19, 20, 21
PS-4	0.134	R2UB1	75	7	31, 32, 33
PS-5a	0.010	R2UB1	6	8	34
PS-5b	0.002	R2UB1	6	-	34
Subtotal	0.286	_			
Intermittent Stream					
IS-1	0.002	R4SB3	10	1, 2	8
IS-2a	0.011	R4SB3	1	6	22, 24
IS-2b	< 0.001	R4SB3	2	6	-
IS-3	0.035	R4SB3	4	-	23
IS-4a	0.008	R4SB3	2	-	27
IS-4b	0.001	R4SB3	3	-	28, 29
Subtotal	0.057				
Ephemeral Stream					
ES-1	0.014	R4SB3	6	3	-
ES-2	0.001	R4SB3	2	4	-
Subtotal	0.015				

Table 4. Potential California Coastal Act Jurisdictional Features Mapped in the Survey Area

RTI Infrastructure, Inc.

Feature Type and Name	CCC Jurisdiction (acres)	Cowardin Typeª	Average Width (feet)	Sampling Point Number	Photo Number
Roadside Ditch					
D-1a	0.017	R4SB3	2	-	5, 6
D-1b	0.010	R4SB3	2	-	7
D-2	0.004	R4SB3	3	-	10
D-3	0.003	R4SB3	2	-	_
D-4	0.011	R4SB3	1	-	_
D-5	0.004	R4SB3	1	-	-
Subtotal	0.049	_			
Culverts					
C-1	0.002	R4SB3	3	-	-
C-2	0.003	R4SB3	3	-	_
C-3	0.003	R4SB3	2	-	_
C-4	0.003	R4SB3	2	-	_
C-5	0.002	R4SB3	2	-	_
C-6	0.002	R4SB3	2	-	_
C-7	0.002	R4SB3	3	-	_
C-8	0.012	R4SB3	5	-	-
C-9	0.002	R4SB3	3	-	-
C-10	0.004	R4SB3	3	-	-
C-11	0.002	R4SB3	2	-	-
C-12	0.003	R4SB3	3	-	-
Subtotal	0.040	_			
Total California Coastal Commission	0.584				

Jurisdictional Features

^a Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979).

PEM1 = Palustrine, Emergent, Persistent.

PEM2 = Palustrine, Emergent, Non-persistent.

R2UB1 = Riverine, Lower Perennial, Unconsolidated Bottom, Cobble-Gravel.

R4SB3 = Riverine, Intermittent, Streambed, Cobble-Gravel.

Emergent Wetlands

In total, 0.101 acre of emergent wetlands was mapped as potential CCA features in the survey area. All emergent wetlands delineated as potential CCA features also were delineated as USACE jurisdictional features and are described above.

Seasonal Wetlands

The seasonal wetlands mapped in the survey area were dominated by annual hydrophytic plants and the features were classified as PEM2: palustrine, non-persistent, emergent wetlands (Cowardin et al. 1979). These features were two-parameter wetlands. Three CCA seasonal wetlands were mapped for a total 0.036 acre. Two seasonal wetlands (SW-1 and SW-2) occur in a compacted, roadside pullout and were dominated by nonnative plants, hyssop loosestrife (*Lythrum hyssopifolium*; OBL) and prostrate knot weed (*Polygonum aviculare*; FAC). Seasonal wetlands SW-1 and SW-2 are approximately 252 feet apart and are characterized by sampling point 2. Surface Soils Cracks (B6) was the Wetland Hydrology Indicator observed by ICF botanists/wetland ecologists in SW-1 and SW-2.

Seasonal wetland SW-3 (sampling point 44) was mapped in a topographic depression in the ROW, but most of the feature occurred in private property east and outside of the survey area. In the survey area, SW-3 was dominated by native hydrophytic coast allocarya (*Plagiobothrys undulatus*; OBL) and nonnative, upland slender lotus (*Lotus angustissimus*; UPL). Coast allocarya was dominant during the wet season, based on the presence of significant cover of dead coast allocarya plants; slender lotus invaded the feature during the dry-season. The seasonal wetland did not have hydric soils. Seasonal wetland SW-3 had the following secondary wetland indicators: water-stained leaves, (B9), saturation visible on aerial imagery (C9), and FAC-neutral test (D5). In the private property adjacent to the survey area and SW-3, the seasonal wetland likely supported hydric soils.

Riverine Wetlands

Riverine wetlands occur below the OWHM of the USACE jurisdictional streams and ditches discussed above. Two roadside ditches delineated as non-wetland waters under potential jurisdiction of the U.S. Army Corps of Engineers (D-6 and D-7) were not classified as coastal zone wetlands because the features were excavated from upland areas and carry only stormwater runoff. These were excluded per the Wetland Exception – Ditches Memorandum (County of Mendocino Planning & Building Services 2006). Riverine wetlands delineated as potential CCA features in the survey area totaled 0.455 acre.

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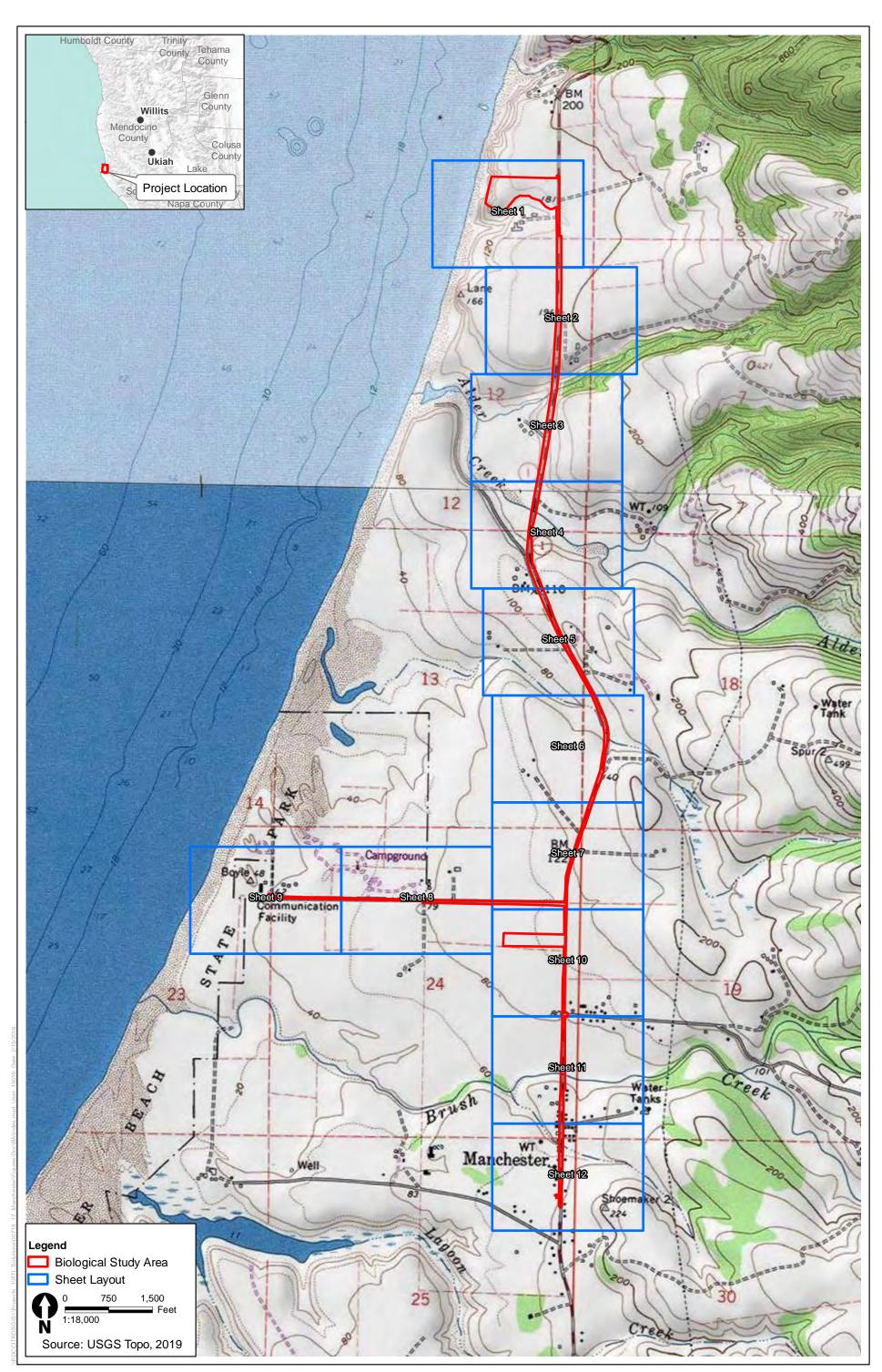
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Appendix A - Index Waters of the United States Delineation Map



39°0'40"N

	Manchester Subsea Cables Project February 19th, 2019 Sheet 1 of 12					
Alter	Legend					
	Survey Area (48 Acres)					
	Area Without Access					
ac)	Cable Landing Stations (CLS)					
	△ Data Point					
2' 2)	Photo Locations					
:)	Features Outside Survey Area					
	Aquatic Resources (0.556 Total Acre)					
02 ac)	Wetland (0.101 Total Acre)					
b, W=2'	Emergent Wetland (EW) (0.101 ac.)					
010 ac)	Non-Wetland Waters (0.455 Total Acre)					
ALC: NOT THE OWNER	Perennial Stream (PS) (0.286 ac.)					
10'	Intermittent Stream (IS) (0.057 ac.)					
ac)	Ephemeral Stream (ES) (0.015 ac.)					
nc)	Roadside Ditch (D) (0.057 ac.)					
=4'	Culvert (C) (0.040 ac.)					
c) =3'	 Section 10 Navigable Waters Upper Elevational Limit (Mean High Water): 5.2 ft ± 1.5 ft (USGS 2017) 					
ac) (0.020 ac)	 Section 404/401 Tidal Waters Upper Elevational Limit (High Tide Line): 7.5 ft ± 1.5 ft (USGS 2017) W = Average Width 					
V=2'	0 50 100 200 + + + + + + + + + + + + Feet 1 inch = 200 feet					
ac)	Notes:					
	Base Map Source:ICF Elevation Data: U.S. Geological Survey, 20180831, USGS NED one meter x44y432 CA FEMA R9 Mendocino HF 2017 Imagery Source: NAIP 2016 USGS Topo Quad: Mallo Pass Creek and Point Arena PLSS: S18 T13N R16W, S19 T13N R16, S1 T13N R17W, S12 T13N R17W, S13 T13N R17W, S23 T13N R17W, S24 T13N R17W, S25 T13N R17W					
-	Prepared By: ICF 916.737.3000 Delineated By: D. Jokerst, M. Widdowson, S. Spooner and J. Mayor Delineation Date: June 26-28, Sept. 29-31 and Oct. 10-12, 2018 Drawn By: A. Angier					

Appendix A Waters of the United States Delineation Map



Legend



- Area Without Access
- Cable Landing Stations (CLS)
- A Data Point
- Photo Locations
 - Features Outside Survey Area

Aquatic Resources (0.556 Total Acre) Wetland (0.101 Total Acre)

Emergent Wetland (EW) (0.101 ac.)

Non-Wetland Waters (0.455 Total Acre)

Perennial Stream (PS) (0.286 ac.) Intermittent Stream (IS) (0.057 ac.)

Ephemeral Stream (ES) (0.015 ac.)

- Roadside Ditch (D) (0.057 ac.)
- ---- Culvert (C) (0.040 ac.)

*Feature does not surface in BSA

W = Average Width

 $\overline{\mathbb{N}}$

0	50	100	200
L			
Feet			
1 inch = 200 feet			

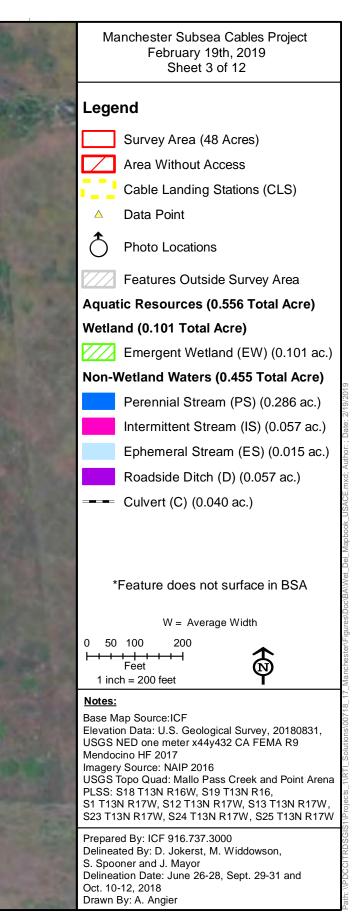
Notes:

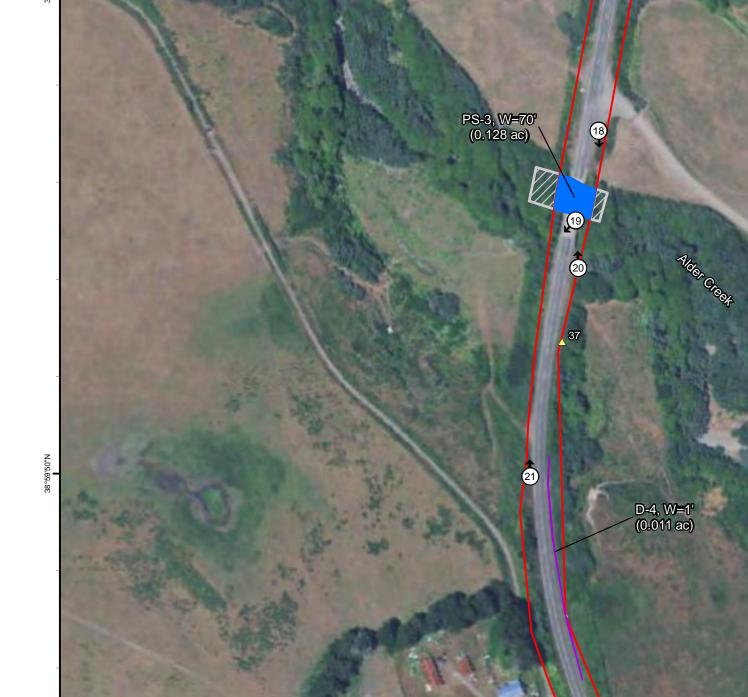
Base Map Source:ICF Elevation Data: U.S. Geological Survey, 20180831, USGS NED one meter x44y432 CA FEMA R9 Mendocino HF 2017 Imagery Source: NAIP 2016 USGS Topo Quad: Mallo Pass Creek and Point Arena PLSS: S18 T13N R16W, S19 T13N R16, S1 T13N R17W, S12 T13N R17W, S13 T13N R17W, S23 T13N R17W, S24 T13N R17W, S25 T13N R17W

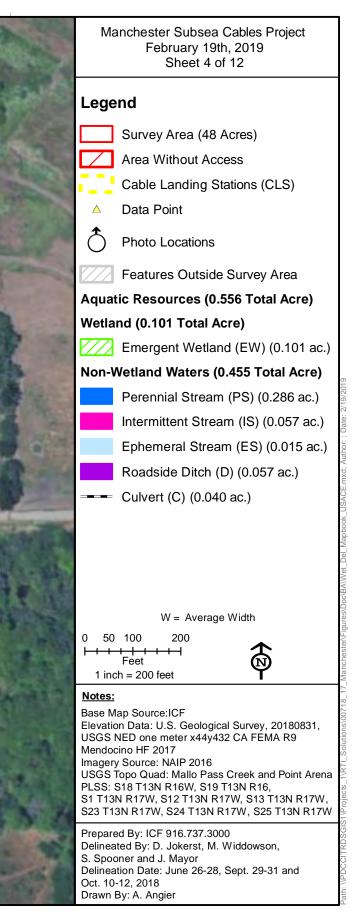
Prepared By: ICF 916.737.3000 Delineated By: D. Jokerst, M. Widdowson, S. Spooner and J. Mayor Delineation Date: June 26-28, Sept. 29-31 and Oct. 10-12, 2018 Drawn By: A. Angier

Appendix A Waters of the United States Delineation Map







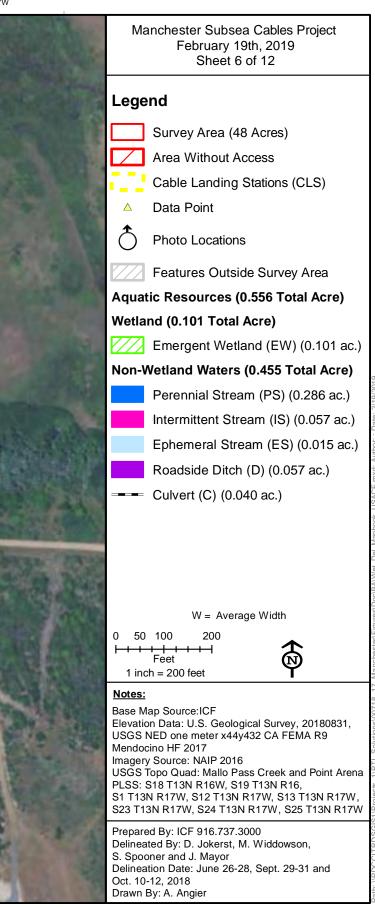




Manchester Subsea Cables Project February 19th, 2019 Sheet 5 of 12 Legend Survey Area (48 Acres) Area Without Access Cable Landing Stations (CLS) Data Point \triangle Õ Photo Locations Features Outside Survey Area Aquatic Resources (0.556 Total Acre) Wetland (0.101 Total Acre) Emergent Wetland (EW) (0.101 ac.) Non-Wetland Waters (0.455 Total Acre) Perennial Stream (PS) (0.286 ac.) Intermittent Stream (IS) (0.057 ac.) Ephemeral Stream (ES) (0.015 ac.) Roadside Ditch (D) (0.057 ac.) ----- Culvert (C) (0.040 ac.) W = Average Width 0 50 100 200 Feet $\overline{\mathbb{O}}$ 1 inch = 200 feet Notes: Base Map Source:ICF Elevation Data: U.S. Geological Survey, 20180831, USGS NED one meter x44y432 CA FEMA R9 Mendocino HF 2017 Imagery Source: NAIP 2016 USGS Topo Quad: Mallo Pass Creek and Point Arena PLSS: S18 T13N R16W, S19 T13N R16, S1 T13N R17W, S12 T13N R17W, S13 T13N R17W, S23 T13N R17W, S24 T13N R17W, S25 T13N R17W Prepared By: ICF 916.737.3000 Delineated By: D. Jokerst, M. Widdowson, S. Spooner and J. Mayor

Delineation Date: June 26-28, Sept. 29-31 and Oct. 10-12, 2018 Drawn By: A. Angier







38°58'50"N



7 \triangle \bigcirc Notes:

Manchester Subsea Cables Project February 19th, 2019 Sheet 8 of 12

Legend

- Survey Area (48 Acres)
- Area Without Access
- Cable Landing Stations (CLS)
- Data Point
- Photo Locations
- Features Outside Survey Area

Aquatic Resources (0.556 Total Acre) Wetland (0.101 Total Acre)

Emergent Wetland (EW) (0.101 ac.)

Non-Wetland Waters (0.455 Total Acre)

Perennial Stream (PS) (0.286 ac.) Intermittent Stream (IS) (0.057 ac.)

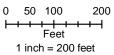
Ephemeral Stream (ES) (0.015 ac.)

Roadside Ditch (D) (0.057 ac.)

---- Culvert (C) (0.040 ac.)

W = Average Width

(N)



Base Map Source:ICF Elevation Data: U.S. Geological Survey, 20180831, USGS NED one meter x44y432 CA FEMA R9 Mendocino HF 2017 Imagery Source: NAIP 2016 USGS Topo Quad: Mallo Pass Creek and Point Arena PLSS: S18 T13N R16W, S19 T13N R16, S1 T13N R17W, S12 T13N R17W, S13 T13N R17W, S23 T13N R17W, S24 T13N R17W, S25 T13N R17W

Prepared By: ICF 916.737.3000 Delineated By: D. Jokerst, M. Widdowson, S. Spooner and J. Mayor Delineation Date: June 26-28, Sept. 29-31 and Oct. 10-12, 2018 Drawn By: A. Angier



Appendix A Waters of the United States Delineation Map

Manchester Subsea Cables Project February 19th, 2019 Sheet 9 of 12

- Survey Area (48 Acres)
- Area Without Access
- Cable Landing Stations (CLS)
- Features Outside Survey Area

Aquatic Resources (0.556 Total Acre)

Emergent Wetland (EW) (0.101 ac.)

Non-Wetland Waters (0.455 Total Acre)

Perennial Stream (PS) (0.286 ac.)

Intermittent Stream (IS) (0.057 ac.)

Ephemeral Stream (ES) (0.015 ac.)

- Roadside Ditch (D) (0.057 ac.)

W = Average Width



Elevation Data: U.S. Geological Survey, 20180831, USGS NED one meter x44y432 CA FEMA R9 USGS Topo Quad: Mallo Pass Creek and Point Arena PLSS: S18 T13N R16W, S19 T13N R16, S1 T13N R17W, S12 T13N R17W, S13 T13N R17W, S23 T13N R17W, S24 T13N R17W, S25 T13N R17W

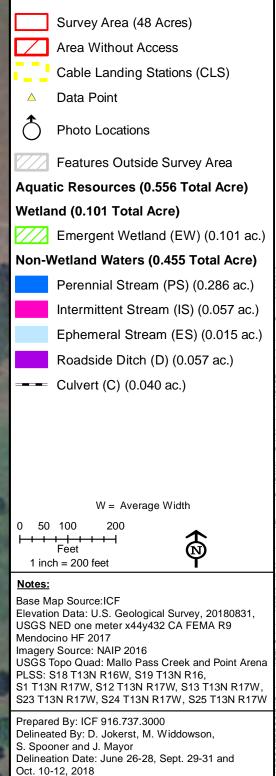
Prepared By: ICF 916.737.3000 Delineated By: D. Jokerst, M. Widdowson, Delineation Date: June 26-28, Sept. 29-31 and



123°41'20"W

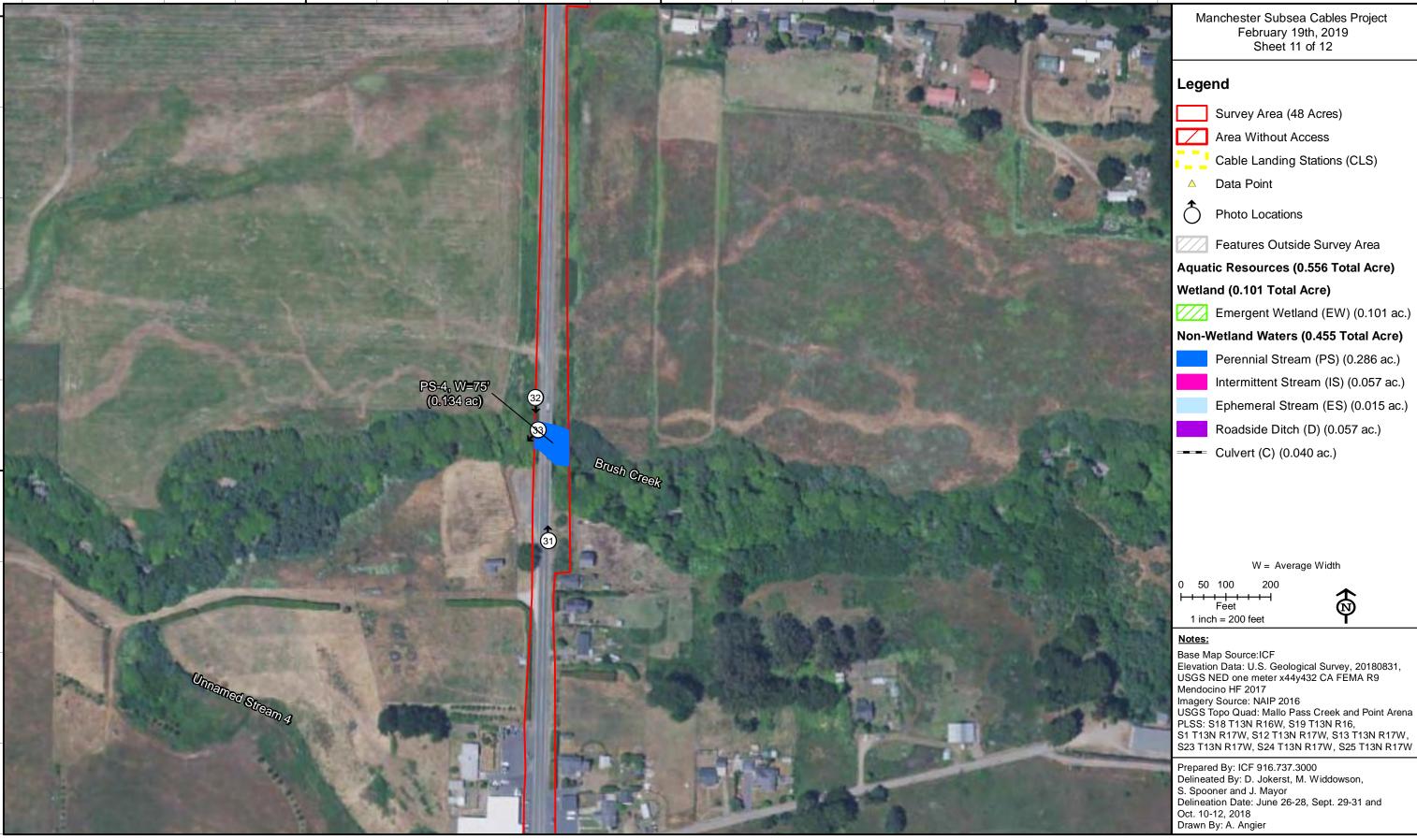
Manchester Subsea Cables Project February 19th, 2019 Sheet 10 of 12

Legend

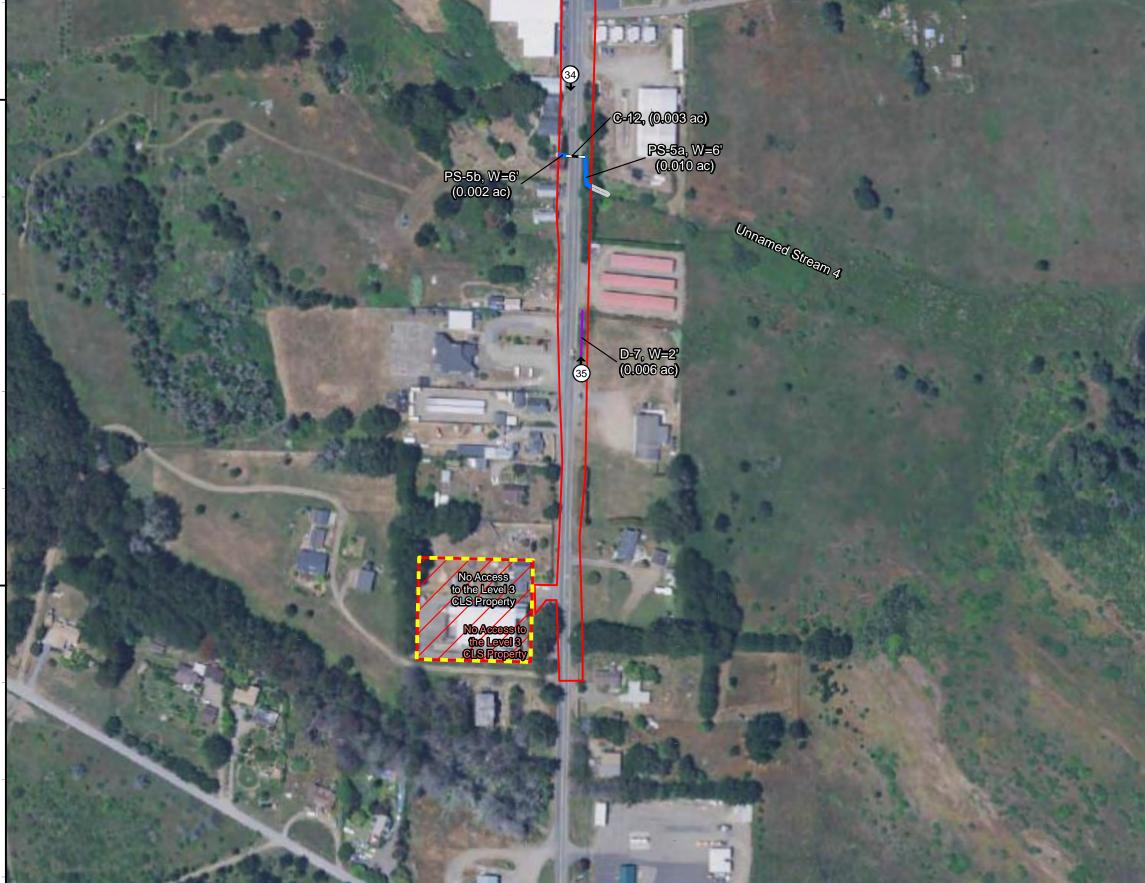


Appendix A Waters of the United States Delineation Map

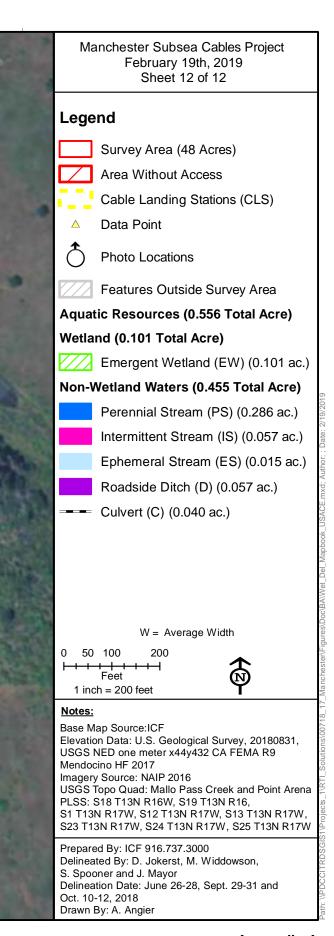
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38°58'20"N



123°41'20"W



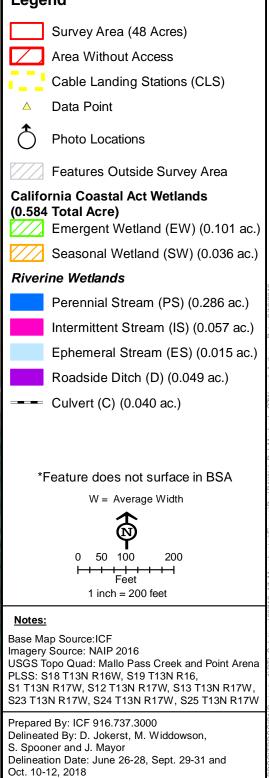


39°0'40"N

	Manchester Subsea Cables Project February 19th, 2019 Sheet 1 of 12					
-	Legend					
	Survey Area (48 Acres)					
10440	Area Without Access					
	Cable Landing Stations (CLS)					
	 Data Point 					
2'	Photo Locations					
-	Features Outside Survey Area					
2 ac)	California Coastal Act Wetlands (0.584 Total Acre) Emergent Wetland (EW) (0.101 ac.)					
N=2'	Seasonal Wetland (SW) (0.036 ac.)					
n=2) ac)	Riverine Wetlands					
	Perennial Stream (PS) (0.286 ac.)					
0' :)	Intermittent Stream (IS) (0.057 ac.)					
The state of the	Ephemeral Stream (ES) (0.015 ac.)					
)	Roadside Ditch (D) (0.049 ac.)					
=4' c)	Culvert (C) (0.040 ac.)					
,						
0 ac)	W = Average Width					
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	N N					
	0 50 100 200					
=2' 1c)	Feet 1 inch = 200 feet					
	Notes:					
10.0000460	Base Map Source:ICF Imagery Source: NAIP 2016					
	USGS Topo Quad: Mallo Pass Creek and Point Arena PLSS: S18 T13N R16W, S19 T13N R16, S1 T13N R17W, S12 T13N R17W, S13 T13N R17W, S23 T13N R17W, S24 T13N R17W, S25 T13N R17W					
82.3	Prepared By: ICF 916.737.3000					
100	Delineated By: D. Jokerst, M. Widdowson, S. Spooner and J. Mayor					
1 100	Delineation Date: June 26-28, Sept. 29-31 and Oct. 10-12, 2018					
State of the second	Drawn By: A. Angier					



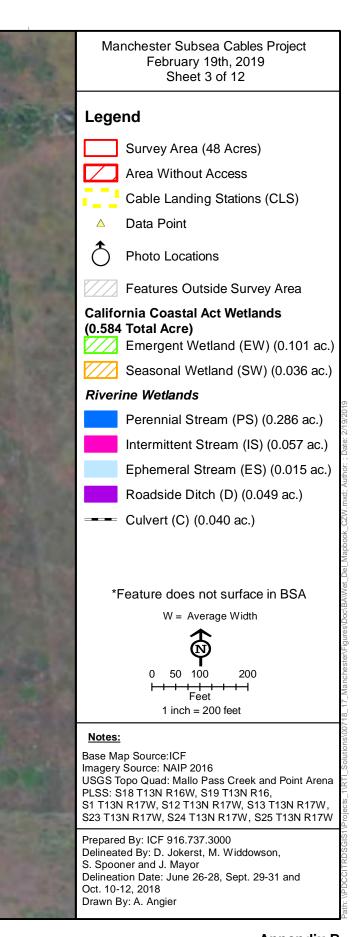
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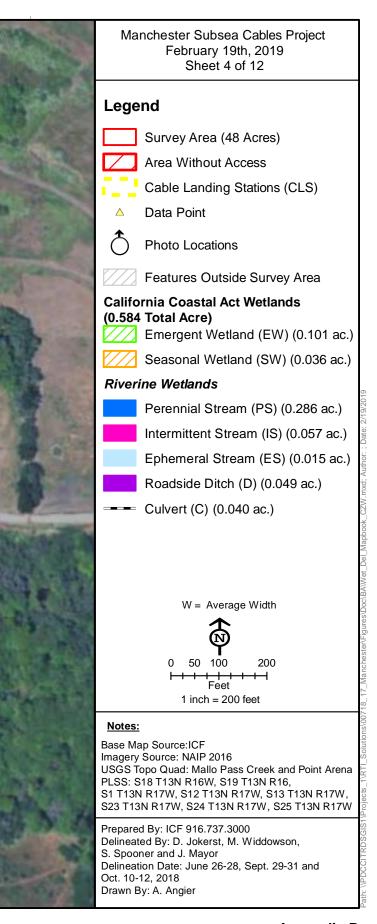
Appendix B **California Coastal Act Waters Delineation Map**

Drawn By: A. Angier





<u>(</u>19 PS-3, W=70' (0.128 ac) Alder Creek (20) (21) D-4, W=1' (0.011 ac)





Legend

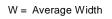
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- Area Without Access
- Cable Landing Stations (CLS)
- A Data Point
- Photo Locations
 - Features Outside Survey Area

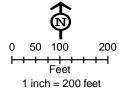
California Coastal Act Wetlands (0.584 Total Acre)

- Emergent Wetland (EW) (0.101 ac.)
- Seasonal Wetland (SW) (0.036 ac.)

Riverine Wetlands

- Perennial Stream (PS) (0.286 ac.)
- Intermittent Stream (IS) (0.057 ac.)
- Ephemeral Stream (ES) (0.015 ac.)
- Roadside Ditch (D) (0.049 ac.)
- ---- Culvert (C) (0.040 ac.)



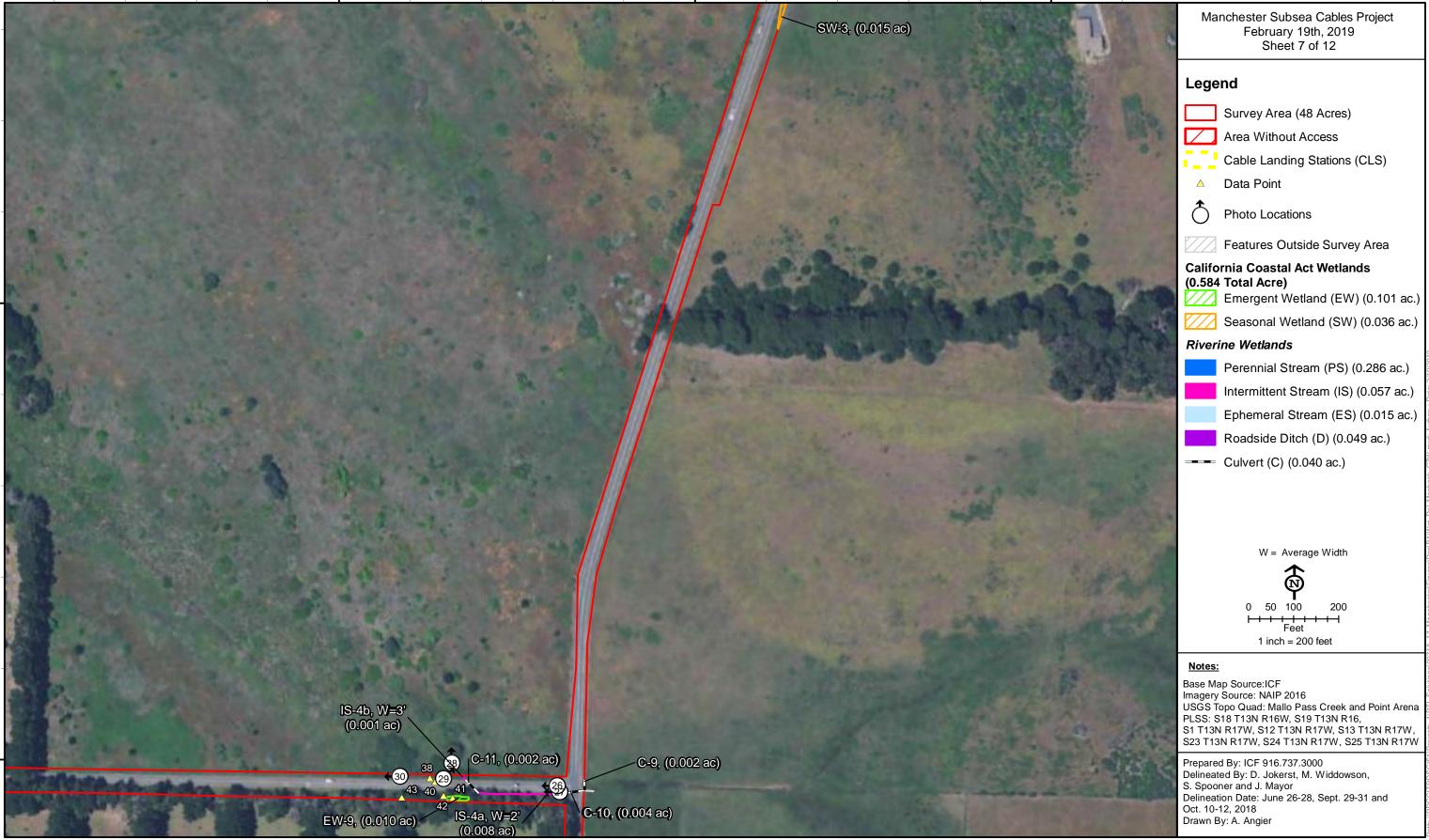


Notes:

Base Map Source:ICF Imagery Source: NAIP 2016 USGS Topo Quad: Mallo Pass Creek and Point Arena PLSS: S18 T13N R16W, S19 T13N R16, S1 T13N R17W, S12 T13N R17W, S13 T13N R17W, S23 T13N R17W, S24 T13N R17W, S25 T13N R17W

Prepared By: ICF 916.737.3000 Delineated By: D. Jokerst, M. Widdowson, S. Spooner and J. Mayor Delineation Date: June 26-28, Sept. 29-31 and Oct. 10-12, 2018 Drawn By: A. Angier





38°58'50"N



Legend

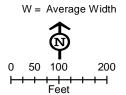
- Survey Area (48 Acres)
- Area Without Access
 - Cable Landing Stations (CLS)
- A Data Point
- Photo Locations
 - Features Outside Survey Area

California Coastal Act Wetlands (0.584 Total Acre)

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- Ephemeral Stream (ES) (0.015 ac.)
- Roadside Ditch (D) (0.049 ac.)
- ----- Culvert (C) (0.040 ac.)



1 inch = 200 feet

Notes:

Base Map Source:ICF Imagery Source: NAIP 2016 USGS Topo Quad: Mallo Pass Creek and Point Arena PLSS: S18 T13N R16W, S19 T13N R16, S1 T13N R17W, S12 T13N R17W, S13 T13N R17W, S23 T13N R17W, S24 T13N R17W, S25 T13N R17W

Prepared By: ICF 916.737.3000 Delineated By: D. Jokerst, M. Widdowson, S. Spooner and J. Mayor Delineation Date: June 26-28, Sept. 29-31 and Oct. 10-12, 2018 Drawn By: A. Angier



Manchester Subsea Cables Project February 19th, 2019 Sheet 9 of 12

- Survey Area (48 Acres)
- Area Without Access
- Cable Landing Stations (CLS)
- Data Point
- Photo Locations
- Features Outside Survey Area

California Coastal Act Wetlands (0.584 Total Acre)

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- Roadside Ditch (D) (0.049 ac.)
- ----- Culvert (C) (0.040 ac.)

W = Average Width N 50 100 0 200 Feet +-1 ++

1 inch = 200 feet

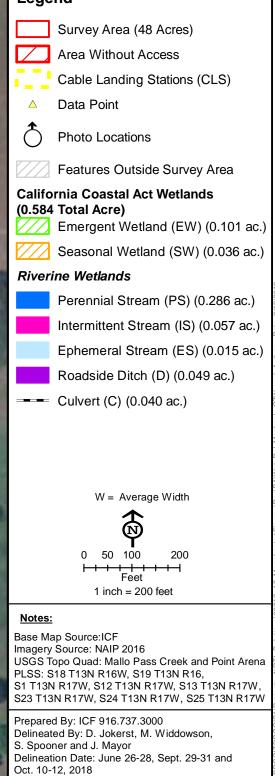
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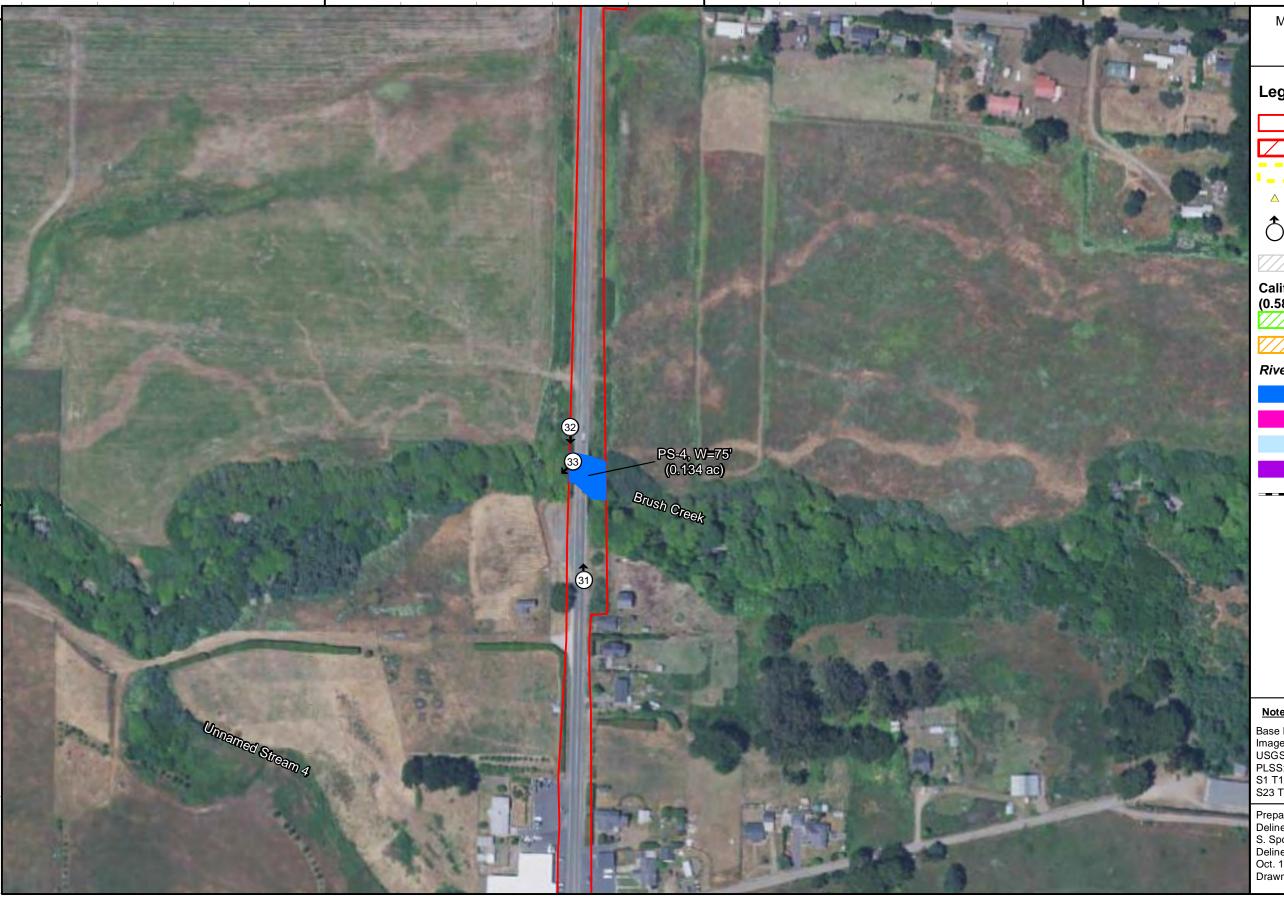
Manchester Subsea Cables Project February 19th, 2019 Sheet 10 of 12

Legend



Appendix B California Coastal Act Waters Delineation Map

Drawn By: A. Angier



Manchester Subsea Cables Project February 19th, 2019 Sheet 11 of 12

Legend

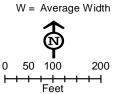
- Survey Area (48 Acres)
- Area Without Access $\overline{}$
 - Cable Landing Stations (CLS)
- Data Point \triangle
- Photo Locations
- Features Outside Survey Area

California Coastal Act Wetlands (0.584 Total Acre)

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Riverine Wetlands

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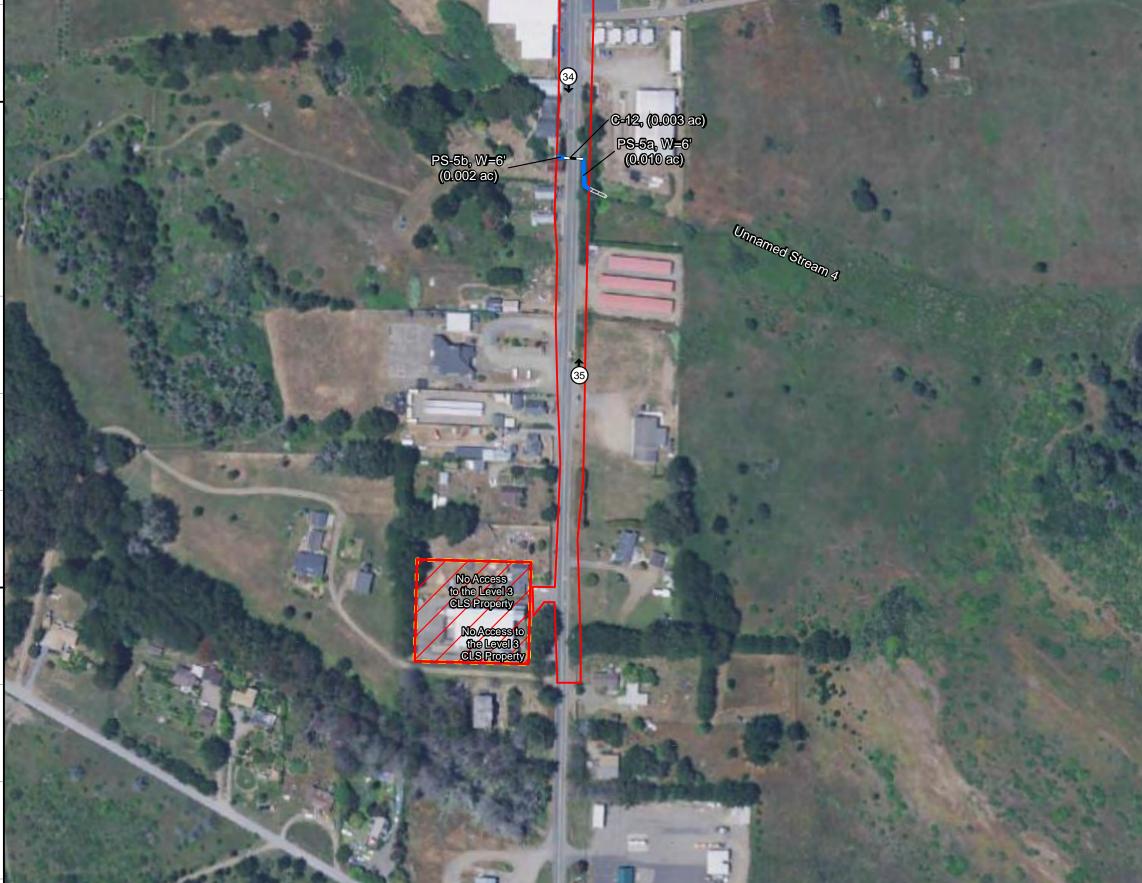


1 inch = 200 feet

Notes:

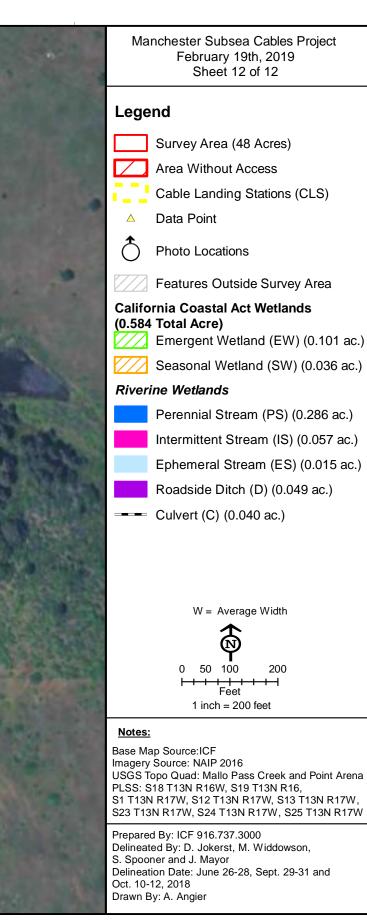
Base Map Source: ICF Imagery Source: NAIP 2016 USGS Topo Quad: Mallo Pass Creek and Point Arena PLSS: S18 T13N R16W, S19 T13N R16, S1 T13N R17W, S12 T13N R17W, S13 T13N R17W, S23 T13N R17W, S24 T13N R17W, S25 T13N R17W

Prepared By: ICF 916.737.3000 Delineated By: D. Jokerst, M. Widdowson, S. Spooner and J. Mayor Delineation Date: June 26-28, Sept. 29-31 and Oct. 10-12, 2018 Drawn By: A. Angier



123°41'10"W

123°41'20"W



Appendix C Supporting Information (Custom Soil Resource Report National Wetlands Inventory Map)



United States Department of Agriculture



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

Custom Soil Resource Report for Mendocino County, Western Part, California

RTI Manchester Subsea Fiber Project



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/? cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



MAP LEGEND				MAP INFORMATION
Area of Int	terest (AOI) Area of Interest (AOI)	8	Spoil Area Stony Spot	The soil surveys that comprise your AOI were mapped at 1:24,000.
Soils	Soil Map Unit Polygons	00 12	Very Stony Spot Wet Spot	Please rely on the bar scale on each map sheet for map measurements.
	Soil Map Unit Lines Soil Map Unit Points Point Features	۵ 	Other Special Line Features	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)
୍ ତ ଷ୍	Blowout Borrow Pit	Water Fea	Streams and Canals	Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts
¥ ⊘	Clay Spot Closed Depression		Rails Interstate Highways	distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.
*	Gravel Pit Gravelly Spot	~	US Routes Major Roads	This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.
© 	Landfill Lava Flow	Backgrou		Soil Survey Area: Mendocino County, Western Part, California Survey Area Data: Version 13, Sep 17, 2018
*	Marsh or swamp Mine or Quarry Miscellaneous Water		Aerial Photography	Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.
0	Perennial Water Rock Outcrop			Date(s) aerial images were photographed: Dec 31, 2009—Nov 6, 2017
* + ::	Saline Spot			The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor
- 	Severely Eroded Spot			shifting of map unit boundaries may be evident.
s S	Slide or Slip Sodic Spot			

10

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI 6.1%
105	Biaggi loam, 0 to 5 percent slopes	14.9	
117	Cabrillo-Heeser complex, 0 to 5 percent slopes	8.9	3.6%
126	Coastal beaches	4.6	1.9%
132	Crispin loam, 0 to 5 percent slopes	97.4	39.8%
138	Duneland	2.7	1.1%
139	Dystropepts, 30 to 75 percent 27.7 slopes		11.3%
144	Flumeville clay loam, 0 to 5 percent slopes	11.0	4.5%
145	Flumeville clay loam, 5 to 15 percent slopes	9.1	3.7%
182	Mallopass loam, 0 to 5 percent slopes	18.6	7.6%
209	Stornetta fine sandy loam, 0 to 2 percent slopes	20.9	8.6%
214	Tropaquepts, 0 to 15 percent slopes	10.3	4.2%
225	Windyhollow loam, 0 to 5 percent slopes	18.6	7.6%
Totals for Area of Interest		244.6	100.0%

Map Unit Descriptions

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, 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 classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils 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. Other minor components, however, have properties and behavioral 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*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one 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.

Mendocino County, Western Part, California

105—Biaggi loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: hmk1 Elevation: 100 to 400 feet Mean annual precipitation: 35 to 45 inches Mean annual air temperature: 45 to 57 degrees F Frost-free period: 250 to 330 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Biaggi and similar soils: 80 percent *Minor components:* 20 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Biaggi

Setting

Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 23 inches: loam H2 - 23 to 27 inches: unweathered bedrock

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Low
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
Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 3e Hydrologic Soil Group: C Ecological site: Loamy Terrace (Perennial Grass) (R004XB059CA) Hydric soil rating: No

Minor Components

Heeser

Percent of map unit: 3 percent Hydric soil rating: No

Flumeville

Percent of map unit: 3 percent Landform: Marine terraces Hydric soil rating: Yes

Cabrillo

Percent of map unit: 3 percent Hydric soil rating: No

Crispin

Percent of map unit: 3 percent Hydric soil rating: No

Mallopass

Percent of map unit: 3 percent Hydric soil rating: No

Windyhollow

Percent of map unit: 3 percent Hydric soil rating: No

Unnamed, gentler or steeper slopes

Percent of map unit: 2 percent Hydric soil rating: No

117—Cabrillo-Heeser complex, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: hmkm Elevation: 20 to 240 feet Mean annual precipitation: 35 to 45 inches Mean annual air temperature: 48 to 57 degrees F Frost-free period: 250 to 330 days Farmland classification: Prime farmland if irrigated

Map Unit Composition

Cabrillo and similar soils: 50 percent Heeser and similar soils: 30 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cabrillo

Setting

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

Typical profile

H1 - 0 to 26 inches: sandy loam H2 - 26 to 35 inches: sandy clay loam H3 - 35 to 50 inches: sandy clay loam H4 - 50 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 30 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): 2w Land capability classification (nonirrigated): 3w Hydrologic Soil Group: B Ecological site: Sandy Loam Terrace (Perennial Grass) (R004XB060CA) Hydric soil rating: No

Description of Heeser

Setting

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

Typical profile

H1 - 0 to 34 inches: sandy loam H2 - 34 to 65 inches: sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: A Ecological site: Sandy Loam Terrace (Perennial Grass) (R004XB060CA) Hydric soil rating: No

Minor Components

Biaggi

Percent of map unit: 5 percent Hydric soil rating: No

Crispin

Percent of map unit: 5 percent Hydric soil rating: No

Sirdrak

Percent of map unit: 4 percent Hydric soil rating: No

Unnamed, gentler or steeper slopes

Percent of map unit: 3 percent Hydric soil rating: No

Tropaquepts

Percent of map unit: 3 percent Landform: Marine terraces Hydric soil rating: Yes

126—Coastal beaches

Map Unit Composition

Coastal beaches: 100 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Coastal Beaches

Setting

Landform: Beaches Landform position (two-dimensional): Backslope, footslope Landform position (three-dimensional): Tread Down-slope shape: Concave Across-slope shape: Linear Parent material: Beach sand derived from sandstone

132—Crispin loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: hml9 Elevation: 20 to 240 feet Mean annual precipitation: 35 to 45 inches Mean annual air temperature: 48 to 57 degrees F Frost-free period: 250 to 330 days Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Crispin

Setting

Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Residuum weathered from igneous, metamorphic and sedimentary rock

Typical profile

H1 - 0 to 14 inches: loam H2 - 14 to 23 inches: loam H3 - 23 to 62 inches: weathered bedrock

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Low
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
Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 3e Hydrologic Soil Group: C Ecological site: Sandy Loam Terrace (Perennial Grass) (R004XB060CA) Hydric soil rating: No

Minor Components

Flumeville

Percent of map unit: 3 percent Landform: Marine terraces Hydric soil rating: Yes

Biaggi

Percent of map unit: 3 percent Hydric soil rating: No

Cabrillo

Percent of map unit: 3 percent Hydric soil rating: No

Mallopass

Percent of map unit: 2 percent Hydric soil rating: No

Windyhollow

Percent of map unit: 2 percent Hydric soil rating: No

Unnamed, gentler or steeper slopes

Percent of map unit: 2 percent Hydric soil rating: No

138—Duneland

Map Unit Composition

Duneland: 90 percent *Minor components*: 10 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Duneland

Setting

Landform: Beaches Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Linear Across-slope shape: Linear Parent material: Eolian sands derived from sandstone

Minor Components

Tropaquepts

Percent of map unit: 5 percent Landform: Depressions Hydric soil rating: Yes

Sirdrak

Percent of map unit: 5 percent Hydric soil rating: No

139—Dystropepts, 30 to 75 percent slopes

Map Unit Composition

Dystropepts and similar soils: 75 percent *Minor components:* 25 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Dystropepts

Setting

Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Riser Down-slope shape: Concave Across-slope shape: Convex Parent material: Residuum weathered from sandstone and shale

Properties and qualities

Slope: 30 to 75 percent Depth to restrictive feature: More than 80 inches Runoff class: High Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None

Minor Components

Abalobadiah

Percent of map unit: 5 percent *Hydric soil rating:* No

Vizcaino

Percent of map unit: 5 percent Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent Hydric soil rating: No

Unnamed, gentler or steeper slopes Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed, talus

Percent of map unit: 5 percent Hydric soil rating: No

144—Flumeville clay loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: hmlt Elevation: 10 to 1,200 feet Mean annual precipitation: 35 to 45 inches Mean annual air temperature: 52 to 54 degrees F Frost-free period: 250 to 330 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Flumeville and similar soils: 85 percent *Minor components:* 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Flumeville

Setting

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

Typical profile

H1 - 0 to 11 inches: clay loam H2 - 11 to 62 inches: clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): 2w Land capability classification (nonirrigated): 3w Hydrologic Soil Group: D Ecological site: Semiwet Meadow (Perennial Grass) (R004XB061CA) Hydric soil rating: Yes

Minor Components

Tropaquepts

Percent of map unit: 4 percent Landform: Depressions Hydric soil rating: Yes

Windyhollow

Percent of map unit: 4 percent Hydric soil rating: No

Cabrillo

Percent of map unit: 4 percent Hydric soil rating: No

Unnamed, steeper slopes

Percent of map unit: 3 percent Hydric soil rating: No

145—Flumeville clay loam, 5 to 15 percent slopes

Map Unit Setting

National map unit symbol: hmlv Elevation: 10 to 1,200 feet Mean annual precipitation: 35 to 45 inches Mean annual air temperature: 52 to 54 degrees F Frost-free period: 250 to 330 days Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Flumeville

Setting

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

Typical profile

H1 - 0 to 11 inches: clay loam H2 - 11 to 62 inches: clay loam

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): 3w Land capability classification (nonirrigated): 3w Hydrologic Soil Group: D Ecological site: Semiwet Meadow (Perennial Grass) (R004XB061CA) Hydric soil rating: Yes

Minor Components

Tropaquepts

Percent of map unit: 4 percent Landform: Drainageways Hydric soil rating: Yes

Cabrillo

Percent of map unit: 4 percent Hydric soil rating: No

Windyhollow

Percent of map unit: 4 percent Hydric soil rating: No

Unnamed, gentler or steeper slopes Percent of map unit: 3 percent

Hydric soil rating: No

182—Mallopass loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: hmnf Elevation: 50 to 800 feet Mean annual precipitation: 35 to 45 inches Mean annual air temperature: 52 to 54 degrees F Frost-free period: 250 to 330 days Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Mallopass

Setting

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

Typical profile

H1 - 0 to 14 inches: loam H2 - 14 to 34 inches: clay loam H3 - 34 to 62 inches: gravelly sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 3e Hydrologic Soil Group: C Ecological site: Loamy Terrace (Perennial Grass) (R004XB059CA) Hydric soil rating: No

Minor Components

Biaggi

Percent of map unit: 3 percent Hydric soil rating: No

Windyhollow

Percent of map unit: 3 percent Hydric soil rating: No

Crispin

Percent of map unit: 3 percent Hydric soil rating: No

Flumeville

Percent of map unit: 2 percent Landform: Marine terraces Hydric soil rating: Yes

Tropaquepts

Percent of map unit: 2 percent Landform: Depressions Hydric soil rating: Yes

Unnamed, steeper slopes

Percent of map unit: 2 percent Hydric soil rating: No

209—Stornetta fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hmpf *Elevation:* 10 to 100 feet

Mean annual precipitation: 35 to 45 inches

Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 250 to 330 days

Farmland classification: Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

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

Description of Stornetta

Setting

Landform: Flood plains Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

H1 - 0 to 2 inches: fine sandy loam *H2 - 2 to 62 inches:* stratified fine sandy loam to silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Low
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 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): 4w Land capability classification (nonirrigated): 4w Hydrologic Soil Group: B/D Hydric soil rating: Yes

Minor Components

Riverwash

Percent of map unit: 5 percent Landform: Channels Hydric soil rating: Yes

Tropaquepts

Percent of map unit: 5 percent Landform: Depressions Hydric soil rating: Yes

Unnamed, flood plain Percent of map unit: 5 percent Hydric soil rating: No

214—Tropaquepts, 0 to 15 percent slopes

Map Unit Composition

Tropaquepts and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tropaquepts

Setting

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

Properties and qualities

Depth to restrictive feature: More than 80 inches Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None

Minor Components

Tregoning

Percent of map unit: 5 percent Landform: Marine terraces Hydric soil rating: Yes

Shinglemill

Percent of map unit: 5 percent Landform: Marine terraces Hydric soil rating: Yes

Aborigine

Percent of map unit: 5 percent Landform: Marine terraces Hydric soil rating: Yes

Blacklock

Percent of map unit: 5 percent Landform: Marine terraces Hydric soil rating: Yes

225—Windyhollow loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: hmq4 Mean annual precipitation: 40 inches Mean annual air temperature: 54 degrees F Frost-free period: 250 to 330 days Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Windyhollow

Setting

Landform: Marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, riser Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

H1 - 0 to 16 inches: loam H2 - 16 to 24 inches: clay loam H3 - 24 to 43 inches: gravelly clay loam H4 - 43 to 61 inches: clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 30 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): 2w Land capability classification (nonirrigated): 3w Hydrologic Soil Group: C Ecological site: Loamy Terrace (Perennial Grass) (R004XB059CA) Hydric soil rating: No

Minor Components

Flumeville

Percent of map unit: 4 percent Landform: Marine terraces Hydric soil rating: Yes

Mallopass

Percent of map unit: 4 percent Hydric soil rating: No

Biaggi

Percent of map unit: 4 percent Hydric soil rating: No

Unnamed, steeper slopes

Percent of map unit: 3 percent Hydric soil rating: No

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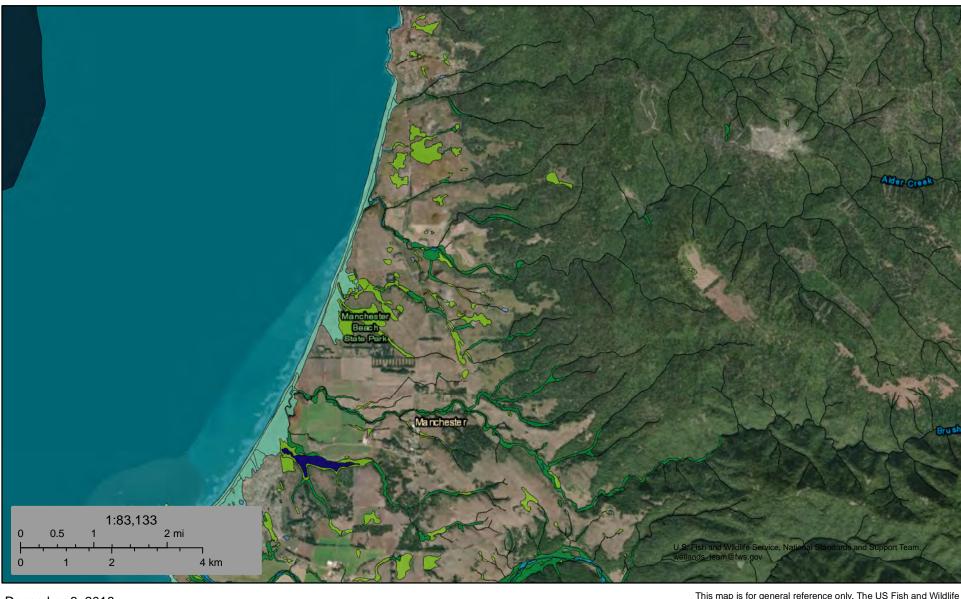
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U.S. Fish and Wildlife Service

National Wetlands Inventory

Manchester Subsea Fiber Project



December 6, 2018

Wetlands

- Estuarine and Marine Wetland

Estuarine and Marine Deepwater

- Freshwater Forested/Shrub Wetland

Freshwater Emergent Wetland

Freshwater Pond

Lake Other Riverine This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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

Project/Site:RTI Manchester	City	County. Manche	ester, Mendocino	Sampling Date: 626 201
0				Sampling Point:
Investigator(s): D. Jokerst, M. Widdowson			inge:	
Landform (hillslope, terrace, etc.): Coastal blue				
Subregion (LRR): <u>A</u> Soil Map Unit Name: <u>225 - Windyhollow lo</u>		9000	_ Long:	
		V		
Are climatic / hydrologic conditions on the site typical for the				
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" p	present? Yes V No
Are Vegetation, Soil, or Hydrology	naturally problem	natic? (If ne	eeded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sa	mpling point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes N	No_V			
Hydric Soil Present? Yes N	No V	Is the Sampled		No. 1
Wetland Hydrology Present? Yes N	10_V_	within a wetar	nar res	NO
Remarks: Ven shallow depression	an on (orstal ter	mie with H.	das lanatur
Wetland Hydrology Present? Yes N Remarks: Veny Shallow depression Wordomin ant		~ 103(00		
VEGETATION – Use scientific names of plar	nts.			
	Absolute Do	ominant Indicator	Dominance Test work	(sheet:
Tree Stratum (Plot size:)			Number of Dominant S	
1			That Are OBL, FACW,	or FAC: (A)
2			Total Number of Domin	* A
3			Species Across All Stra	ata: (B)
4			Percent of Dominant S	
Sapling/Shrub Stratum (Plot size:)		otal Cover	That Are OBL, FACW,	and the second
1			Prevalence Index wor	
2				Multiply by:
3				x 1 =
4			The second se	x 2 =
5				x 3 = x 4 =
Herb Stratum (Plot size: 5' radius)	=]	Total Cover		x 4 = x 5 =
1. Hous (anatus)	25	Y FA	A DEALER TO MAKE A DEALER AND A D	(A) (B)
2. Plantago lance stata	40	V LIDEE		
3. Horkelia Calfornica	3	NI WPL	Prevalence Index	
4. Rumex acetosella		N EARL	Hydrophytic Vegetatio	
5. Escheschetzia californica	2-	N LIPL	2 - Dominance Tes	Hydrophytic Vegetation
6. Stachys naida	5	N FACW	3 - Prevalence Inde	
7				Adaptations ¹ (Provide supporting
8	1			s or on a separate sheet)
9	1		5 - Wetland Non-V	
10			Problematic Hydro	phytic Vegetation ¹ (Explain)
11			¹ Indicators of hydric sol	il and wetland hydrology must
	90 =T	otal Cover	be present, unless dist	urbed or problematic.
Woody Vine Stratum (Plot size: 20' vadua)	24	11		
1. Kubusursinus	- 40	Y FACU	Hydrophytic	
2. Loncera hispidula		IN FACH	Vegetation Present? Ye	s No
% Bare Ground in Herb Stratum	=T	otal Cover		
Remarks:				

US Army Corps of Engineers

SOIL

0	- Distant	Deint
Sam	niina	Point:

Depth <u>Matrix</u>	Redox Features	
(inches) <u>Color (moist)</u>	<u>% Color (moist) % Type¹ Loc²</u>	Texture Remarks
2-12 104R3/2_	<u> </u>	
		· · ·
ype: C=Concentration, D=Depletion	on, RM=Reduced Matrix, CS=Covered or Coated Sand G	Grains. ² Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable	e to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (except MLRA 1 Loamy Gleyed Matrix (F2)) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
_ Depleted Below Dark Surface (A		
_ 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.
estrictive Layer (if present):		
Туре:		Hydric Soil Present? Yes No
emarks: 'DROLOGY		
remarks: /DROLOGY /etland Hydrology Indicators:	required: check all that apply)	
emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one i		Secondary Indicators (2 or more required)
emarks: /DROLOGY /etland Hydrology Indicators:	required; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required)
emarks: DROLOGY retland Hydrology Indicators: rimary Indicators (minimum of one i Surface Water (A1)	Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
emarks: DROLOGY fetland Hydrology Indicators: <u>imary Indicators (minimum of one I</u> Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Şeason Water Table (C2)
emarks: 'DROLOGY 'etland Hydrology Indicators: <u>imary Indicators (minimum of one i</u> _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	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)
emarks: 'DROLOGY 'etland Hydrology Indicators: <u>'imary Indicators (minimum of one I</u> _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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 pots (C3) Geomorphic Position (D2)
emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one i _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) 	 <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) Saturation Visible on Aerial Imagery (C9 tots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one I _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4) _ Iron Deposits (B5)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C 	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Şeason Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (6) FAC-Neutral Test (D5)
emarks: DROLOGY fetland Hydrology Indicators: <u>imary Indicators (minimum of one I</u> _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) 	 <u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Şeason Water Table (C2) Saturation Visible on Aerial Imagery (C9 sots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
emarks: etland Hydrology Indicators: imary Indicators (minimum of one I Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A gery (B7) _ Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Şeason Water Table (C2) Saturation Visible on Aerial Imagery (C9 wots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A)
Permarks: POROLOGY Petland Hydrology Indicators: mary Indicators (minimum of one I 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	 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) Gery (B7) Other (Explain in Remarks) 	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Şeason Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
PROLOGY Yetland Hydrology Indicators: imary Indicators (minimum of one I 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?	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) gery (B7) Other (Explain in Remarks) Inface (B8) No Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Şeason Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
PROLOGY Yetland Hydrology Indicators: imary Indicators (minimum of one I 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?	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) gery (B7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Şeason Water Table (C2) Saturation Visible on Aerial Imagery (C9 oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 60 FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
emarks: //DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one i 	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) Other (Explain in Remarks) urface (B8) No Depth (inches): <u>Ap_17</u> No Depth (inches): <u>Ap_17</u>	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Şeason Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 60) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Eland Hydrology Present? Yes No
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one i 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 Imag Sparsely Vegetated Concave Su Vater Table Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes	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) gery (B7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Şeason Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 60) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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

roject/Site:RTI Manchester	City	y/County: Manche	ster, Mendocino	Sampling Date:	6 26 20
			State: Ca		
vestigator(s): D. Jokerst, M. Widdowson	Se	ction, Township, Rar	nge:		
ubregion (LRR): La	at:		Lona:	Datun	1:
oil Map Unit Name: 132 - Crspin loam, O					
e climatic / hydrologic conditions on the site typical for this time	e of year?				/
e Vegetation, Soil, or Hydrology signifi	cantly dis	turbed? Are "I	Normal Circumstances	" present? Yes	No
e Vegetation, Soil, or Hydrology natura	ally proble	ematic? (If ne	eded, explain any answ	wers in Remarks.)	
UMMARY OF FINDINGS – Attach site map sho	wing s	ampling point lo	ocations, transec	ts, important fea	atures, etc.
Hydrophytic Vegetation Present? Yes Veg	- party To -	CZ Weth	and Yes	V	
Hydric Soil Present? Yes No		Is the Sampled		/	
Wetland Hydrology Present? Yes Ves No		within a Wetlan	id? Yes	No	
Remarks: Small seasond wetland i. by benns on 3 sider rEGETATION - Use scientific names of plants.	scray	pe at end	of full out	, clearly du	elincate,
and the Constant of Manual Constant of Annual An	solute D	Dominant Indicator	Dominance Test wo	orkshoot.	
	Cover S	Species? Status	Number of Dominant That Are OBL, FACV	Species 7	(A)
2			Total Number of Don	ninant 7	
·			Species Across All S	trata:	(B)
		Total Cover	Percent of Dominant That Are OBL, FACV		D_ (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index w	orksheet:	
·			Total % Cover or	f: Multiply	by:
· ·			OBL species	x 1 =	
			FACW species		
·			FAC species		
		Total Cover	FACU species		
lerb Stratum (Plot size: 5 yrdus)		NC 601	UPL species		· · · · · · · · · · · · · · · · · · ·
Lythnum hyssopi folum 2	15_	Y OBL	Column Totals:	(A)	(B)
	20_	Y FAC	Prevalence Ind	ex = B/A =	
Mentha pulegium	5-	N OBL	Hydrophytic Vegeta		
Festuca perennis (Loluin)	10	N FAC	1 - Rapid Test fo	or Hydrophytic Vegeta	ation
·			2 - Dominance T		
			3 - Prevalence In		
·			4 - Morphologica	al Adaptations ¹ (Provi arks or on a separate	de supporting
			5 - Wetland Non	and the second	311001)
·				rophytic Vegetation ¹	(Explain)
0				soil and wetland hydr	
i1	10-	Total Cover		isturbed or problemat	
Moody Vine Stratum (Plot size:)	<u> </u>				
I			Hydrophytic		
			Vegetation		
			Present?	Yes V No	
2	H	Total Cover			
	F	Total Cover			

SOIL

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SOIL					Sampling Point: 2
Profile Descrip	otion: (Describe	to the depth	n needed to document the indicator or	confirm the al	bsence of indicators.)
Depth	Matrix		Redox Features		
(inches)	Color (moist)	%	Color (moist) % Type ¹		ture Remarks
0-4 1	OYRZZ	100		- wr	
					- 24
		- <u></u>			
			Reduced Matrix, CS=Covered or Coated		² Location: PL=Pore Lining, M=Matrix.
		able to all L	RRs, unless otherwise noted.)	h	ndicators for Problematic Hydric Soils ³ :
Histosol (A	The second se	-	_ Sandy Redox (S5)	-	2 cm Muck (A10)
Histic Epipe		5	_ Stripped Matrix (S6)		_ Red Parent Material (TF2)
Black Histic			Loamy Mucky Mineral (F1) (except M	ILRA 1) _	Very Shallow Dark Surface (TF12)
Hydrogen S Depleted B	elow Dark Surfac		Loamy Gleyed Matrix (F2) Depleted Matrix (F3)		Other (Explain in Remarks)
	Surface (A12)		Redox Dark Surface (F6)	3	ndicators of hydrophytic vegetation and
and the second s	ky Mineral (S1)		Depleted Dark Surface (F7)		wetland hydrology must be present,
	ed Matrix (S4)		Redox Depressions (F8)		unless disturbed or problematic.
Restrictive Lay	/er (if present):				
Type:	Autor Render Carl		2,	1.17	
Depth (inche	es):			Hydr	ric Soil Present? Yes No
YDROLOGY	1				
Vetland Hydro	logy Indicators:				and a subscription of
Primary Indicato	ors (minimum of o	one required;	check all that apply)		Secondary Indicators (2 or more required)
Surface Wa	and the second se		Water-Stained Leaves (B9) (exce	ept	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water			MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation (Salt Crust (B11)		Drainage Patterns (B10)
Water Mark	(B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	eposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9
_ Drift Deposi			Oxidized Rhizospheres along Liv	ving Roots (C3)	Geomorphic Position (D2)
Algal Mat or			Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Deposi			Recent Iron Reduction in Tilled S	and the second sec	FAC-Neutral Test (D5)
Surface Soi			Stunted or Stressed Plants (D1) ((LRR A)	Raised Ant Mounds (D6) (LRR A)
	Visible on Aerial		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely Ve ield Observati	egetated Concave	a Sunace (B8	<i>y</i>	T	
Surface Water F		'es No	o Depth (inches):		
Vater Table Pre		es No			
Saturation Prese		1		Wotland Live	drology Present? Yes V No
ncludes capilla	ry fringe)				
escribe Record	ded Data (stream	gauge, moni	toring well, aerial photos, previous inspec	ctions), if availa	ble;
Remarks:					

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region City/County: Manchester, Mendocino Sampling Date: 6/26 RTI Manchester Project/Site: State: Ca Sampling Point: Applicant/Owner: Investigator(s): D. Jokerst, M. Widdowson _____ Section, Township, Range: ____ Landform (hillslope, terrace, etc.): Dawn Local relief (concave, convex, none): None Slope (%): L Long: Datum: Subregion (LRR): A Lat: Soil Map Unit Name: 132 - Crispin loam 0-5% Slape ___ NWI classification: ___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ No _____ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No __ Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No V Is the Sampled Area Hydric Soil Present? Yes No V Yes____No__ within a Wetland? Wetland Hydrology Present? Yes ____ No _1/ Remarks: Bern at back of pullout at edge of seasonal wetland - CZ only ived with Sampling point Z' VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: _____) % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: (A) 1. 2. Total Number of Dominant 3._____ Species Across All Strata: (B) Percent of Dominant Species = Total Cover That Are OBL, FACW, or FAC: (A/B) Sapling/Shrub Stratum (Plot size: _____) Prevalence Index worksheet: 1. Total % Cover of: Multiply by: 2. OBL species _____ x 1 = _____ 3. FACW species _____ x 2 = ____ 4. FAC species _____ x 3 = _____ 5. FACU species _____ x 4 = _____ = Total Cover Herb Stratum (Plot size: 5 UPL species _____ x 5 = _____ radius) Column Totals: _____ (A) _____ (B) Pumex acatosell FACU 5 2. Convia Tavostis Stalomber Prevalence Index = B/A = 2 airsum Vula FACH 3 Hydrophytic Vegetation Indicators: 25 Stadys naid FACW ____ 1 - Rapid Test for Hydrophytic Vegetation lantago lanceolata 10 N FACIN ____ 2 - Dominance Test is >50% 3nza minor 41 N FAC 3 - Prevalence Index is ≤3.0¹ Eschescholzia californica 25 UPL ____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 8. Leucanthemium VII gar FACU 5 - Wetland Non-Vascular Plants¹ 9. Problematic Hydrophytic Vegetation¹ (Explain) 10. ¹Indicators of hydric soil and wetland hydrology must 11. be present, unless disturbed or problematic. DD = Total Cover Woody Vine Stratum (Plot size: _____) 1. Hydrophytic

= Total Cover

% Bare Ground in Herb Stratum

0

Remarks:

2.

Yes No

Vegetation

Present?

SOIL

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Con	anli	-	Poir
Odu	IDI	na	POIL

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Profile Description: (Describe	to the depth	needed to document the indicato	r or confirm	the absence o	f indicators.)
Depth Matrix		Redox Features			
(inches) Color (moist)	%	Color (moist) % Type ¹	Loc ²	Texture	Remarks
0-18 107R212	100			511	
				0	
1 2					
· · · · · · · · · · · · · · · · · · ·		······································			
2		and address of the Teacher of States			
		educed Matrix, CS=Covered or Coa	ted Sand Grai		tion: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applic					s for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (S5)			Muck (A10)
Histic Epipedon (A2) Black Histic (A3)		Stripped Matrix (S6)			Parent Material (TF2)
Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1) (exce Loamy Gleyed Matrix (F2)	pt MLRA I)		Shallow Dark Surface (TF12) (Explain in Remarks)
Depleted Below Dark Surfac	e (A11)	Depleted Matrix (F3)			
Thick Dark Surface (A12)		Redox Dark Surface (F6)		³ Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	2	Depleted Dark Surface (F7)			I hydrology must be present,
Sandy Gleyed Matrix (S4)		_ Redox Depressions (F8)		unless	disturbed or problematic.
Restrictive Layer (if present):				V	
Туре:		2			/
Depth (inches):					10 1/ 1/
Bopar (moneu).				Hydric Soil P	resent? Yes No _/
		÷		Hydric Soil P	resent? Yes No _V
Remarks:		÷		Hydric Soil P	resent? Yes <u>No V</u>
YDROLOGY Wetland Hydrology Indicators:		÷		Hydric Soil P	resent? Yes <u>No V</u>
Remarks: YDROLOGY Wetland Hydrology Indicators:		heck all that apply)			ary Indicators (2 or more required)
Remarks: YDROLOGY Vetland Hydrology Indicators:		heck all that apply)	except	<u>Second</u>	
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of c			except	<u>Seconda</u>	ary Indicators (2 or more required)
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of c Surface Water (A1)		Water-Stained Leaves (B9) (except	<u>Seconda</u> Wat	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2,
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	except	<u>Seconda</u> Wat	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	except	<u>Seconda</u> Wa Dra Dry	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10)
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of co Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)		<u>Seconda</u> Wai Dra Dry Sate	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2)
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of co Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	g Living Roots	<u>Second</u> Wai Dra Dry Satu (C3) Geo	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
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of co Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	g Living Roots (24)	<u>Seconda</u> Wat Dra Dra Dry Satu (C3) Gec 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)
Remarks: YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of co Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C)	g Living Roots 24) ed Soils (C6)	<u>Seconda</u> Wat Dra Dra Satu (C3) Geo Sha FAC	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)
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of co 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)	one required; c	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till	g Living Roots 24) ed Soils (C6)	<u>Seconda</u> Wat Dra Dra Dry Satu (C3) Geo Sha FAC Rais	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)
Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of co 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)	one required; c	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (g Living Roots 24) ed Soils (C6)	<u>Seconda</u> Wat Dra Dra Dry Satu (C3) Geo Sha FAC Rais	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) sed Ant Mounds (D6) (LRR A)
Remarks: YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of of 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 I Sparsely Vegetated Concave Field Observations:	one required; c Imagery (B7) e Surface (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks)	g Living Roots 24) ed Soils (C6)	<u>Seconda</u> Wat Dra Dra Dry Satu (C3) Geo Sha FAC Rais	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) sed Ant Mounds (D6) (LRR A)
Remarks: YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of of 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 I Sparsely Vegetated Concave Field Observations:	one required; c Imagery (B7) e Surface (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (g Living Roots 24) ed Soils (C6)	<u>Seconda</u> Wat Dra Dra Dry Satu (C3) Geo Sha FAC Rais	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) sed Ant Mounds (D6) (LRR A)
Remarks: YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of or 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 I Sparsely Vegetated Concave Field Observations: Surface Water Present?	one required; c Imagery (B7) e Surface (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks)	g Living Roots (4) ed Soils (C6) D1) (LRR A)	<u>Seconda</u> Wat Dra Dra Dry Satu (C3) Geo Sha FAC Rais	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) sed Ant Mounds (D6) (LRR A)
Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of or 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 I Sparsely Vegetated Concave Field Observations: Surface Water Present? Y Water Table Present? Y	one required; c Imagery (B7) e Surface (B8) des No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks)	g Living Roots 34) ed Soils (C6) D1) (LRR A)	Seconda Wai Dra Dry Satu (C3) Geo Sha FAC Rais Fros	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) sed Ant Mounds (D6) (LRR A)
Remarks: YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of or 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 I Sparsely Vegetated Concave Field Observations: Surface Water Present? Vater Table Present? Yater Table Present? Saturation Present? Yater Table Present? Yater Present Present? Yater Present	one required; c Imagery (B7) e Surface (B8) fes No fes No fes No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks)	g Living Roots (4) ed Soils (C6) D1) (LRR A)	Seconda Wat Dra Dry Satu (C3) Gec Sha FAC Rais Fros	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) ullow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Remarks: YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of or 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 I Sparsely Vegetated Concave Field Observations: Surface Water Present? Vater Table Present? Yater Table Present? Saturation Present? Yater Table Present? Yater Present Present? Yater Present	one required; c Imagery (B7) e Surface (B8) fes No fes No fes No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks)	g Living Roots (4) ed Soils (C6) D1) (LRR A)	Seconda Wat Dra Dry Satu (C3) Gec Sha FAC Rais Fros	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) ullow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Remarks: YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of or 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 I Sparsely Vegetated Concave Field Observations: Surface Water Present? Vater Table Present? Yater Table Present? Saturation Present? Yater Table Present? Yater Present Present? Yater Present	one required; c Imagery (B7) e Surface (B8) fes No fes No fes No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks)	g Living Roots (4) ed Soils (C6) D1) (LRR A)	Seconda Wat Dra Dry Satu (C3) Gec Sha FAC Rais Fros	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) ullow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)

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

ject/Site: RTI Manchester		City/County: Manche	ester, Mendocino Sampling Date: /26/2
plicant/Owner:			State: Ca Sampling Point:
estigator(s): D. Jokerst, M. Widdowson			
			convex, none): <u>Concare</u> Slope (%): <u>2</u>
			_ Long: Datum:
Map Unit Name: 132 - Crispin loan	1.0.5	2 slopes	NWI classification:
climatic / hydrologic conditions on the site typical for		/	
Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes _/ No
Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
			ocations, transects, important features, etc.
ydrophytic Vegetation Present? Yes		CZ Wet	
ydric Soil Present? Yes		Is the Sampled	d Area
etland Hydrology Present? Yes		within a Wetla	nd? Yes No
emarks: Depressional feature	,	<i>fence</i> line	
GETATION – Use scientific names of p	Absolute	Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size:)		Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant
			Species Across All Strata: (B)
			Percent of Dominant Species
pling/Shrub Stratum (Plot size:)		= Total Cover	That Are OBL, FACW, or FAC: (A/B)
		-	Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
	_		FAC species x 3 =
		= Total Cover	FACU species x 4 =
erb Stratum (Plot size: 8x2')	5	V De	UPL species x 5 = (A)
Holous lanatus	50	- TAC	Column Totals: (A) (B)
Brza maxima		N UPL	Prevalence Index = B/A =
Eschetholzing californica	$-\frac{2}{7}$	W UPL	Hydrophytic Vegetation Indicators:
Avena barbata			1 - Rapid Test for Hydrophytic Vegetation
			$\frac{1}{2}$ - Dominance Test is >50% 3 - Prevalence Index is $\leq 3.0^{1}$
			4 - Morphological Adaptations ¹ (Provide supporting
			data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
 D			Problematic Hydrophytic Vegetation ¹ (Explain)
			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
(Plot size: 4,XID)	_65	= Total Cover	The second management of the second s
Cupusamenicarus	FD	Y FAC	Hudrophytic
	-10	N FACU	Hydrophytic Vegetation
Rubins wiscouss			
Bare Ground in Herb Stratum 35	- BD	= Total Cover	Present? Yes // No

	ription: (Describe									
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Features % 1	imal	Loc ²	Texture		emarks	
0-16	107R3/2	100			<u>vpe</u> -		gr ban	lot of	coloble	
Hydric Soil I Histosol Histic Ep Black His Hydroge	oipedon (A2) stic (A3) n Sulfide (A4)	able to all L - - -	RRs, unless other Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed I	wise noted.) 65) (S6) /ineral (F1) (4 Matrix (F2)			Indicator 2 cm Red Very	ation: PL=Pore rs for Problema Muck (A10) Parent Material (Shallow Dark So r (Explain in Rer	tic Hydric Soi (TF2) urface (TF12)	
Thick Da Sandy M	l Below Dark Surface ark Surface (A12) lucky Mineral (S1) ileyed Matrix (S4)	e (A11)	Depleted Matrix Redox Dark Su Depleted Dark S Redox Depress	face (F6) Surface (F7)			wetlar	rs of hydrophytic nd hydrology mus s disturbed or pro	st be present,	t
Restrictive L	ayer (if present):									
Tunor							in an arm			×
Type:	ches):						Hydric Soil	Present? Yes	No	1

Wetland Hydrology Indicators:		
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) (excerning statement of the stateme	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) poils (C6) FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) Ves No	Depth (inches): worke to 16 Depth (inches): worke to 16	Wetland Hydrology Present? Yes No
Remarks: No hydrology u		tions), if available:

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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region t/Site: RTI Manchester City/County: Manchester, Mendocino Sampling Date: 6/26/18

Project/Site:	City/County:	Sampling Date: 0/26/1
Applicant/Owner:		State: Ca Sampling Point:
Investigator(s): D. Jokerst, M. Widdowson	Section, Township, Rai	nge:
Landform (hillslope, terrace, etc.): pad shoulder	Local relief (concave, o	convex, none): Convey Slope (%): 4
Subregion (LRR):	Lat:	Long: Datum:
Soil Map Unit Name: Ch Spin Joan, 0-5%	clares	NWI classification:
Are climatic / hydrologic conditions on the site typical for this ti	ime of year? Yes X No	(If no, explain in Remarks)
Are Vegetation, Soil, or Hydrologysign		"Normal Circumstances" present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology nat		eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh		ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _	Le die Osmulad	l Aroa
Hydric Soil Present? Yes <u>No</u>		
Wetland Hydrology Present? Yes No		
Remarks: Representative Upland		aired w/ 5W3 (dp 4)
VEGETATION – Use scientific names of plants		
	Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
1//		Number of Dominant Species / That Are OBL, FACW, or FAC:
2		4
3		Total Number of Dominant / Species Across All Strata:
4		Percent of Dominant Species
	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)		Prevalence Index worksheet:
1		Total % Cover of:Multiply by:
2		OBL species x 1 =
3		FACW species x 2 =
5		FAC species x 3 =
	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5. raturs)		UPL species x 5 =
1. Briza maxima	40 Y UPL	Column Totals: (A) (B)
2. Avena barbata pr	20 Y upl	Prevalence Index = B/A =
3. Eschschofztia calitorna		Hydrophytic Vegetation Indicators:
4. Holcus lanatus	30 Y FAC	1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0 ¹
7		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8		5 - Wetland Non-Vascular Plants ¹
9 10		Problematic Hydrophytic Vegetation ¹ (Explain)
11.		¹ Indicators of hydric soil and wetland hydrology must
	100 = Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 15×6')		
1. Rubus Ursinus	20 Y FACU	Hydrophytic
2		Vegetation Present? Yes No X
% Pare Cround in Herb Stratum	2° = Total Cover	
% Bare Ground in Herb Stratum Remarks:		

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Profile Description: (Describe	e to the depth heet		confirm the absen	ce of indicators.)
Depth <u>Matrix</u> (inches) Color (moist)	% Cole	Redox Features	oc ² Texture	Remarks
A L K I I				
0-16 10yR 3/2	•• <u></u> •		_ loan	graver inclusio
· · · · · · · · · · · · · · · · · · ·				
		ed Matrix, CS=Covered or Coated S		ocation: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applie				tors for Problematic Hydric Soils ³ :
_ Histosol (A1)		ndy Redox (S5)		cm Muck (A10)
_ Histic Epipedon (A2)		ipped Matrix (S6)		ed Parent Material (TF2)
_ Black Histic (A3) _ Hydrogen Sulfide (A4)		amy Mucky Mineral (F1) (except MI amy Gleyed Matrix (F2)		ery Shallow Dark Surface (TF12) ther (Explain in Remarks)
_ Hydrogen Sunde (A4) Depleted Below Dark Surfac		pleted Matrix (F3)	0	
Thick Dark Surface (A12)		dox Dark Surface (F6)	³ Indic	ators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		pleted Dark Surface (F7)		tland hydrology must be present,
_ Sandy Gleyed Matrix (S4)		dox Depressions (F8)		ess disturbed or problematic.
estrictive Layer (if present):				
Туре:				
	A/ 66	Imported 1		oil Present? Yes No <u>×</u>
emarks: M/		Imported 1		oil Present? Yes No <u>X</u>
emarks: <u>M</u> /// /DROLOGY /etland Hydrology Indicators			F.U	
emarks: /DROLOGY /etland Hydrology Indicators rimary Indicators (minimum of o		all that apply)	Sec.	ondary Indicators (2 or more required)
emarks: //DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of of Surface Water (A1)		all that apply) _ Water-Stained Leaves (B9) (exce	Sec.	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
emarks: /DROLOGY /etland Hydrology Indicators rimary Indicators (minimum of o Surface Water (A1) High Water Table (A2)		. all that apply) _ Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)	pt	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
emarks: MATHY VDROLOGY Vetland Hydrology Indicators <u>rimary Indicators (minimum of c</u> Surface Water (A1) High Water Table (A2) Saturation (A3)		<u>all that apply)</u> Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	pt	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
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emarks: ////////////////////////////////////		all that apply) _ Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) _ Salt Crust (B11) _ Aquatic Invertebrates (B13) _ Hydrogen Sulfide Odor (C1)	pt	condary 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)
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VDROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		<u>all that apply)</u> Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So	pt	condary 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 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Permarks: MAPPENDECOGY Vetland Hydrology Indicators rimary Indicators (minimum of e _ 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)	: one required; check 	 all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 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 	pt	condary 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) Geomorphic Position (D2) Shallow Aquitard (D3)
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Remarks: YDROLOGY Vetland Hydrology Indicators: trimary Indicators (minimum of or	i <u>one required; check</u> <u></u>	 all that apply) Water-Stained Leaves (B9) (excending to the state of the state	pt	Condary 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 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Yetland Hydrology Indicators Trimary Indicators (minimum of elements) 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 Sparsely Vegetated Concav ield Observations: urface Water Present? Vater Table Present? Vater Table Present? Yaturation Present? Yaturation Present? Yaturation Present?	i <u>one required; check</u> <u></u>	 all that apply) Water-Stained Leaves (B9) (excending to the state of the state	pt	Condary 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) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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

roject/Site:RTI Manchester		City/County: Manche	ester, Mendocino Sampling Date:6 26 26
			State: Ca Sampling Point:6
vestigator(s):D. Jokerst, M. Widdowson			
andform (hillslope, terrace, etc.): <u>Swal-e</u> ubregion (LRR): <u>A</u>	Lat: this time of yea significantly	Local relief (concave, d	convex, none):
			eeded, explain any answers in Remarks.) ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes V Hydric Soil Present? Yes V	No No No	CZ WeH Is the Sampled within a Wetlar	and Yes_V_
EGETATION – Use scientific names of pl	ants.		
	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)			Number of Dominant Species 7
			That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant Species Across All Strata:2 (B)
apling/Shrub Stratum (Plot size:)			Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
erb Stratum (Plot size: <u>8×4'</u>) Opnanthe Sarmentosa		==	Prevalence Index worksheet:
Potentille ansenna	20	Y OBL	
Equisietum telmateia		N FACW	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
			$\sqrt{1 - \text{Rapid Test for Hydrophytic Vegetation}}$
			2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
 D			Problematic Hydrophytic Vegetation ¹ (Explain)
1			¹ Indicators of hydric soil and wetland hydrology must
Voody Vine Stratum (Plot size:)	[00]	= Total Cover	be present, unless disturbed or problematic.
	_		Hydrophytic /
2	_		Vegetation Present? Yes <u>V</u> No
% Bare Ground in Herb Stratum O		= Total Cover	

SOU

Samp	ling	Point'
Samp	ing	r onn.

Depth	Matrix			x Features			Mar Land	
(inches) Color			Color (moist)	%	Type'	_Loc ²	Texture	Remarks
D-6 IDYR	3/2	100					- 1	
5-10 10 YR	3/2	93	2.54R5/8	7	<u> </u>	<u>M</u>		
				_				
Type: C=Concentratio	n D=Denl	etion RM:	=Reduced Matrix CS	S=Covered	or Coate		ains ² l oca	tion: PL=Pore Lining, M=Matrix.
ydric Soil Indicators						su Sanu Or		s for Problematic Hydric Soils ³ :
Histosol (A1)	(Sandy Redox (S					Muck (A10)
Histosof (A1) Histic Epipedon (A2 Black Histic (A3)	2)		Stripped Matrix Loamy Mucky M	(S6)) (excep	t MLRA 1)	Red F	Parent Material (TF2) Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (/	44)		Loamy Gleyed				Other	(Explain in Remarks)
Depleted Below Da		(A11)	Depleted Matrix				3.	
_ Thick Dark Surface			Redox Dark Su		75			s of hydrophytic vegetation and
Sandy Mucky Mine Sandy Claved Mate			Depleted Dark S		()			d hydrology must be present, disturbed or problematic.
_ Sandy Gleyed Matr	and the second second		Redox Depress	ions (F8)			uniess	disturbed of problematic.
testilative I aver /if a	incont).							
	esent):							
Туре:	esent):	-	_					
Type: Depth (inches):	esent):						Hydric Soil P	Present? Yes <u>/</u> No
Type: Depth (inches): Remarks:	esent):		_				Hydric Soll P	Present? Yes <u>/</u> No
Type: Depth (inches): Remarks: YDROLOGY							Hydric Soll P	Present? Yes <u>V</u> No
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Inc	dicators:	ie required	d; check all that apply	0		· ·		Present? Yes <u>V</u> No
Type: Depth (inches): Remarks: YDROLOGY Yetland Hydrology Ind Primary Indicators (mini Surface Water (A1)	dicators: mum of or	ie required	d; check all that apply	10.0.00 Port 27	s (B9) (e	xcept	Second	
Type: Depth (inches): Remarks: YDROLOGY Yetland Hydrology Ind Primary Indicators (mini Surface Water (A1) High Water Table (A	dicators: mum of or	ie required	Water-Stai MLRA	ned Leave 1, 2, 4A, ar		xcept	<u>Second</u> Wa	lary Indicators (2 or more required) Iter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Type: Depth (inches): Remarks: YDROLOGY Yetland Hydrology Inc Primary Indicators (mini Surface Water (A1)	dicators: mum of or	ne required	Water-Stai MLRA Salt Crust	ned Leave 1, 2, 4A, ar (B11)	nd 4B)	xcept	<u>Second</u> Wa Dra	lary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10)
Type: Depth (inches): Remarks: YDROLOGY Yetland Hydrology Ind Primary Indicators (mini Surface Water (A1) High Water Table (A	dicators: mum of or	ie required	Water-Stai MLRA Salt Crust Aquatic Inv	ned Leave 1, 2, 4A, ar (B11) vertebrates	nd 4B) (B13)	xcept	<u>Second</u> Wa Dra Dry	lary Indicators (2 or more required) iter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) /-Season Water Table (C2)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Ind Primary Indicators (mini Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits	dicators: mum of or A2)	ne required	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd	nd 4B) (B13) pr (C1)		<u>Second</u> Wa Dra Dry Sat	lary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) r-Season Water Table (C2) turation Visible on Aerial Imagery (C
Type: Depth (inches): Remarks: YDROLOGY YDROLOGY Vetland Hydrology Ind Primary Indicators (mini Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits V Drift Deposits (B3)	dicators: mum of or A2) (B2)	ie required	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odo hizosphere	nd 4B) (B13) or (C1) es along	Living Roo	<u>Second</u> Wa Dra Dry Sat ts (C3) Get	lary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) r-Season Water Table (C2) turation Visible on Aerial Imagery (Co omorphic Position (D2)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Ind Primary Indicators (mini Surface Water (A1) High Water Table (<i>i</i> Saturation (A3) Water Marks (B1) Sediment Deposits V Drift Deposits (B3) Algal Mat or Crust (dicators: mum of or A2) (B2)	ne required	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence o	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd hizosphere of Reduced	nd 4B) (B13) or (C1) es along I Iron (C4	Living Roo \$)	<u>Second</u> Wa Dra Dry Sat ts (C3) Ge Sha	lary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) r-Season Water Table (C2) turation Visible on Aerial Imagery (C omorphic Position (D2) allow Aquitard (D3)
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Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Ind Primary Indicators (mini 	dicators: mum of or A2) (B2) B4) s (B6) n Aerial In Concave	nagery (B7 Surface (I	Water-Stai MLRA Salt Crust Aquatic Inv Aquatic Inv Oxidized R Presence o Recent Iroo Stunted or 7) Other (Exp 38)	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd thizosphere of Reduced n Reductio Stressed F lain in Ren	nd 4B) (B13) or (C1) es along I Iron (C4 n in Tilleo Plants (D	Living Roo 4) d Soils (C6	<u>Second</u> Wa Dra Dry Sat ts (C3) Gea Sha) FA(Rai	lary Indicators (2 or more required) iter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) inage Patterns (B10) r-Season Water Table (C2) turation Visible on Aerial Imagery (C omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Ind Primary Indicators (mini Surface Water (A1) High Water Table (<i>i</i> Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated Field Observations: Surface Water Present?	licators: mum of or A2) (B2) B4) a (B6) n Aerial In Concave Ye	nagery (B7 Surface (I	Water-Stai MLRA Salt Crust Aquatic Inv Aquatic Inv Aquatic Inv Oxidized R Presence c Recent Iro Stunted or 7) Other (Exp 38) No ⊥ Depth (inc	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd hizosphere of Reduced n Reductio Stressed F lain in Ren	nd 4B) (B13) or (C1) es along I Iron (C4 n in Tiller Plants (D narks)	Living Roo 4) d Soils (C6 1) (LRR A)	<u>Second</u> Wa Dra Dry Sat ts (C3) Gea Sha) FA(Rai	lary Indicators (2 or more required) iter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) inage Patterns (B10) r-Season Water Table (C2) turation Visible on Aerial Imagery (C omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
Type: Depth (inches): Remarks: YDROLOGY Yetland Hydrology Ind Primary Indicators (mini Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (A Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present?	dicators: mum of or A2) (B2) B4) a (B6) n Aerial In Concave Ye Ye	nagery (B3 Surface (I s I	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen B Oxidized R Presence C Recent Iron Stunted or To Other (Exp 38) No V Depth (inc	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd thizosphere of Reduced n Reductio Stressed F lain in Ren ches):	(B13) (B13) or (C1) es along I Iron (C4 n in Tillee Plants (D narks)	Living Roo 4) d Soils (C6 1) (LRR A)	<u>Second</u> Wa Dra Dry Sat ts (C3) Gea Sha) FA(Rai Fro	lary Indicators (2 or more required) tter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) A-Season Water Table (C2) turation Visible on Aerial Imagery (C2) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) Ised Ant Mounds (D6) (LRR A) Ist-Heave Hummocks (D7)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Ind Primary Indicators (mini Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (Iron Deposits (B5) Surface Soil Cracks Inundation Visible of	dicators: mum of or A2) (B2) B4) a (B6) n Aerial In Concave Ye Ye Ye	nagery (B7 Surface (I s I s I	Water-Stai MLRA Salt Crust Aquatic Inv Aquatic Inv Hydrogen 3 Oxidized R Presence 6 Recent Iron Stunted or TO Other (Exp 38) No V Depth (inc No V Depth (inc	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd thizosphere of Reduced n Reductio Stressed F lain in Ren ches): ches):	nd 4B) (B13) or (C1) es along I Iron (C4 n in Tiller Plants (D narks) ret to ne to	Living Roo 4) d Soils (C6 1) (LRR A) 1) 10 10 Wetla	<u>Second</u> Wa Dra Sat ts (C3) Gea Sha) FAG Rai Fro	lary Indicators (2 or more required) tter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) A-Season Water Table (C2) turation Visible on Aerial Imagery (C2) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) Ised Ant Mounds (D6) (LRR A) Ist-Heave Hummocks (D7)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Inc Primary Indicators (mini 	dicators: mum of or A2) (B2) B4) a (B6) n Aerial In Concave Ye Ye Ye	nagery (B7 Surface (I s I s I	Water-Stai MLRA Salt Crust Aquatic Inv Aquatic Inv Hydrogen 3 Oxidized R Presence 6 Recent Iron Stunted or TO Other (Exp 38) No V Depth (inc No V Depth (inc	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd thizosphere of Reduced n Reductio Stressed F lain in Ren ches): ches):	nd 4B) (B13) or (C1) es along I Iron (C4 n in Tiller Plants (D narks) ret to ne to	Living Roo 4) d Soils (C6 1) (LRR A) 1) 10 10 Wetla	<u>Second</u> Wa Dra Sat ts (C3) Gea Sha) FAG Rai Fro	lary Indicators (2 or more required) tter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) A-Season Water Table (C2) turation Visible on Aerial Imagery (C2) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) Ised Ant Mounds (D6) (LRR A) Ist-Heave Hummocks (D7)

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

roject/Site: RTI Manchester	City/	County: Manche	ester, Mendocino Sampling Date: 626 22
pplicant/Owner:			
vestigator(s): D. Jokerst, M. Widdowson			
andform (hillslope, terrace, etc.): <u>Swale</u>	Loc	al relief (concave,	convex, none): <u>Concarle</u> Slope (%): <u>3</u>
Dil Map Unit Name: 105 Braggi loan	n, 0-5%	slopes	Datum
re climatic / hydrologic conditions on the site typical for			
e Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
			locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V	No	czwetla	nd Yes_V_
lydric Soil Present? Yes V	No	Is the Sampled	
Vetland Hydrology Present? Yes V	No	within a Wetla	nd? Yes / No
Roadside Swate			
GETATION – Use scientific names of pl	1		
ree Stratum (Plot size:)	<u>% Cover</u> Sp	minant Indicator ecies? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
			Total Number of Dominant
A			Species Across All Strata: (B)
		otal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:(DD(A/B)
apling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
			Total % Cover of:Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
1		otal Cover	FACU species x 4 =
erb Stratum (Plot size: 27 8')			UPL species x 5 =
Juncus barticus Brža maxima	<u> </u>	Y FACW	Column Totals: (A) (B) Prevalence Index = B/A =
Holaus lanatus	5	N FAC	Hydrophytic Vegetation Indicators:
11.			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations ¹ (Provide supporting
		i	data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
			Problematic Hydrophytic Vegetation ¹ (Explain)
			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
oody Vine Stratum (Plot size:)	<u>40</u> =T		
			Hydrophytic Vegetation
			Present? Yes No
6 Bare Ground in Herb Stratum60	= Te	otal Cover	

000

SOIL								Sampling Point:
Profile Desc	cription: (Describe f	to the dep	oth needed to docum	ent the	indicator	or confirm	n the absence of ir	idicators.)
Depth	Matrix		Redox	Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	Texture	Remarks
0-4	104RZZ	100	The second second	_		<u> </u>	gr I	
4-16	104R 2/2	90	7.5YR 5/8	D	1		sday	
			=Reduced Matrix, CS			d Sand Gr		n: PL=Pore Lining, M=Matrix.
Hydric Soil Histosol		able to all	LRRs, unless other		ed.)		Indicators fo	or Problematic Hydric Soils ³ : ck (A10)
the second se	oipedon (A2)		Stripped Matrix (ent Material (TF2)
	stic (A3)		Loamy Mucky M			MLRA 1)		Illow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed M)		Other (E:	xplain in Remarks)
the second se	d Below Dark Surface	e (A11)	Z Depleted Matrix Redox Dark Surf				³ Indicators of	hydrophytic vegetation and
	ark Surface (A12) lucky Mineral (S1)		Depleted Dark Sun					/drology must be present,
the second se	Bleyed Matrix (S4)		Redox Depression		0			turbed or problematic.
	Layer (if present):						1	
Type:							1.5 6.9 7	1
Depth (ind	ches):						Hydric Soil Pres	sent? Yes <u>/</u> No
Remarks:								
YDROLO	GY							

Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, ____ Surface Water (A1) ____ High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) ____ Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) ____ Water Marks (B1) _ Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) ___ Geomorphic Position (D2) ___ Drift Deposits (B3) ____ Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) FAC-Neutral Test (D5) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B5) Raised Ant Mounds (D6) (LRR A) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: No Depth (inches): Surface Water Present? Yes Depth (inches): None to 16 Water Table Present? Yes No 1 No Depth (inches): hone to 16 Wetland Hydrology Present? Yes Saturation Present? No 1 Yes_ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Wetland Hydrology Indicators:

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

Project/Site:RTI Manchester	C	ity/County: Manche	ester, Mendocino s	ampling Date: 6 26 20
Applicant/Owner:			State: Ca S	ampling Point: <u> </u>
nvestigator(s): D. Jokerst, M. Widdowson	S	ection, Township, Ra	nge:	
andform (hillslope, terraçe, etc.):		ocal relief (concave,	convex, none): Concas	H Slope (%): 2
Subregion (LRR):				
Soil Map Unit Name: 144 - Flynseville	clay loam	10-5% Sla	pes NWI classificati	on:
Are climatic / hydrologic conditions on the site typical fo				
Are Vegetation, Soil, or Hydrology	a construction of the second second			
Are Vegetation, Soil, or Hydrology			eeded, explain any answers	
SUMMARY OF FINDINGS – Attach site m			agations transacts i	mnortant foaturos ato
			I TALL , MARKED , MAR	riportant leatures, etc.
Hydrophytic Vegetation Present? Yes		CZ Wetta Is the Sampled	10,5	-
Hydric Soil Present? Yes V		within a Wetlan		No_/
Wetland Hydrology Present? Yes Remarks:	No_V	M. B. A. P		
/EGETATION – Use scientific names of p	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksh Number of Dominant Spe	cies
1			That Are OBL, FACW, or	FAC: (A)
2			Total Number of Dominar Species Across All Strata	
4				
		= Total Cover	Percent of Dominant Spe That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size:)			Prevalence Index works	heet:
1			Total % Cover of:	Multiply by:
23			OBL species	x 1 =
4			FACW species	
7			LTAC anasias	×2 -

	= Tot	al Cover	That Are OBL, FACW, o	FAC: 50	(A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index work	sheet:	
1			Total % Cover of:	Multiply b	<u>/:</u>
2			OBL species	x 1 =	
3			FACW species	x 2 =	
4			FAC species	x 3 =	
5			FACU species	x 4 =	
Herb Stratum (Plot size: $278'$)	= l ot	al Cover	UPL species	x 5 =	
1. Holcus lanatus	30 >	- FAC	Column Totals:	(A)	(B)
2. Briza maxima	20 7	- upc	Prevalence Index	= B/A =	i i i
3			Hydrophytic Vegetatio	n Indicators:	
4			1 - Rapid Test for H	ydrophytic Vegetatio	n
5			2 - Dominance Test	is >50%	
6			3 - Prevalence Inde	x is ≤3.0 ¹	
7			4 - Morphological A data in Remarks	daptations ¹ (Provide or on a separate sh	
9			5 - Wetland Non-Va	scular Plants ¹	
10			Problematic Hydrop	hytic Vegetation ¹ (E	xplain)
11			¹ Indicators of hydric soil		
	5D = Tota	al Cover	be present, unless distu	rbed or problematic.	
Woody Vine Stratum (Plot size:)					
1			Hydrophytic		
2			Vegetation	1.	/
% Bare Ground in Herb Stratum $_5D$	= Tota		Present? Yes	s No∕	-
Remarks:					

S	0	I	L

Depth	cription: (Describe t	o me uepi				or commit	ne absence of	indicators.)
(inches)	Matrix Color (moist)	%	Color (moist)	x Features %	Type ¹	Loc ²	Texture	Remarks
0-9	1040712	100	- color (molet)				CI	Kondiko
9 11	10 10 212			· ·				
1-11-	10 YR 212	100	110 510				<u></u>	
11-15	<u>2,5 YR 5/Z</u>	_ <u>fo</u> 	10×185/8			 		
	oncentration, D=Depl Indicators: (Applica					d Sand Grain		on: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol Histic Ep Black Hi Hydroge Depleted Thick Da Sandy M Sandy G	l (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)		Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed I Depleted Matrix Redox Dark Su Depleted Dark S Redox Depress	S5) (S6) Aineral (F1) Matrix (F2) (F3) (F3) fface (F6) Surface (F7)) (except	MLRA 1)	2 cm M Red Pa Very S Other (³ Indicators wetland	luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and hydrology must be present, listurbed or problematic.
Restrictive I Type: Depth (ind	Layer (if present):		-				Hydric Soil Pr	esent? Yes / No
Remarks: S	oils moist	- at	Il inches	5				
YDROLO	GY							
Wetland Hyd	drology Indicators:		10.000					Contraction in the second second
Primary Indic	cators (minimum of on	e required;	check all that apply	()			Seconda	ry Indicators (2 or more required)
minary man	Water (A1)			1, 2, 4A, ar		cept	4	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B)
Surface High Wa Saturatio	on (A3)		Salt Crust				Drail	nage Patterns (B10)
Surface High Wa Saturatio Water M Sedimer			Aquatic Inv Hydrogen \$	vertebrates Sulfide Ode	or (C1)	iving Roots	Dry-: Satu	Season Water Table (C2)
Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	on (A3) 1arks (B1) nt Deposits (B2)	nagery (B7)	Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or	vertebrates Sulfide Ode hizosphere of Reduced n Reductio Stressed F	or (C1) es along L I Iron (C4) n in Tilled Plants (D1	Soils (C6)	Dry-3 Satu (C3) Geor Shal FAC Rais	Season Water Table (C2) ration Visible on Aerial Imagery (C9)
Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial Im y Vegetated Concave		Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iron Stunted or Other (Exp	vertebrates Sulfide Ode hizosphere of Reduced n Reductio Stressed F	or (C1) es along L I Iron (C4) n in Tilled Plants (D1	Soils (C6)	Dry-3 Satu (C3) Geor Shal FAC Rais	Season Water Table (C2) ration Visible on Aerial Imagery (C9) morphic Position (D2) low Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (LRR A)

Remarks:

Swale, but no sign of recent water flow

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

Project/Site: RTI Manchester	City/County: Manchester, Mendocino Sampling Date: 627 201
Applicant/Owner:	State: Ca Sampling Point: 9
Investigator(s):D. Jokerst, M. Widdowson	Section, Township, Range:
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): Slope (%):
Subregion (LRR): A	: Long: Datum:
Soil Map Unit Name: 144 - Flumeville day loa	m 20-570 Slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circumstances" present? Yes 📈 No
Are Vegetation, Soil, or Hydrology naturall	ly problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling point locations, transects, important features, etc.
SUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Yes No	4
	ving sampling point locations, transects, important features, etc.

VEGETATION - Use scientific names of plants.

<u>Tree Stratum</u> (Plot size:) 1)		Dominant Species?	Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC		(A)
2 3 4				Total Number of Dominant Species Across All Strata:	3	(B)
Sapling/Shrub Stratum (Plot size:)		= Total Co		Percent of Dominant Species That Are OBL, FACW, or FAC		(A/B)
1				Prevalence Index worksheet	Contraction of the second second	
2				OBL species		
3				FACW species		
4				FAC species		
5	$\rightarrow \longrightarrow$			FACU species		
Herb Stratum (Plot size: 8 × 2')		= Total Co	ver	UPL species		
1. Bria maxima	40	<u> </u>	UPL	Column Totals:		
2. Holcus lanatus		1	FAC	Prevalence Index = B/A	=	_
3				Hydrophytic Vegetation Indi	cators:	
4				1 - Rapid Test for Hydropl	nytic Vegetation	
5				2 - Dominance Test is >50)%	
6				3 - Prevalence Index is ≤3	i.0 ¹	
78				4 - Morphological Adaptat data in Remarks or on	ions ¹ (Provide sup a separate sheet)	porting
9				5 - Wetland Non-Vascular	Plants ¹	
10		-		Problematic Hydrophytic	/egetation ¹ (Expla	uin)
11				¹ Indicators of hydric soil and w be present, unless disturbed o	etland hydrology	must
W 11 01 10 10 10 10 10 10 10 10 10 10 10	90	= Total Cov	er	be present, unless disturbed o	r problematic.	_
Woody Vine Stratum (Plot size: 8×7')	20	V	GIO.	the second		_
1. Kubrs ursinus	30		FACU	Hydrophytic Vegetation	/	2
2 % Bare Ground in Herb Stratum	30	= Total Cov	er	Present? Yes	No	
Remarks:						
M.						

	e me nep				or confirm	the absence	of indicators.)
Depth <u>Matrix</u>	0/		Redox Feature		Loc ²	Texture	Remarks
nches) Color (moist)	%	Color (mois	it) <u>%</u>	_Type ¹	Loc		1/1
2-61110YR22	100		*			L	Some cobbly
-16 10YR 3/1	75	IOYR 5	8 25	C	M	sl	with gravel
pe: C=Concentration, D=Deple dric Soil Indicators: (Applica Histosol (A1) Histic Epipedon (A2)			otherwise not dox (S5)		d Sand Gra	Indicate 2 cr	cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ : n Muck (A10) d Parent Material (TF2)
Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface	(411)	Loamy Gle	icky Mineral (F [.] eyed Matrix (F2 Matrix (F3)		t MLRA 1)		y Shallow Dark Surface (TF12) er (Explain in Remarks)
 Depleted Derk Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) 		Redox Da Depleted I	rk Surface (F6) Dark Surface (F pressions (F8)			wetla	ors of hydrophytic vegetation and and hydrology must be present, as disturbed or problematic.
estrictive Layer (if present):							
estrictive Layer (il present).						1	-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
Type:						Hydric Soil	

HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, MLRA 1, 2, 4A, and 4B) 4A, and 4B) ____ High Water Table (A2) Salt Crust (B11) Drainage Patterns (B10) _ Saturation (A3) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Water Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Drift Deposits (B3) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Stunted or Stressed Plants (D1) (LRR A) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Yes _____ No ____ Depth (inches): Surface Water Present? Yes ____ No V Depth (inches): wone to 16 Water Table Present? Yes _____ No V___ Depth (inches): 100 Wetland Hydrology Present? Yes Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: No indicators - site is shallow roadside swale but no sign of water flow

US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

Project/Site:RTI Manchester	City/County: Manche	ester, Mendocino s	ampling Date: 6 27 2018
Applicant/Owner:		State: Ca State:	ampling Point:
Investigator(s): D. Jokerst, M. Widdowson		nge:	
Landform (hillslope, terrace, etc.):	Local relief (concave,	convex, none):	N Slope (%):
Subregion (LRR):	Lat:	Lona:	Datum:
Soil Map Unit Name: 144- Purpeville clas	y loam, 0.5% slag	NWI classificat	ion:
Are climatic / hydrologic conditions on the site typical for this			
Are Vegetation, Soil, or Hydrologys	ignificantly disturbed? Are '	"Normal Circumstances" pre	sent? Yes 📈 No
Are Vegetation, Soil, or Hydrology n		eeded, explain any answers	
SUMMARY OF FINDINGS – Attach site map	showing sampling point l	ocations, transects, i	important features, etc.
Hydrophytic Vegetation Present? Yes N	o CZ Wetla		•
	o Is the Sampled within a Wetlar		No
	o within a wetian	nur fes <u>v</u>	NO
Remarks:			
VEGETATION – Use scientific names of plan	ts.		
Tree Stratum (Plot size:)	Absolute Dominant Indicator	Dominance Test worksh	neet:
1)	<u>% Cover</u> <u>Species?</u> <u>Status</u>	Number of Dominant Spe That Are OBL, FACW, or	
2	·		
3		Total Number of Dominar Species Across All Strata	
4			

3 4 Sapling/Shrub Stratum (Plot size:)	= Total Cover	Species Across All Strata:
5. Equisition felmater 6. Holcus Lanatus 7. Lotus Comiculatus 8.	= Total Cover $= Total Cover$ $= 30 Y OBL$ $= 30 Y FACW$ $= 30 Y FACW$ $= 20 Y OBL$ $= 2 N FACW$ $= 3 N FAC$ $= 5 N FAC$	Prevalence index worksheet:Total % Cover of:Multiply by:OBL species $x 1 =$ FACW species $x 2 =$ FAC species $x 3 =$ FACU species $x 4 =$ UPL species $x 5 =$ Column Totals:(A)Prevalence Index = B/A =Hydrophytic Vegetation Indicators:1 - Rapid Test for Hydrophytic Vegetation2 - Dominance Test is >50%3 - Prevalence Index is $\leq 3.0^1$ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants ¹
9 10 11 Woody Vine Stratum (Plot size:)		Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 2 % Bare Ground in Herb Stratum20	= Total Cover	Hydrophytic Vegetation Present? Yes <u>V</u> No
Remarks: Hydrophytic vegetation	i vordside deta	4

1000			
Sam	nling	Doint'	
Salli	pilliu	Point:	

in the second se

OIL								Sampling Point:
		the dep	oth needed to docur		dicator	or confirn	n the abs	ence of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Features %	Type ¹	Loc ²	Textu	re Remarks
0-6	104R217	90	57R 518	10	C	M	15	
6-16	10 YR 2/1	80		20	C	M	7.0	
			<u></u>			-		
		2						
	··				-		1	
Type: C=Co	oncentration, D=Depl	etion, RM	=Reduced Matrix, CS	S=Covered	or Coate	d Sand G	rains.	² Location: PL=Pore Lining, M=Matrix.
lydric Soil Ir	ndicators: (Applica	ble to all	LRRs, unless other	wise note	d.)		Inc	licators for Problematic Hydric Soils ³ :
_ Histosol (Sandy Redox (S					2 cm Muck (A10)
	ipedon (A2)		Stripped Matrix	Contract of the second s			-	Red Parent Material (TF2)
_ Black His			Loamy Mucky N		(except	MLRA 1)		Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
_ , ,	n Sulfide (A4) I Below Dark Surface	(A11)	Loamy Gleyed I				-	
	rk Surface (A12)	(~1)	Redox Dark Su				³ In	dicators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark		')			wetland hydrology must be present,
	leyed Matrix (S4)		Redox Depress		2	- 1		unless disturbed or problematic.
	ayer (if present):							
Type:								
Depth (incl	hes):						Hydrid	: Soil Present? Yes 🔽 No
	22							
Vetland Hyd	Irology Indicators:	ne require	d: check all that appl	<i>v</i>)				Secondary Indicators (2 or more required)
Vetland Hyd rimary Indica	trology Indicators: ators (minimum of or	ne require	d <u>; check all that appl</u> Water-Sta	A CONTRACT OF A	s (B9) (e	xcept		Secondary Indicators (2 or more required)
/etland Hyd rimary Indica Surface V	trology Indicators: ators (minimum of or Water (A1)	ne require	Water-Stai	ned Leave		xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
/etland Hyd rimary Indica Surface V High Wat	Irology Indicators: ators (minimum of or Water (A1) ter Table (A2)	ne require	Water-Stai MLRA	ned Leave 1, 2, 4A, ar		xcept		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
/etland Hyd rimary Indica Surface V High Wat Saturation	trology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3)	ne require	Water-Stai MLRA Salt Crust	ned Leave 1, 2, 4A, ar (B11)	nd 4B)	xcept		 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma	trology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3)	ne require	Water-Stai MLRA	ned Leave 1, 2, 4A, ar (B11) /ertebrates	nd 4B) (B13)	xcept		 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment	trology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1)	ne require	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen	ned Leave 1, 2, 4A, ar (B11) /ertebrates	nd 4B) (B13) or (C1)			 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo	trology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	ne require	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F	ned Leave 1, 2, 4A, ar (B11) /ertebrates Sulfide Odd	nd 4B) (B13) or (C1) es along	Living Roo		 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo	trology Indicators: ators (minimum of or Water (A1) ter Table (A2) nn (A3) arks (B1) tt Deposits (B2) osits (B3)	ne require	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Ode Rhizosphere	nd 4B) (B13) or (C1) es along I Iron (C4	Living Roo	- 	 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)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo	trology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) oosits (B3) t or Crust (B4)	ne require	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F	(B13) (B13) or (C1) es along I Iron (C4 n in Tiller Plants (D	Living Roo I) d Soils (C6	ots (C3)	 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)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depr Algal Mat Iron Depr Surface S Inundatio	trology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) tosits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir	nagery (B	Water-Stai MLRA Salt Crust Aquatic Inv Aquatic Inv Oxidized F Presence 0 Recent Iro Stunted or Stunted or	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F	(B13) (B13) or (C1) es along I Iron (C4 n in Tiller Plants (D	Living Roo I) d Soils (C6	ots (C3)	 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)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely	trology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir v Vegetated Concave	nagery (B	Water-Stai MLRA Salt Crust Aquatic Inv Aquatic Inv Oxidized F Presence 0 Recent Iro Stunted or Stunted or	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F	(B13) (B13) or (C1) es along I Iron (C4 n in Tiller Plants (D	Living Roo I) d Soils (C6	ots (C3)	 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)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely ield Observ	irology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) to Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave vations:	nagery (B Surface (Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or Stunted or 7) Other (Exp (B8)	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F olain in Ren	(B13) (B13) or (C1) es along I Iron (C4 n in Tiller Plants (D	Living Roo I) d Soils (C6	ots (C3)	 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)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely ield Observ	Arology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) rosits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave vations: er Present? Ye	nagery (B Surface (Water-Stail MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or Stunted or Other (Exp (B8)	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F plain in Ren ches):	nd 4B) (B13) or (C1) es along I Iron (C4 n in Tillee Plants (D narks)	Living Roo)) d Soils (C6 1) (LRR A	ots (C3)	 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)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely ield Observ urface Wate Vater Table F	Arology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3) t or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave Vations: er Present? Ye	nagery (B Surface (es	Water-Stail MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or Stunted or Other (Exp B8) No <u>V</u> Depth (inv No <u>Depth (inv</u>	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F olain in Ren ches): ches):	(B13) (B13) or (C1) es along I Iron (C4 n in Tille Plants (D narks)	Living Roo) d Soils (C6 1) (LRR A	ots (C3)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hyd rimary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Vater Table F Saturation Pre ncludes cap	irology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave vations: er Present? Present? Ye esent? Ye	nagery (B Surface (28 28 28	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or Stunted or T) Depth (inv No V Depth (inv	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F olain in Ren ches): ches): ches):	(B13) (B13) or (C1) es along I Iron (C4 n in Tillee Plants (D narks)	Living Roo) d Soils (CC 1) (LRR A 6 6 Wetl	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hyd Primary Indica Surface V High Wat Saturation Vater Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Vater Table F Saturation Pre Includes cap	irology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave vations: er Present? Present? Ye esent? Ye	nagery (B Surface (28 28 28	Water-Stail MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or Stunted or Other (Exp B8) No <u>V</u> Depth (inv No <u>Depth (inv</u>	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F olain in Ren ches): ches): ches):	(B13) (B13) or (C1) es along I Iron (C4 n in Tillee Plants (D narks)	Living Roo) d Soils (CC 1) (LRR A 6 6 Wetl	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indica Surface V High Wat Saturation Water Ma Sediment Conft Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate Vater Table F Saturation Pre includes cap	irology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave vations: er Present? Present? Ye esent? Ye	nagery (B Surface (28 28 28	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or Stunted or T) Depth (inv No V Depth (inv	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F olain in Ren ches): ches): ches):	(B13) (B13) or (C1) es along I Iron (C4 n in Tillee Plants (D narks)	Living Roo) d Soils (CC 1) (LRR A 6 6 Wetl	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hyd Primary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate Vater Table F Saturation Pre- includes capi Describe Rec	irology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave vations: er Present? Present? Ye esent? Ye willary fringe)	nagery (B Surface (28 28 28	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or Stunted or T) Depth (inv No V Depth (inv	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F olain in Ren ches): ches): ches):	(B13) (B13) or (C1) es along I Iron (C4 n in Tillee Plants (D narks)	Living Roo) d Soils (CC 1) (LRR A 6 6 Wetl	ots (C3) 6) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hyd Primary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate Vater Table F Saturation Pre- includes capi Describe Rec	irology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave vations: er Present? Present? Ye esent? Ye willary fringe)	nagery (B Surface (28 28 28	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or Stunted or T) Depth (inv No V Depth (inv	ned Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed F olain in Ren ches): ches): ches):	(B13) (B13) or (C1) es along I Iron (C4 n in Tillee Plants (D narks)	Living Roo) d Soils (CC 1) (LRR A 6 6 Wetl	ots (C3) 6) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO Sampling Date: 27 Sept, 2018
Applicant/Owner: RTI / Caltrans, private	State: CA Sampling Point:
Investigator(s): M. Widdowson, S. Spooner	Section, Township, Range:
Landform (hillslope, terrace, etc.): Valley Slope, lower	Local relief (concave, convex, none): Concave Slope (%): 5-15
Subregion (LRR): A: Northwest Forests and Coast Lat:	Long: Datum:
Soil Map Unit Name: 144 - Thype ville clay ban	0.570 Slopes NWI classification:
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	iz wetland yes - No /
Hydric Soil Present? Yes No	Is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes No
Remarks: PM 23.74 Ripania willow Scrub	, along intermittent stream

VEGETATION – Use scientific names of plants.

Tree Stratum, (Plot size; <u>30 XIOH</u> 1. <u>Saling lasidaps</u> 2.		Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant
3		· · · · · ·	Species Across All Strata: (B)
4		_ = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1)			Prevalence Index worksheet:
2			Total % Cover of:Multiply by:
3			OBL species x 1 =
4			FACW species x 2 =
5.		· ·	FAC species x 3 =
		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5 mature)			UPL species x 5 =
1. Polystichum munitum	45	Y. FACU	Column Totals: (A) (B)
2. Conum maculatum	10	NEAC	Prevalence Index = B/A =
3. Stadys agidum	<1	NFAC	Hydrophytic Vegetation Indicators:
4		<u></u>	1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
6	_		3 - Prevalence Index is ≤3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide supporting 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
11	57	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 30 +10 /		_= Total Cover	
1. Lubus ursinus	_ 50	Y FACU	Hydrophytic Vegetation
2		= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum _45			
Remarks:			

Sampling Point:

11

Depth (inches)			
(inches)	Matrix	Redox Features	Taulura
	Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
	· · · · · · · · · · · · · · · · · · ·		
T			ains. ² Location: PL=Pore Lining, M=Matrix.
		M=Reduced Matrix, CS=Covered or Coated Sand Gra all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (Sandy Redox (S5)	2 cm Muck (A10)
	ipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black His		Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
	n Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
	Below Dark Surface (A11)	Depleted Matrix (F3)	31
	rk Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
	ucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
	eyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive L	ayer (if present):		
Type:			and the second sec
Depth (inc	hes):		Hydric Soil Present? Yes No
Remarks:		pit because of presence of	
YDROLOO Wetland Hyd	rology Indicators:		
Primary Indic	ators (minimum of one requi	rod: shock all that apply)	Secondary Indicators (2 or more required)
	Nator (A1)	reu, check all that apply)	
Surface \		The second s	Water-Stained Leaves (B9) (MLRA 1, 2,
Surface \		Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Wat	er Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	4A, and 4B)
High Wat	er Table (A2) n (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	4A, and 4B) Drainage Patterns (B10)
High Wal Saturatio Water Ma	er Table (A2) n (A3) arks (B1)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
High Wat Saturatio Water Ma Sedimen	er Table (A2) n (A3) arks (B1) t Deposits (B2)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
High Wat Saturatio Water Ma Sedimen Drift Dep	er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root 	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2)
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Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO Sampling Date: 22 Sept, 2018
Applicant/Owner: RTI / Caltrans, private	State: CA Sampling Point:2
Investigator(s): M. Widdowson, S. Spooner	Section, Township, Range:
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>5</u>
Subregion (LRR): A: Northwest Forests and Coast Lat:	Long: Datum:
	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Normal Circumstances" present? Yes Ves No
Are Vegetation, Soil, or Hydrology naturally pr	
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Ves	CZ-Worland Yes V.
Hydric Soil Present? Yes No	Is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes No
Remarks: PM 23.74 - Patch of Salix Dris at edge of Salix pate	1
VEGETATION – Use scientific names of plants.	Developent Indicator Development Technologicato
	Dominant Indicator Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
3	
	= Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1. Salve sconlenana 100	Y FAC Prevalence Index worksheet:
2. Bacchan's pilulan's 10	N ALP(Total % Cover of: Multiply by:
3. Lonicera involucrata 10	N CAL OBL species x1 =
4	FACW species x 2 = FAC species x 3 =
5	
<u>Herb Stratum</u> (Plot size: $5 \times 8'$).	_ = Total Cover UPL species
1. Atemisia douglasiana 10	Y A Column Totals: (A) (B)
2. Equisetum telinatei 5	Prevalence Index = B/A =
3. Stachysnauda 2	Hydrophytic Vegetation Indicators:
4	1 - Rapid Test for Hydrophytic Vegetation
5	2 - Dominance Test is >50%
6	
7	
8	
9	
10	¹ Indicators of hydric soil and wetland hydrology must
1117	_= Total Cover
Woody Vine Stratum (Plot size:)	
1	
2	Brocont2 Voc V
% Bare Ground in Herb Stratum	_= Total Cover
Remarks:	

	needed to document the indicator or confirm	In the absence of indicators.
Depth <u>Matrix</u>	<u>Redox Features</u> Color (moist) % <u>Type¹ Loc²</u>	Texture Remarks
(inches) Color (moist) %		
0-12 10/R3/2 100_		gr loan_
		· · · · · · · · · · · · · · · · · · ·
		A
······································		
	educed Matrix, CS=Covered or Coated Sand G	rains. ² Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all LF	RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	_ Sandy Redox (S5)	2 cm Muck (A10)
_ Histic Epipedon (A2)	_ Stripped Matrix (S6)	Red Parent Material (TF2)
_ Black Histic (A3)	_ Loamy Mucky Mineral (F1) (except MLRA 1)	
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Depleted Below Dark Surface (A11) _ _ Thick Dark Surface (A12) _	_ Depleted Matrix (F3) _ Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
_ Sandy Gleyed Matrix (S4)	_ Redox Depressions (F8)	unless disturbed or problematic.
estrictive Layer (if present):		
Туре:		1
Depth (inches):		Hydric Soil Present? Yes No
emarks:		
YDROLOGY		
YDROLOGY Vetland Hydrology Indicators:	check all that apply)	Secondary Indicators (2 or more required)
/DROLOGY Vetland Hydrology Indicators:	check all that apply) Water-Stained Leaves (B9) (except	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; o	and the second state of th	
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; o Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
/DROLOGY /etland Hydrology Indicators: <u>rimary Indicators (minimum of one required; of</u> Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
/DROLOGY /etland Hydrology Indicators: <u>rimary Indicators (minimum of one required; o</u> Surface Water (A1) High Water Table (A2) Saturation (A3)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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State: <u>CA</u> Sampling Point: <u>3</u>
Section, Township, Range:
Local relief (concave, convex, none):
Long: Datum:
0-5% slopes NWI classification:
r? Yes No (If no, explain in Remarks.)
listurbed? Are "Normal Circumstances" present? Yes No _
plematic? (If needed, explain any answers in Remarks.)
sampling point locations, transects, important features,
Is the Sampled Area
within a Wetland? Yes No

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:		Absolute		t Indicator	Dominance Test worksho	eet:
2	Tree Stratum (Plot size:)					
3.						
4.						
Sapling/Shrub Stratum (Plot size:) = Total Cover Total Ac COBL, FACU, or FAC: (A/B) 1.				· • • • • • • • • • • • • • • • • • • •	Species Across All Strata:	(B)
Sapling/Shrub Stratum (Plot size:) Intervention (Plot size:) Intervention (Plot size:) Intervention (Plot size:) 1.	4				Percent of Dominant Spec	ies 🔿
1.	Capting (Chrute Christian (Distained		= Total C	over	That Are OBL, FACW, or F	FAC: (A/B)
2. 100 1/2 Cover 01. Multiply 0y. 3.					Prevalence Index worksh	neet:
2.					Total % Cover of:	Multiply by:
3.						
4.	3					
5.	4			·		
Herb Stratum (Plot size: 2 × 10')	5	_			and the second	
1. AVend Sp. 3 N UPL 2. Geranim Cort - core 2 N UPL 3. Cccdbschelz in cathformer 5 N UPL 4. Cynessums echinatti 30 Y UPL 5. Lumex acetosella 5 N EAction 6. British maxima 30 Y UPL 7. bromus borde aceus 20 Y EAction 8. Bromus borde aceus 20 Y EAction 9. - - - - 9. - - - - 10. - - - - - 11. - - - - - - 10. -			= Total C	over		
2. Geranim Cord-core 2 N UPL 3. CodeSchelzia californica 5 N UPL 4. Cynosume echinatti 30 Y UPL 5. Cumex acctosella 5 N EAzia 6. Briza maxima 30 Y UPL 7. Bromus hordenceus 20 Y EAcia 8. Bromus hordenceus 20 Y EAcia 9. - - - 4 10. - - - 5 11. - - - - 5 10. - - - - - 11. - - - - - - 10. - - - - - - - 11. - - - - - - - - 10. - - - - - - - - 10. -		-		1.1		
3. C_CASChelizia califormed 5 N UPL Hydrophytic Vegetation Indicators: 4.	1. Ang SP'	2	N	UPL	Column Totals:	(A) (B)
3. CCASChed zia califormes 5 N UPL 4. Cynosums echinattif 30 Y UPL 5. Cumex acetosella 5 N EAch 6. Brita maxima 30 Y UPL 7. Bromus hordeaceus 20 Y EAch 8. Bromus hordeaceus 20 Y EAch 9. - - - 4 10. - - - 5 11. - - - - 5 10. - - - - 5 - 11. - - - - 5 - - 10. - - - - 5 - - 5 - - 5 - - 5 - - - 5 - - - 5 - - - 5 - - - 5 - - - - 5 - - <td></td> <td>2</td> <td>N</td> <td>UPL</td> <td>Prevalence Index =</td> <td>B/A =</td>		2	N	UPL	Prevalence Index =	B/A =
4. Cynessing edminator 30 Y UPL 1 - Rapid Test for Hydrophytic Vegetation 5. Gumex acctosella 5 N FACM 2 - Dominance Test is >50% 6. Priza maxima 30 Y UPL 3 - Prevalence Index is \$3.01 7. Promus hordeaceus 20 Y FACM 3 - Prevalence Index is \$3.01 8. Promus duantms 5 N UPL 4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet) 9. 5 N UPL 5 - Wetland Non-Vascular Plants1 10. 10. - 100 = Total Cover 5 - Wetland Non-Vascular Plants1 11. - 100 = Total Cover - 5 - Wetland Non-Vascular Plants1 12. - 100 = Total Cover - - 30. Y FACM - - 14. Moody Vine Stratum (Plot size: 2/10') - - - 15. - - - - - 20. - - - - - 10. - -	3. Eschedzia californica	5	N	UPL		
5. 1011111111111111111111111111111111111			Y	UPL	이 이 것 이 안 가장 가지 않는 것 같은 것 같은 것 같이 많이 했다.	
6. <u>Bria maxima</u> 30 Y WPL 7. <u>bromus hordeaceus</u> 20 Y FACU 8. <u>bromus duantmus</u> 5 N WPL 9 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) 9 5 - Wetland Non-Vascular Plants ¹ 10 5 - Wetland Non-Vascular Plants ¹ 11 100 = Total Cover <u>Woody Vine Stratum</u> (Plot size: 2'110') 1 100 = Total Cover <u>Woody Vine Stratum</u> (Plot size: 2'110') 1 100 = Total Cover <u>Woody Vine Stratum</u> (Plot size: 2'110') 1 100 = Total Cover <u>Woody Vine Stratum</u> (Plot size: 2'110') 1 = Total Cover <u>% Bare Ground in Herb Stratum</u> 0 = Total Cover	5. Rumer acotosella	5	Ň	FACH		
7.		30	Y			
8. Browns drantms 5 N UPL 9.			V	FALL		
9			-1	1.01	data in Remarks of	ptations' (Provide supporting
10.			14	ure.		
11. 100 = Total Cover Woody Vine Stratum (Plot size: 2410') 100 = Total Cover 1. 100 = Total Cover 30. Y FAcu Hydrophytic Vegetation Present? Yes No						
Woody Vine Stratum (Plot size: 2410') 100 = Total Cover 1. 100 = Total Cover 30. Y 30. Y 4. FAcu Woody Vine Stratum		-			the second se	
Woody Vine Stratum (Plot size: 2 410') 100 = Total Cover 1. 100 = Total Cover 30. Y 9 Bare Ground in Herb Stratum Image: Cover Hydrophytic Vegetation Present? Yes	11		-		be present unless disturbe	ed or problematic
1. <	March Mine Chatter (Distained 7 410')	100	= Total Co	over		
2	Woody vine Stratum (Plot size:)	RO	N	FARM	the second second	
% Bare Ground in Herb Stratum		30,		1/10		/
% Bare Ground in Herb Stratum = Total Cover	2		-			No
	W Dave Cround in Llash Stratum		= Total Co	over	100_	
Remarks.						
	Remains.					

Profile Description: (Describ	e to the dep	th needed to docum		maioacor			
Depth Matrix			Feature	S1			Deventer
(inches) Color (moist)	%	Color (moist)	%	Type.	Loc ²	Texture	Remarks
			-				
				•			
				· ·)	·	
				·			
	_				1		
Type: C=Concentration, D=D					d Sand Gr	ains. ² Locatio	n: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Appl	icable to all	LRRs, unless other	wise not	ed.)		Indicators f	or Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (S				2 cm Mi	
Histic Epipedon (A2)		Stripped Matrix		5. 5 · · · · · ·			rent Material (TF2)
Black Histic (A3)		Loamy Mucky M			MLRA 1)		allow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)	/ 0 / / 1	Loamy Gleyed N		2)		Other (E	Explain in Remarks)
 Depleted Below Dark Surfa Thick Dark Surface (A12) 	ace (ATT)	Depleted Matrix Redox Dark Sur				³ Indicators o	f hydrophytic vegetation and
Sandy Mucky Mineral (S1)		Depleted Dark S					hydrology must be present,
Sandy Gleyed Matrix (S4)		Redox Depressi		.,			sturbed or problematic.
estrictive Layer (if present)							
Туре:							
Depth (inches):						Hydric Soil Pre	sent? Yes No
Sol pit v	not dug	- too dos.	e to	VOR			
Remarks: Sol pit v YDROLOGY Vetland Hydrology Indicator		- too dos	e to	VURD			
YDROLOGY Vetland Hydrology Indicator	s:	d; check all that apply)				y Indicators (2 or more required)
VDROLOGY /etland Hydrology Indicator rimary Indicators (minimum o _ Surface Water (A1)	s:	d; check all that apply Water-Stair) ned Leav	es (B9) (e		Wate	r-Stained Leaves (B9) (MLRA 1, 2,
VDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum o Surface Water (A1) High Water Table (A2)	s:	d; check all that apply Water-Stain MLRA 1) ned Leav I, 2, 4A, :	es (B9) (e		Wate	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B)
A pt v A pt v	s:	d <u>; check all that apply</u> Water-Stair MLRA 1 Salt Crust () ned Leav I, 2, 4A, ; [B11)	es (B9) (e and 4B)		Wate 4/ Drain	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10)
YDROLOGY //etland Hydrology Indicator rimary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	s:	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv) ned Leav I, 2, 4A, ; (B11) ertebrate	res (B9) (e and 4B) es (B13)		Wate 44 Drain Dry-S	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2)
Vetland Hydrology Indicator rimary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	s:	d; check all that apply Water-Stain MLRA ^ Salt Crust (Aquatic Inv Hydrogen S) ned Leav I, 2, 4A, i B11) ertebrate Sulfide O	res (B9) (e and 4B) es (B13) dor (C1)	xcept	Wate 4/ Drain Dry-S Satur	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9)
VDROLOGY /etland Hydrology Indicator rimary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	s:	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen 3 Oxidized R) ned Leav I, 2, 4A, i B11) ertebrate Sulfide O hizosphe	res (B9) (e and 4B) es (B13) dor (C1) eres along	xcept Living Roo	Wate 4/ Drain Dry-S Satur ts (C3) Geon	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2)
VDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum o 	s:	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of) ned Leav I, 2, 4A , i B11) ertebrate Sulfide O hizosphe f Reduce	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4	xcept Living Roo	Wate 4/ Drain Dry-S Satur ts (C3) Geon Shall	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9 norphic Position (D2) ow Aquitard (D3)
VDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum o 	s:	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror) ned Leav I, 2, 4A, i B11) ertebrate Sulfide O hizosphe of Reduce n Reducti	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tiller	xcept Living Roo 4) d Soils (C6		r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5)
VDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum o 	s: fone required	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or) ned Leav I, 2, 4A , i B11) ertebrate Sulfide O hizosphe of Reduce n Reducti Stressed	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D	xcept Living Roo 4) d Soils (C6		r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Prific Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Mater Anthere (B4) Mater Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria	s: fone required	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or 7) Other (Exp) ned Leav I, 2, 4A , i B11) ertebrate Sulfide O hizosphe of Reduce n Reducti Stressed	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D	xcept Living Roo 4) d Soils (C6		r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5)
VDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum o 	s: fone required	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or 7) Other (Exp) ned Leav I, 2, 4A , i B11) ertebrate Sulfide O hizosphe of Reduce n Reducti Stressed	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D	xcept Living Roo 4) d Soils (C6		r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A)
Verland Hydrology Indicator rimary Indicators (minimum o 	s: <u>f one required</u> Il Imagery (B' ive Surface (i	d; check all that apply Water-Stain MLRA ^ Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or 7) Other (Exp B8)) ned Leav (, 2, 4A, i B11) ertebrate Sulfide O hizosphe of Reducti Stressed lain in Re	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D emarks)	xcept Living Roo 4) d Soils (C6 1) (LRR A)		r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9 norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicator rimary Indicators (minimum o 	s: fone required one required fone required l Imagery (B ve Surface (Yes	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or 7) Other (Exp B8) No Depth (inc) ned Leav (, 2, 4A, i B11) ertebrate Sulfide O hizosphe of Reducti Stressed lain in Re lain in Re	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled Plants (D emarks)	xcept Living Roo 4) d Soils (C6 1) (LRR A)		r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9 norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A)
VDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum o 	s: fone required I Imagery (B ive Surface (i Yes Yes	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or 7) Other (Exp B8) No Depth (inc) ned Leav l, 2 , 4A , i B11) ertebrate Sulfide O hizosphe of Reduce n Reducti Stressed lain in Re hes): hes):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled Plants (D emarks)	xcept Living Roo 4) d Soils (C6 1) (LRR A)		r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A) -Heave Hummocks (D7)
Vertiand Hydrology Indicator rimary Indicators (minimum o 	s: fone required l Imagery (B ive Surface (i Yes Yes Yes	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or 7) Other (Exp B8) No Depth (inc No Depth (inc) hed Leav 1, 2, 4A, i B11) ertebrate Sulfide O hizosphe of Reducti Stressed lain in Re hes): hes):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D emarks)	xcept Living Roo 4) d Soils (C6 1) (LRR A)	Wate 4/ Drain Dry-S Satur ts (C3) Geon Shall) FAC- Raise Frost	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicator Inimary Indicators (minimum o 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 Aeria Sparsely Vegetated Conca Vater Table Present? Vater Table Present? Saturation Present? Saturation Present?	s: fone required l Imagery (B ive Surface (i Yes Yes Yes	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or 7) Other (Exp B8) No Depth (inc No Depth (inc) hed Leav (, 2, 4A, i B11) ertebrate Sulfide O hizosphe of Reducti Stressed lain in Re hes): hes):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D emarks)	xcept Living Roo 4) d Soils (C6 1) (LRR A)	Wate 4/ Drain Dry-S Satur ts (C3) Geon Shall) FAC- Raise Frost	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A) -Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum o 	s: fone required l Imagery (B ive Surface (i Yes Yes Yes	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or 7) Other (Exp B8) No Depth (inc No Depth (inc) hed Leav (, 2, 4A, i B11) ertebrate Sulfide O hizosphe of Reducti Stressed lain in Re hes): hes):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D emarks)	xcept Living Roo 4) d Soils (C6 1) (LRR A)	Wate 4/ Drain Dry-S Satur ts (C3) Geon Shall) FAC- Raise Frost	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A) -Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum of 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 Aeria	s: fone required l Imagery (B ive Surface (i Yes Yes Yes	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or 7) Other (Exp B8) No Depth (inc No Depth (inc) hed Leav (, 2, 4A, i B11) ertebrate Sulfide O hizosphe of Reducti Stressed lain in Re hes): hes):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D emarks)	xcept Living Roo 4) d Soils (C6 1) (LRR A)	Wate 4/ Drain Dry-S Satur ts (C3) Geon Shall) FAC- Raise Frost	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A) -Heave Hummocks (D7)
Verland Hydrology Indicator rimary Indicators (minimum o 	s: fone required l Imagery (B ive Surface (i Yes Yes Yes	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or 7) Other (Exp B8) No Depth (inc No Depth (inc) hed Leav (, 2, 4A, i B11) ertebrate Sulfide O hizosphe of Reducti Stressed lain in Re hes): hes):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D emarks)	xcept Living Roo 4) d Soils (C6 1) (LRR A)	Wate 4/ Drain Dry-S Satur ts (C3) Geon Shall) FAC- Raise Frost	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A) -Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum o 	s: fone required l Imagery (B ive Surface (i Yes Yes Yes	d; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iror Stunted or 7) Other (Exp B8) No Depth (inc No Depth (inc) hed Leav (, 2, 4A, i B11) ertebrate Sulfide O hizosphe of Reducti Stressed lain in Re hes): hes):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D emarks)	xcept Living Roo 4) d Soils (C6 1) (LRR A)	Wate 4/ Drain Dry-S Satur ts (C3) Geon Shall) FAC- Raise Frost	r-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) age Patterns (B10) Season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) ed Ant Mounds (D6) (LRR A) -Heave Hummocks (D7)

	City/County: Manches	ster / MENDOCINO	Sampling Date: 27	Sept, 201	
			State: CA		4
Investigator(s): M. Widdowson, S. Spooner		Section, Township, R	ange:		1
Landform (hillslope, terrace, etc.):		Local relief (concave,	, convex, none):	Slope (%	6): <u>2</u>
Subregion (LRR): A: Northwest Forests and Coast	Lat:		Long:	Datum:	
Soil Map Unit Name: 144 - Flumeville	day loam	10-570 Sl	NWI class	ification:	
Are climatic / hydrologic conditions on the site typical					
Are Vegetation, Soil, or Hydrology				s" present? Yes	No
Are Vegetation, Soil, or Hydrology			needed, explain any ans		
SUMMARY OF FINDINGS – Attach site	and the second second second second				res, etc.
	No	CZN	wetland Yes_	No	
Hydric Soil Present? Yes	No	Is the Sample	and? Yes_	No	
Wetland Hydrology Present? Yes	No	within a weth			11
VEGETATION – Use scientific names of	f plants.				
Tree Stratum (Plot size:)	Absolute % Cover	Species? Status	- Number of Dominan	t Species	
Tree Stratum (Plot size:) 1	Absolute <u>% Cover</u>	Species? Status		t Species	_ (A)
Tree Stratum (Plot size:) 1	Absolute <u>% Cover</u>	Species? Status	 Number of Dominan That Are OBL, FACV Total Number of Dominan 	t Species W, or FAC:	
Tree Stratum (Plot size:) 1	Absolute <u>% Cover</u>	Species? Status	- Number of Dominan _ That Are OBL, FAC	t Species W, or FAC:	(A) (B)
Tree Stratum (Plot size:) 1	Absolute <u>% Cover</u>	<u>Species?</u> <u>Status</u>	 Number of Dominan That Are OBL, FACM Total Number of Don Species Across All S Percent of Dominan 	t Species W, or FAC: <u>4</u> minant Strata: <u>5</u> t Species	(B)
Tree Stratum (Plot size:) 1.	Absolute <u>% Cover</u>	Species? Status	 Number of Dominan That Are OBL, FACM Total Number of Dom Species Across All S Percent of Dominan That Are OBL, FACM 	t Species W, or FAC: 4 minant Strata: 5 t Species W, or FAC: 80	
Tree Stratum (Plot size:) 1.	Absolute <u>% Cover</u>	<u>Species?</u> <u>Status</u>	 Number of Dominan That Are OBL, FAC Total Number of Don Species Across All S Percent of Dominan That Are OBL, FAC Prevalence Index v 	t Species W, or FAC: 4 minant Strata: 5 t Species W, or FAC: 80 vorksheet:	(B) (A/B)
Tree Stratum (Plot size:) 1 2 3 4 Sapling/Shrub Stratum (Plot size: 5 × 30 1. Lonicera invencerata 2 Bacchanis plinlans	Absolute <u>% Cover</u>	<u>Species?</u> <u>Status</u>	 Number of Dominan That Are OBL, FACM Total Number of Dominan Species Across All S Percent of Dominan That Are OBL, FACM Prevalence Index v Total % Cover of 	t Species W, or FAC: 4 minant Strata: 5 t Species W, or FAC: 80 vorksheet: of: Multiply by:	(B) (A/B)
Tree Stratum (Plot size:) 1.	Absolute <u>% Cover</u>	<u>Species?</u> <u>Status</u>	 Number of Dominan That Are OBL, FACM Total Number of Don Species Across All S Percent of Dominan That Are OBL, FACM Prevalence Index v <u>Total % Cover of</u> OBL species 	t Species W, or FAC: minant Strata:5 t Species W, or FAC:80 vorksheet: Multiply by: x 1 =	(B) (A/B)
Tree Stratum (Plot size:) 123 34 54 54 54 54 54 54 1 54 1 5 1 5 1 5 5 1 5 5 1 5 5 1 5	Absolute <u>% Cover</u>)	<u>Species?</u> <u>Status</u>	 Number of Dominan That Are OBL, FACM Total Number of Dom Species Across All S Percent of Dominan That Are OBL, FACM Prevalence Index v Total % Cover of OBL species FACW species 	t Species W, or FAC: minant Strata: t Species W, or FAC: W, or FAC: vorksheet: x 1 = x 2 =	(B) (A/B)
Tree Stratum (Plot size:) 1 2 3 4 Sapling/Shrub Stratum (Plot size: 5 × 30 1. Lonicera involucinata 2. Bacchanis plutans 3. Salvx sitchencis	Absolute <u>% Cover</u>)	Species? Status	 Number of Dominan That Are OBL, FAC Total Number of Don Species Across All S Percent of Dominan That Are OBL, FAC Prevalence Index v Total % Cover of OBL species FACW species FAC species 	t Species 4 minant 5 Strata: 5 t Species 80 W, or FAC: 80 vorksheet: 91	(B) (A/B)
Tree Stratum (Plot size:) 1 2 3 4 Sapling/Shrub Stratum (Plot size: 5 × 30 1. Lonicera involucrata 2. Bacchan's plutans 3. Salux sitchencis 4 5	Absolute <u>% Cover</u>)	<u>Species?</u> <u>Status</u>	 Number of Dominan That Are OBL, FAC Total Number of Dom Species Across All S Percent of Dominan That Are OBL, FAC Prevalence Index v 	t Species W, or FAC: minant Strata: t Species W, or FAC: W, or FAC: vorksheet: x 1 = x 2 =	(B) (A/B)
1 2 3 4 5 4 5 1. Lonicera involucrata 2. Bacchan's plinans 3 3 4 4 4 4 5.	Absolute <u>% Cover</u>)	Species? Status	 Number of Dominan That Are OBL, FACM Total Number of Dom Species Across All S Percent of Dominan That Are OBL, FACM Prevalence Index v <u>Total % Cover of</u> OBL species FACW species FAC species FACU species UPL species 	t Species 4 minant 5 Strata: 5 t Species 80 worksheet: 5 of: Multiply by:	(B) (A/B)

3		Hydrophytic Vegetation Indicators:
4	· · · · · · · · · · · · · · · · · · ·	1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6	<u></u>	3 - Prevalence Index is $≤3.0^1$
7		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 ¹ (Explain)
11.		¹ Indicators of hydric soil and wetland hydrology must
- 12	40 = Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5 ¥ 30) 1. Rubus wiscums 2.	10 Y FACU	Hydrophytic Vegetation
% Bare Ground in Herb Stratum 600	= Total Cover	Present? Yes V No
Remarks: Hydrophytic vegetation pavement here	n extends to ba	ive graded word Shouldert

US Army Corps of Engineers

A.

Depth Matrix (inches) Color (moist) %		n the absence of indicators.)
	<u></u>	Texture Remarks
0-6 10 YR313 100		reloam
		- fr com
		· · · · · · · · · · · · · · · · · · ·
Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sand G	rains. ² Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all		Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
_ Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Matrix (F3) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
_ Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
estrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
/DROLOGY /etland Hydrology Indicators:	5.4 P. 4 S. 1	
rimary Indicators (minimum of one required		Secondary Indicators (2 or more required)
_ Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2
_ High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
_ Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
_ Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
_ Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (CS
Sediment Deposits (B2) Drift Deposits (B3)	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc	Saturation Visible on Aerial Imagery (CS ots (C3) Geomorphic Position (D2)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4)	 Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2) Shallow Aquitard (D3)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	 Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) 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 Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	 Saturation Visible on Aerial Imagery (CS) 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 Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	 Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) 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) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	 Saturation Visible on Aerial Imagery (CS) 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 Sparsely Vegetated Concave Surface (Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	 Saturation Visible on Aerial Imagery (CS) 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 Sparsely Vegetated Concave Surface (Id Observations: Urface Water Present? Yes	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) B8) 	 Saturation Visible on Aerial Imagery (CS) 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 Sparsely Vegetated Concave Surface (eld Observations: urface Water Present? Yes /ater Table Present? Yes aturation Present? Yes	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A 7) Other (Explain in Remarks) B8) 	 Saturation Visible on Aerial Imagery (CS) 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 Sparsely Vegetated Concave Surface (ield Observations: urface Water Present? Yes /ater Table Present? Yes aturation Present? Yes ncludes capillary fringe)	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) B8) No ✓ Depth (inches): to 6 No ✓ Depth (inches): to 6 No ✓ Depth (inches): to 6 Weth	 Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) 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 Vater Table Present? Yes Saturation Present? Yes	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A 7) Other (Explain in Remarks) B8) No Depth (inches): Depth (inches): 	 Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) 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 (ield Observations: urface Water Present? Yes Vater Table Present? Yes raturation Present? Yes meludes capillary fringe)	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A 7) Other (Explain in Remarks) B8) No ✓ Depth (inches): to 6 	 Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) 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 (ield Observations: urface Water Present? Yes /ater Table Present? Yes /ater Table Present? Yes escribe Recorded Data (stream gauge, modeling)	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) B8) No ✓ Depth (inches): to 6 No ✓ Depth (inches): to 6 Weth 	 Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) 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 (Ind Observations: Urface Water Present? Yes Ater Table Present? Yes Ater Table Present? Yes aturation Present? Yes	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A 7) Other (Explain in Remarks) B8) No ✓ Depth (inches): to 6 	 Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) 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 (ield Observations: urface Water Present? Yes /ater Table Present? Yes aturation Present? Yes aturation Present? Yes meludes capillary fringe) escribe Recorded Data (stream gauge, me	 Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A 7) Other (Explain in Remarks) B8) No ✓ Depth (inches): to 6 	 Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Profile Des	cription: (Describe	to the dept	h needed to docu	ment the inc	dicator	or confirm	the absence of i	indicators.)
Depth	Matrix		Redo	x Features				
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²		Remarks
0-6	10YR33	100					gloan_	
							8	
0								
·	1	· · · · · ·		- , <u></u>			·	
	·			<u></u>				
							· · · · · · · · · · · · · · · · · · ·	
¹ Type: C=C	Concentration, D=Dep	letion RM=	Reduced Matrix C	S=Covered c	or Coate		aine ² l ocatio	on: PL=Pore Lining, M=Matrix.
	Indicators: (Applic					u Ganu Gi		for Problematic Hydric Soils ³ :
Histoso			Sandy Redox (.,		2 cm M	그 것 같아? 아파 그 가 그 것 같아? 그 가 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다
	pipedon (A2)		Stripped Matrix					rent Material (TF2)
	listic (A3)		Loamy Mucky I		(except	MLRA 1)		nallow Dark Surface (TF12)
	en Sulfide (A4)	C	Loamy Gleyed					Explain in Remarks)
	d Below Dark Surfac	e (A11)	Depleted Matrix					
	ark Surface (A12)		Redox Dark Su				³ Indicators o	of hydrophytic vegetation and
Sandy M	Mucky Mineral (S1)		Depleted Dark		(i			nydrology must be present,
Sandy (Gleyed Matrix (S4)		Redox Depress	ions (F8)				sturbed or problematic.
Restrictive	Layer (if present):			V				
Type:							1.5.5.7.7	
Depth (in	nches):						Hydric Soil Pre	esent? Yes No //
	drology Indicators:							
Primary Indi	cators (minimum of c	one required	; check all that appl	y)			<u>Secondar</u>	y Indicators (2 or more required)
	Water (A1)			ined Leaves	10 C 10 C	ccept		r-Stained Leaves (B9) (MLRA 1, 2,
A CONTRACT OF	ater Table (A2)			1, 2, 4A, and	d 4B)		4/	A, and 4B)
Saturati			Salt Crust	(B11)				age Patterns (B10)
	/arks (B1)		Aquatic In	vertebrates ((B13)		Dry-S	Season Water Table (C2)
	nt Deposits (B2)		Hydrogen	Sulfide Odor	r (C1)		Satur	ation Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Oxidized F	Rhizospheres	s along l	iving Roo	ts (C3) Geon	norphic Position (D2)
	at or Crust (B4)		and the second	of Reduced		The second		ow Aquitard (D3)
	posits (B5)		Recent Iro	n Reduction	in Tillec	Soils (C6) FAC-	Neutral Test (D5)
	Soil Cracks (B6)			Stressed Pl	lants (D') (LRR A)	Raise	ed Ant Mounds (D6) (LRR A)
Inundat	ion Visible on Aerial	Imagery (B7) Other (Exp	olain in Rema	arks)		Frost	-Heave Hummocks (D7)
Sparsel	y Vegetated Concave	e Surface (B	(8)					
Field Obser	rvations:					-		
Surface Wat	ter Present? Y	'es N	lo 👱 Depth (in	ches):	_	-		
Water Table	Present? Y	esN	lo 🖌 Depth (in	ches): non	etot			/
Saturation P	Present? Y	'es N		ches):		· · · · · · · · · · · · · · · · · · ·	and Hydrology Pr	resent? Yes No 🗸
(includes ca	pillary fringe)						100 1 2 10 10 10 2 10 10 10 10 10 10 10 10 10 10 10 10 10	
Describe Re	ecorded Data (stream	i gauge, mor	nitoring well, aerial	pnotos, prev	ious insp	pections),	it available:	
Remarks:		_				_		
						4		

Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO Sampling Date: 27 Sept, 2018
Applicant/Owner: RTI / Caltrans, private	State: CA Sampling Point:5
Investigator(s): M. Widdowson, S. Spooner	Section, Township, Range:
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): Slope (%):
Subregion (LRR): A: Northwest Forests and Coast Lat	t: Long: Datum:
Soil Map Unit Name: 144 - Plymentle day loa	m 0-52 slapes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	
Are Vegetation, Soil, or Hydrology signific	
Are Vegetation, Soil, or Hydrology natural	
	wing 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	within a Wetland? Yes No V
Remarks:	

VEGETATION – Use scientific names of plants.

1.
3.
4.
Sapling/Shrub Stratum (Plot size: 6 × 25') = Total Cover That Are OBL, FACW, or FAC: (A/B) 1. Bacchonis pilmans 20 Y Frequence Index worksheet: 2 OBL species x 1 =
1. Bacchon's pilulans 20 Y Interview of the second s
2 OBL species x 1 =
3
4 FAC species x 3 =
5 EACH species x4 =
- Total Covor
Larch Comple
2. <u>Grindelia Stricta</u> <u>10</u> <u>Y</u> FACW Prevalence Index = B/A =
3. Holans lanatus 2 N FAC Hydrophytic Vegetation Indicators:
4 1 - Rapid Test for Hydrophytic Vegetation
5 2 - Dominance Test is >50%
6 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
0
lindicators of budge call and wotherd budge must
be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 6' ×25') 22 = Total Cover
Vegetation
2 Present? Ves No V
% Bare Ground in Herb Stratum 78 60 = Total Cover
Remarks:

Project/Site: RTI Manchester		City/County: Mancheste	er / MENDOCINO	Sampling Date: 27	Sept, 2018
Applicant/Owner: RTI / Caltrans, private			State: CA	Sampling Point:	
Investigator(s): M. Widdowson, S. Spooner		Section, Township, Ran	nge:		
Landform (hillslope, terrace, etc.):	÷	Local relief (concave, o	convex, none): 🏠	e concare Slope (%): 5
Subregion (LRR): A: Northwest Forests and Coast	Lat:		Long:	Datum:	
Soil Map Unit Name: 132 - Crispin loa	m. 0-5%	slopes	NWI clas	sification:	
Are climatic / hydrologic conditions on the site typic					
Are Vegetation, Soil, or Hydrology				es" present? Yes	No
Are Vegetation, Soil, or Hydrology			eded, explain any ar		
SUMMARY OF FINDINGS – Attach sit	1		ocations, transe	sets, important reatur	es, etc.
· · · · ·	No	In the Complet	A		
	No	within a Matlan	Area nd? Yes	No	
Wetland Hydrology Present? Yes	No	within a wotian	100_		
VEGETATION – Use scientific names	of plants. Absolute	e Dominant Indicator	Dominance Test	worksheet:	
Tree Stratum (Plot size:)	% Cove	r Species? Status	Number of Domina That Are OBL, FA	ant Species 🛛 📿	(A)
1			That Ale OBL, PAG		_ (~)
23			Total Number of D Species Across All		(B)
4.					_ (5)
		= Total Cover	Percent of Domina That Are OBL, FA		(A/B)
Sapling/Shrub Stratum (Plot size:			Prevalence Index		_ ()
1				r of: Multiply by:	
2				x1=	
3				x 2 =	
4	·			x 3 =	
5			FACU species	x 4 =	
Herb Stratum (Plot size: 575')		= Total Cover		x 5 =	
1. Cypens eragostis	25	Y FACW	the state of the second s	(A)	
2 Mumulue auttatus	10	N OBL		ndov = P/A =	

2

5

10

20

2

2

= Total Cover

= Total Cover

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00

ten

cus

Woody Vine Stratum (Plot size:

% Bare Ground in Herb Stratum

OB

FACU

OBL

FACW

C	
FACW	Hydrophytic Vegetation Indicators:
FACW	1 - Rapid Test for Hydrophytic Vegetati

- 1 Rapid Test for Hydrophytic Vegetation
 - 2 Dominance Test is >50%
 - 3 Prevalence Index is ≤3.01
 - 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - 5 Wetland Non-Vascular Plants¹
 - Problematic Hydrophytic Vegetation¹ (Explain)

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

	Hydrophytic
3	Vegetation
÷	Present?

Yes V No

US Army Corps of Engineers

3.

4

5.

6.

7.

8.

9.

10.

11.

1.

2.

Remarks:

Tome Desc	cription: (De	escribe	to the dep	oth needed to docun	nent the i	ndicator	or confirm	n the abse	ence o	of indicat	ors.)	
Depth		Matrix			x Features	3		1.000				
inches)	Color (n			Color (moist)	%	_Type ¹	Loc	Textur	e		Rema	rks
2-2	OYR		100					100	m			
7-12	10YR	3/2	70	10YR 5/8	20	C	M	loan	m			
		-		10YR 613								
				10 ne ya								
									-			
	-											
				(
			<u> </u>									
		D D						-	21		B	
				=Reduced Matrix, CS LRRs, unless other			d Sand Gr					g, M=Matrix. Iydric Soils ³ :
Histosol		(Applied	ibic to un	Sandy Redox (S						Muck (A1		iyunc oons .
	oipedon (A2)			Stripped Matrix							terial (TF2	Y
Black Hi				Loamy Mucky M) (excent	MIRA 1)				ark Surfac	
and the second s	en Sulfide (A4	4)		Loamy Gleyed M							in Remark	
	d Below Dark		e (A11)	Depleted Matrix				-				-/
	ark Surface (Kedox Dark Sur				³ Indi	icators	s of hydro	phytic vege	etation and
	Aucky Minera	10 m 1 m 1		Depleted Dark S		7)					gy must be	
_ Sandy G	Bleyed Matrix	(S4)		Redox Depressi	ons (F8)						or problem	the second se
estrictive L	Layer (if pre	sent):						1				
Туре:								1.1				
Depth (inc	ches):							Hydric	Soil F	resent?	Yes 🕨	No
and the second sec												
emarks:												
DROLO		cators:										
	drology Indi		ne require	1: check all that anniv)					ary Indica	ators (2 or a	more required
DROLO Vetland Hyd	drology Indi ators (minim		ne require	d; check all that apply Water Stair	the second se	a (B0) (a)	(oppt	<u>S</u>	econd			more required
DROLO Vetland Hyd rimary Indic	drology Indi ators (minim Water (A1)	num of or	ne require	Water-Stair	ned Leave		ccept	<u>S</u>	econd	ter-Staine	d Leaves	more required (B9) (MLRA 1
/DROLO /etland Hyc rimary Indic _ Surface \ _ High Wa	drology Indi cators (minim Water (A1) iter Table (A2	num of or	ne required	Water-Stair MLRA 1	ned Leave , 2, 4A, a		ccept	<u>S</u>	econd	ter-Staine 4A, and 4	ed Leaves (B)	(B9) (MLRA 1
DROLO detland Hyd <u>rimary Indic</u> _ Surface _ High Wa <u>_</u> Saturatio	drology Indi cators (minim Water (A1) tter Table (A2 on (A3)	num of or	ne require	Water-Stair MLRA 1 Salt Crust (ned Leave , 2, 4A, a B11)	nd 4B)	ccept	-	econd Wa Dra	ter-Staine 4A, and 4 iinage Pa	ed Leaves (IB) Itterns (B10	(B9) (MLRA 1))
DROLO /etland Hyd <u>rimary Indic</u> _ Surface \ _ High Wa _ Saturatio _ Water Ma	drology Indi cators (minim Water (A1) tter Table (A2 on (A3) arks (B1)	num of or 2)	ne require	Water-Stair MLRA 1 Salt Crust (Aquatic Inv	ned Leave , 2, 4A, a B11) ertebrates	nd 4B) (B13)	ccept	-	econd Wa Dra Dra	ter-Staine 4A, and 4 inage Pa -Season	ed Leaves (B) tterns (B10 Water Tabl	(B9) (MLRA 1)) le (C2)
DROLO Vetland Hyd rimary Indic Surface V High Wa Saturatio Water Ma Sedimen	drology Indi cators (minim Water (A1) tter Table (A2 on (A3) arks (B1) at Deposits (I	num of or 2)	ne require	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen S	ned Leave , 2, 4A, a B11) ertebrates Sulfide Od	nd 4B) (B13) or (C1)			econd Wa Dra Dry Sat	ter-Staine 4A, and 4 inage Pa -Season V uration Vi	ed Leaves (B) tterns (B10 Water Tabl sible on Ae	(B9) (MLRA 1)) le (C2) erial Imagery (
DROLO detland Hyd rimary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep	drology Indi cators (minim Water (A1) tter Table (A2 on (A3) arks (B1) at Deposits (B posits (B3)	n <u>um of or</u> 2) 32)	ne require	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Cxidized R	ned Leave , 2, 4A, a B11) ertebrates Sulfide Od hizosphere	nd 4B) (B13) or (C1) es along l	living Root		econd Wa Dra Sat Ge	ter-Staine 4A, and 4 inage Pa -Season ' uration Vi omorphic	ed Leaves (B) Itterns (B10 Water Tabl sible on Ae Position (E	(B9) (MLRA 1)) le (C2) erial Imagery (
PROLO Vetland Hyd rimary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma	drology Indi cators (minim Water (A1) tter Table (A2 on (A3) arks (B1) arks (B1) tt Deposits (B oosits (B3) tt or Crust (B	n <u>um of or</u> 2) 32)	ne require	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized RI Presence o	ned Leave , 2, 4A, al B11) ertebrates Sulfide Od hizosphere f Reduced	nd 4B) (B13) or (C1) es along l I Iron (C4	living Roo	 ts (C3)	econd Wa Dra Sat Get Sha	ter-Staine 4A, and 4 inage Pa -Season uration Vi omorphic allow Aqui	ed Leaves (B) tterns (B10 Water Tabl sible on Ae Position (E tard (D3)	(B9) (MLRA 1)) le (C2) erial Imagery (
/DROLOO /etland Hyd rimary Indic Surface V High Wa Saturatio Saturatio Water Ma Sedimen Sedimen Drift Dep Algal Ma Iron Dep	drology Indi eators (minim Water (A1) tter Table (A2 on (A3) arks (B1) at Deposits (B posits (B3) at or Crust (B posits (B5)	num of or 2) 32) 4)	ne require	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iron	ned Leave , 2, 4A, au B11) ertebrates Sulfide Od hizosphere f Reducec n Reductio	nd 4B) (B13) or (C1) es along I I Iron (C4 n in Tilled	iving Root)) Soils (C6)		econd Wa Dra Sat Sha FAG	ter-Staine 4A, and 4 inage Pa -Season uration Vi omorphic allow Aqui C-Neutral	ed Leaves (B) Iterns (B10 Water Tabl sible on Ae Position (E tard (D3) Test (D5)	(B9) (MLRA 1)) le (C2) erial Imagery ()2)
	drology Indi cators (minim Water (A1) tter Table (A2 on (A3) arks (B1) at Deposits (B posits (B3) tt or Crust (B posits (B5) Soil Cracks (n <u>um of or</u> 2) 32) 44) (B6)		Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iron Stunted or S	ned Leave , 2, 4A, at B11) ertebrates Sulfide Od hizosphere f Reduced Reductio Stressed F	nd 4B) or (C1) es along l I Iron (C4 n in Tilled Plants (D1	iving Root)) Soils (C6)		econd Wa Dra Dra Sat Gee Sha FA Rai	ter-Staine 4A, and 4 inage Pa -Season uration Vi omorphic allow Aqui C-Neutral sed Ant M	ed Leaves (B) tterns (B10 Water Tabl sible on Ad Position (D tard (D3) Test (D5) founds (D6)	(B9) (MLRA 1)) le (C2) erial Imagery ()2) 5) (LRR A)
DROLO Tetland Hyd Surface M High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio	drology Indi cators (minim Water (A1) ther Table (A2 on (A3) arks (B1) at Deposits (B posits (B3) thor Crust (B posits (B5) Soil Cracks (on Visible on	<u>um of or</u> 2) 32) 4) (B6) Aerial In	nagery (B	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iron Stunted or S Other (Expl	ned Leave , 2, 4A, at B11) ertebrates Sulfide Od hizosphere f Reduced Reductio Stressed F	nd 4B) or (C1) es along l I Iron (C4 n in Tilled Plants (D1	iving Root)) Soils (C6)		econd Wa Dra Dra Sat Gee Sha FA Rai	ter-Staine 4A, and 4 inage Pa -Season uration Vi omorphic allow Aqui C-Neutral sed Ant M	ed Leaves (B) Iterns (B10 Water Tabl sible on Ae Position (E tard (D3) Test (D5)	(B9) (MLRA 1)) le (C2) erial Imagery ()2) 5) (LRR A)
DROLO Tetland Hyc surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic Sparsely	drology Indi cators (minim Water (A1) tter Table (A2 on (A3) arks (B1) at Deposits (B oosits (B3) at or Crust (B oosits (B5) Soil Cracks (on Visible on v Vegetated (<u>um of or</u> 2) 32) 4) (B6) Aerial In	nagery (B	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iron Stunted or S Other (Expl	ned Leave , 2, 4A, at B11) ertebrates Sulfide Od hizosphere f Reduced Reductio Stressed F	nd 4B) or (C1) es along l I Iron (C4 n in Tilled Plants (D1	iving Root)) Soils (C6)		econd Wa Dra Dra Sat Gee Sha FA Rai	ter-Staine 4A, and 4 inage Pa -Season uration Vi omorphic allow Aqui C-Neutral sed Ant M	ed Leaves (B) tterns (B10 Water Tabl sible on Ad Position (D tard (D3) Test (D5) founds (D6)	(B9) (MLRA 1)) le (C2) erial Imagery ()2) 5) (LRR A)
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DROLO Vetland Hyc imary Indic Surface High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic Sparsely eld Observ urface Water Table I aturation Princludes cap escribe Rec	drology Indi eators (minim Water (A1) ther Table (A2 on (A3) arks (B1) at Deposits (B oosits (B3) at or Crust (B oosits (B5) Soil Cracks (on Visible on vegetated (vations: er Present? Present? resent? oillary fringe)	num of or 2) 32) (B6) Aerial In Concave Ye Ye Ye	nagery (B' Surface (I es es	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iron Stunted or 3 7) Other (Expl B8) No Depth (incl No Depth (incl	hed Leave , 2, 4A, and B11) ertebrates Sulfide Od hizosphere f Reduced hizosphere Reductio Stressed F ain in Rer hes): hes):	nd 4B) (B13) or (C1) es along I I Iron (C4 n in Tilled Plants (D1 narks)	Living Root) Soils (C6)) (LRR A)	ts (C3)	econd Wa Dra Sat Sha FAG Rai Fro	ter-Staine 4A, and 4 inage Pa -Season 1 uration Vi pmorphic allow Aqui C-Neutral sed Ant M st-Heave	ed Leaves (B) tterns (B10 Water Tabl sible on Ae Position (D tard (D3) Test (D5) founds (D6 Hummock	(B9) (MLRA 1)) le (C2) erial Imagery ()2) 5) (LRR A)

Project/Site: RTI Manchester	(City/County:	Mancheste	r / MENDOCINO	Sampling Date: 2	7 Sept, 2018
Applicant/Owner: RTI / Caltrans, private				State: CA	Sampling Point:	17
nvestigator(s): M. Widdowson, S. Spooner						14
Landform (hillslope, terrace, etc.):						e (%):
Subregion (LRR): A: Northwest Forests and Coast	.at:			Long:	Datun	n:
Soil Map Unit Name: 132 - Crispin loam, O-	5%	screes		NWI classific	cation:	en -
Are climatic / hydrologic conditions on the site typical for this tim	ne of vea	ar? Yes	No	(If no, explain in F		1
Are Vegetation, Soil, or Hydrology signi	ficantly	disturbed?	Are "	Normal Circumstances"		No
Are Vegetation, Soil, or Hydrology nature Are Vegetation, Soil, and the set of t				eded, explain any answe		
SUMMARY OF FINDINGS – Attach site map sho						atures, etc.
Hydrophytic Vegetation Present? Yes No			31		.,	
Hydric Soil Present? Yes No	V	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	e Sampled	Area		
Wetland Hydrology Present? Yes No	1	with	in a Wetlan	d? Yes	No	
Remarks:						
VEGETATION – Use scientific names of plants.				and the second		
	bsolute Cover	Dominant Species?		Dominance Test worl		
1				Number of Dominant S That Are OBL, FACW,	pecies or FAC: 2	(A)
2		-				
3				Total Number of Domin Species Across All Stra		(B)
4				Percent of Dominant S		
		= Total Co	ver	That Are OBL, FACW,	or FAC:	33 (A/B)
Sapling/Shrub Stratum (Plot size: 5×15) 1. Kubus parvifloms	25	Y	FACY	Prevalence Index wo		
	20		1/104	Total % Cover of:	Multiply	by:
2				OBL species	x 1 =	
4		·		FACW species	x 2 =	
5.				FAC species		
21	25	= Total Co	ver	FACU species		
Herb Stratum (Plot size: 5 radius)	11-	×	CAR	UPL species		
1. Anthox anthum odoration	15	1	FACH	Column Totals:	(A)	(B)
2. Scirpus menocarpus	5	N	OBL	Prevalence Index	<pre>< = B/A =</pre>	
3. Heracleum Maximum	10		FAC	Hydrophytic Vegetati		
4. Equisatum telmatei	15	-V	FACW	1 - Rapid Test for		ation
	12		MIL	2 - Dominance Te		
6			·	3 - Prevalence Inc		
8				data in Remark	Adaptations ¹ (Provi (s or on a separate	ue supporting sheet)
9.				5 - Wetland Non-\	[10] M.	
10					ophytic Vegetation ¹	(Explain)
11				¹ Indicators of hydric so		
	50	= Total Cov	ver	be present, unless disl	urbed or problemat	ic.
Woody Vine Stratum (Plot size: 5 × 15)	to	V	EA cu			
1. Kubus whinks	20		The	Hydrophytic		1
2. Toxico dendron diversilobum_	20		ptr	Vegetation Present? Ye	esNo	V
% Bare Ground in Herb Stratum 50 -	00	= Total Cov	ver			
Remarks:						

C	0	I	r
9	U	l	L

Sampling Point:

7

Depth (inches)		a area de las	n needed to document the indicator or con	
(incries)	Matrix	%	Redox Features Color (moist) % Type ¹ Loc ²	² Texture Remarks
	Color (moist)	100	<u>Color (moist)</u> <u>%</u> <u>Type'</u> <u>Loc'</u>	
0-10	10 YR3/2	100		v gr wan
	· · · · · · · · · · · · · · · · · · ·			
	· · · · · ·			
			Reduced Matrix, CS=Covered or Coated Sand	
		able to all L	RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (2	_ Sandy Redox (S5)	2 cm Muck (A10)
Black His	ipedon (A2)	P ==	Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA)	A 1) Red Parent Material (TF2) A 1) Very Shallow Dark Surface (TF12)
	n Sulfide (A4)	-	_ Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
	Below Dark Surface	e (A11)	_ Depleted Matrix (F3)	
	rk Surface (A12)		Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
	ucky Mineral (S1)	1	Depleted Dark Surface (F7)	wetland hydrology must be present,
	leyed Matrix (S4)		_ Redox Depressions (F8)	unless disturbed or problematic.
Restrictive L	ayer (if present):			
Type:				
Depth (incl	hes):			Hydric Soil Present? Yes No
HYDROLOG Wetland Hyd	GY Irology Indicators:			
Primary Indica	ators (minimum of or	ne required;	check all that apply)	
				Secondary Indicators (2 or more required)
Surface V	Nater (A1)		Water-Stained Leaves (B9) (except	
Contraction of the second s	Water (A1) ter Table (A2)			
Contraction of the second s	ter Table (A2)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
High Water Mater M	ter Table (A2) n (A3) arks (B1)		 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
High Wat Saturation Water Ma Sediment	ter Table (A2) n (A3) arks (B1) t Deposits (B2)		 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
High Wat Saturation Water Ma Sediment	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)		 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2)
High Wat Saturation Water Ma Sediment Drift Depo	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)		 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)		 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	naden/ (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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial Ir		 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave		 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations:	Surface (B	 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave rations: er Present? Ye	Surface (B	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Other (Explain in Remarks) 3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate Water Table F Saturation Pre	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave rations: er Present? Ye esent? Ye	e Surface (B8 es N es N	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR Other (Explain in Remarks) Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate Water Table F Saturation Pre (includes capi	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave rations: er Present? Ye esent? Ye esent? Ye	es N es N es N es N	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR) Other (Explain in Remarks) 3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate Water Table F Saturation Pre (includes capi	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave rations: er Present? Ye esent? Ye esent? Ye	es N es N es N es N	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR) Other (Explain in Remarks) B) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate Water Table F Saturation Pre (includes capi Describe Reco	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave rations: er Present? Ye esent? Ye esent? Ye	es N es N es N es N	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR) Other (Explain in Remarks) B) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate Water Table F Saturation Pre (includes capi Describe Reco	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave rations: er Present? Ye esent? Ye esent? Ye	es N es N es N es N	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR) Other (Explain in Remarks) B) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Wate Water Table F Saturation Pre (includes capi Describe Reco	ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ir Vegetated Concave rations: er Present? Ye esent? Ye esent? Ye	es N es N es N es N	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR) Other (Explain in Remarks) B) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO Sampling Date: 27 Sept, 2018
Applicant/Owner: RTI / Caltrans, private	State: CA Sampling Point:S
Investigator(s): M. Widdowson, S. Spooner	Section, Township, Range:
Landform (hillslope, terrace, etc.): Nod Dank	_ Local relief (concave, convex, none): Slope (%):
Subregion (LRR): A: Northwest Forests and Coast Lat:	Long: Datum:
Soil Map Unit Name: 132 - Crispin ban 0-5%	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y Are Vegetation, Soil, or Hydrology significantly Are Vegetation, Soil, or Hydrology naturally p SUMMARY OF FINDINGS – Attach site map showin	y disturbed? Are "Normal Circumstances" present? Yes No
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Patch of Salex scrub on !	pank above road shoulder

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) 1)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
23				Total Number of Dominant Species Across All Strata:(B)
4		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
1. Jalix sitchensis	80	Y	FACW	Prevalence Index worksheet: Total % Cover of: Multiply by:
2. Rubus wishus	5	N	FACU	OBL species x 1 =
3				FACW species x 2 = FAC species x 3 =
5	95	= Total Co		FACU species x 4 =
Herb Stratum (Plot size: 5 radius)			ver	UPL species x 5 =
1. Equisition felmatei 2. Scimpus nucrocarpus	5	-N-	HACW	Column Totals: (A) (B)
3. Scrophylanic califor	3	Y	FAC	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4. Polystichum munipu	5	¥_	FACU	1 - Rapid Test for Hydrophytic Vegetation
5				 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
7	- <u></u> -		_	4 - Morphological Adaptations ¹ (Provide supporting
8 9				data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	_15	= Total Co	ver	
1				Hydrophytic Vegetation
2 % Bare Ground in Herb Stratum		_= Total Co	ver	Present? Yes V No
Remarks:				
i.				9

SOIL						Sampling Point:
Profile Description: (Describe	e to the depth ne	eeded to document t	he indicator of	or confirm th	e absence	of indicators.)
Depth <u>Matrix</u> (inches) Color (moist)	%C	Redox Feat Color (moist) %		_Loc ²	Texture	Remarks
			22			
	plotion DM-Doc	luced Matrix CS=Cov	ared or Costo		s ² l.or	ation: PL=Pore Lining, M=Matrix.
¹ Type: C=Concentration, D=De Hydric Soil Indicators: (Applie				u Sanu Grain		rs for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (S5)	notouty			n Muck (A10)
Histic Epipedon (A2)		Stripped Matrix (S6)				Parent Material (TF2)
Black Histic (A3)		Loamy Mucky Mineral	(F1) (except	MLRA 1)		Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix				er (Explain in Remarks)
Depleted Below Dark Surface		Depleted Matrix (F3)				
Thick Dark Surface (A12)		Redox Dark Surface (F6)		³ Indicato	rs of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		Depleted Dark Surface				nd hydrology must be present,
Sandy Gleyed Matrix (S4)		Redox Depressions (F	-8)		unles	s disturbed or problematic.
Restrictive Layer (if present):						
Туре:						
Depth (inches):		· · · · · · · · · · · · · · · · · · ·		- F	Hydric Soil	Present? Yes No
IYDROLOGY						
Wetland Hydrology Indicators					Case	den Indicators (2 or more required)
Primary Indicators (minimum of	one required; che		(Da) (C.S.C.		hdary Indicators (2 or more required)
Surface Water (A1)		Water-Stained Le		kcept	v	/ater-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)		MLRA 1, 2, 4	A, and 4B)		D	4A, and 4B)
Saturation (A3)		Salt Crust (B11) Aquatic Invertebr	ator (P13)			rainage Patterns (B10) ry-Season Water Table (C2)
Water Marks (B1) Sediment Deposits (B2)		Hydrogen Sulfide				aturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Oxidized Rhizos	5 - C	iving Roots (eomorphic Position (D2)
Algal Mat or Crust (B4)		Presence of Red	요즘 이 이 것이 같아. 감정하는 것이 같아.			hallow Aquitard (D3)
Iron Deposits (B5)		Recent Iron Red				AC-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunted or Stress		a standard and a stand		aised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial	Imagery (B7)	Other (Explain in				rost-Heave Hummocks (D7)
Sparsely Vegetated Concav	그는 것 같은 것 같은 것 같은 것 같이 많이					
Field Observations:		1				
Surface Water Present?	Yes No _	Depth (inches):		_		
Water Table Present?	Yes No _	Depth (inches):		_		
(includes capillary fringe)		Depth (inches):				/ Present? Yes No _
Describe Recorded Data (stream	n gauge, monitor	ing well, aerial photos	, previous insj	pections), if a	vailable:	
Remarks:				_		
Site topogn	aphy u	rould not	pond o	vionu	entrat	e water

Project/Site: RTI Manchester	City/County: Manchester	/ MENDOCINO	Sampling Date:	7 Sept, 2018
Applicant/Owner: RTI / Caltrans, private		State: CA	Sampling Point: _	19
Investigator(s): M. Widdowson, S. Spooner	Section, Township, Rang	e:		
Landform (hillslope, terrace, etc.): nad bank	Local relief (concave, co	nvex, none):N	Slop	be (%):
Subregion (LRR): A: Northwest Forests and Coast	at:	Long:	Datur	n:
Soil Map Unit Name: 139- Dystropepts, 30-7	5% slopes	NWI clas	sification:	·
Are climatic / hydrologic conditions on the site typical for this tim	e of year? Yes ⊻_ No	(If no, explain i	in Remarks.)	/
Are Vegetation, Soil, or Hydrology signif	ficantly disturbed? Are "N	ormal Circumstance	es" present? Yes 🚩	No
Are Vegetation, Soil, or Hydrology natur	ally problematic? (If nee	ded, explain any an	swers in Remarks.)	

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

Hydrophytic Vegetation Present?	Yes V	No_	CZ Wetland	Yes_1	4
Hydric Soil Present? Wetland Hydrology Present?	Yes Yes	No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					

VEGETATION – Use scientific names of plants.

	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover Species?</u> Status	Number of Dominant Species
1		That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 20 4 (0')	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1. Loncera involucrata	80 Y FAC	Prevalence Index worksheet:
		Total % Cover of: Multiply by:
2. Bacchan's pilulane	10 1 upe	OBL species x 1 =
3. Kubus pantforms	10 N FACU	FACW species x 2 =
4		FAC species x 3 =
5		FACU species x 4 =
CL P	= Total Cover	
Herb Stratum (Plot size: 5 mins)	NO N CAR	UPL species x 5 =
1. Heradeum maximum	15 Y FAC	Column Totals: (A) (B)
2		Prevalence Index = B/A =
3	· · · · · · · · · · · · · · · · · · ·	Hydrophytic Vegetation Indicators:
4		1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		$3 - Prevalence Index is \leq 3.0^1$
7 8		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹
		Problematic Hydrophytic Vegetation ¹ (Explain)
10 11		¹ Indicators of hydric soil and wetland hydrology must
11	NC THE	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 20 + (0')	S= Total Cover	
1. Toxicodendon diversilobum	20 Y FAC	and the second
		Hydrophytic Vegetation
2		Present? Yes V No
% Bare Ground in Herb Stratum	= Total Cover	
Remarks:		l

4

1

in an

-

Sampling Point: _

9

Depth Matrix	lepth needed to document the indicator or confirm Redox Features	
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type¹</u> <u>Loc²</u>	Texture Remarks
<u></u>		
,,,,,		
·		· · · · · · · · · · · · · · · · · · ·
	RM=Reduced Matrix, CS=Covered or Coated Sand Gr	
lydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
_ Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3
_ 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.
testrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
emarks:		
	1	
Vetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ		Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	 Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) 	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requ 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	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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (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 solution (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicators: <u>rimary Indicators (minimum of one requ</u> 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	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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (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 ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 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 Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, 	 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Vetland Hydrology Indicators: rimary Indicators (minimum of one requination of the requination of th	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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): No Depth (inches): No Depth (inches): Wetlat	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Saturation Visible on Aerial Imagery (D9) Saturation Visib
Vetland Hydrology Indicators: Primary Indicators (minimum of one requination of the second stress of the second	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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): No Depth (inches): No Depth (inches): Wetlat	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Saturation Visible on Aerial Imagery (D9 Saturation Visible on Aerial Image

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Project/Site: RTI Manchester	City/County: Ma	nchester / MENDOCINO	Sampling Date: 27 Sept, 2018
		State: CA	
nvestigator(s): M. Widdowson, S. Spooner	Section, Townsh	nip, Range:	
Landform (hillslope, terrace, etc.): <u>rrad bank</u> Subregion (LRR): <u>A: Northwest Forests and Coast</u> La	t:	Long:	Datum:
Soil Map Unit Name: 139 - Dystropepts, 30-7			
Are climatic / hydrologic conditions on the site typical for this time Are Vegetation, Soil, or Hydrology signific Are Vegetation, Soil, or Hydrology natura SUMMARY OF FINDINGS – Attach site map sho	cantly disturbed? Ily problematic?	Are "Normal Circumstances" p (If needed, explain any answe	present? Yes <u>/</u> No ers in Remarks.)
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: Patch of Sitka willow at top	within a		No
from edge of pavement. Up to	ISFt for for	m Edip butter	S .
VEGETATION – Use scientific names of plants.			
	solute Dominant Indi Cover Species? Sta	and the state of t	or FAC: <u> </u>
3 4	= Total Cover	Species Across All Stra Percent of Dominant S	pecies
	30 Y FA	FACW species FAC species	Multiply by: x 1 = x 2 = x 3 =
<u>Herb Stratum</u> (Plot size:)	00 = Total Cover	UPL species	x 4 = x 5 = (A) (B)
2.		2 - Dominance Te 3 - Prevalence Inc 3 - Prevalence Inc 4 - Morphological data in Remark 5 - Wetland Non-N Problematic Hydro ¹ Indicators of hydric so	ion Indicators: Hydrophytic Vegetation st is >50% lex is ≤3.0 ¹ Adaptations ¹ (Provide supporting (s or on a separate sheet) /ascular Plants ¹ ophytic Vegetation ¹ (Explain) bil and wetland hydrology must
Woody Vine Stratum (Plot size:) 1 2	Total Cover	Hydrophytic Vegetation Present? Ye	es No
% Bare Ground in Herb Stratum ~100 Remarks: Veny dense showbs			8

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d'

Depth (inches) Matrix Redox Features O -6 IOYA 3/3 IOO Color (moist) % Type¹ Loc² O -6 IOYA 3/3 IOO	Texture Remarks Indicators for Problematic Hydric Soils ³ :
O -6 IO YR 3/3 IOO Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grain Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	ins. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grait ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	ins. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
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vdric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
vdric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
vdric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
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ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
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ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
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Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	maliatora or productivity veneration and
	wetland hydrology must be present,
	unless disturbed or problematic.
estrictive Layer (if present):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes No
emarks:	
/DROLOGY /etland Hydrology Indicators:	
rimary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
_ High Water Table (A2) MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3) Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1) Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (CS
Original Deposits (B3) Oxidized Rhizospheres along Living Roots	
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
그는 것은 것 같은 것은 것은 것은 것을 하는 것을 수 있는 것을 다 있는 것을 들었다. 지원은 것은 것은 것은 것은 것은 것을 가지 않는 것을 가지 않는 것을 가지 않는 것을 가지 않는 것을 하는 것을 하는 것을 가지 않는 것을 것을 것을 것을 수 있다. 것을	
_ Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
_ Sparsely Vegetated Concave Surface (B8)	
ield Observations:	
urface Water Present? Yes No V Depth (inches):	
	1
	nd Hydrology Present? Yes No
aturation Present? Yes No 🗹 Depth (inches): nove to 6 Wetlan	
aturation Present? Yes No <u>//</u> Depth (inches): <u>nove to 6</u> Wetlan	available:
aturation Present? Yes No <u>/</u> Depth (inches): <u>nove to 6</u> Wetlan	
Saturation Present? Yes No <u></u> Depth (inches): <u>nove to 6</u> Wetlan Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if a	available:
Caturation Present? Yes No Depth (inches): <u>nove to 6</u> Wetlan ncludes capillary fringe) Wetlan Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if the semarks:	19 ES
aturation Present? Yes No Depth (inches): <u>nove to 6</u> Wetlan ncludes capillary fringe) lescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	19 ES
aturation Present? Yes No Depth (inches): <u>nove to 6</u> Wetlan <u>ncludes capillary fringe</u> escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if <u>emarks</u> :	- 15

Project/Site: RTI Manchester	City/County: Manchester	/ MENDOCINO	_ Sampling Da	ate: 28	Sept, 2018
Applicant/Owner: RTI / Caltrans, private		State: CA	_ Sampling Po	oint: 2	1
Investigator(s): M. Widdowson, S. Spooner				1 1	
Landform (hillslope, terrace, etc.): Valley	_ Local relief (concave, co	onvex, none):	care	Slope (%):
Subregion (LRR): A: Northwest Forests and Coast Lat:		Long:		Datum:	
Soil Map Unit Name: 139-Dystopepts, 30-75	To slopes	NWI classif	fication:		
Are climatic / hydrologic conditions on the site typical for this time of y					
Are Vegetation, Soil, or Hydrology significantl	y disturbed? Are "N	ormal Circumstances'	present? Yes		No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If nee	ded, explain any answ	vers in Remarks	s.)	
SUMMARY OF FINDINGS – Attach site map showin	g sampling point lo	cations, transect	ts, importar	nt featur	es, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	In the Ocumulad I		/No	_	
Remarks: PM 23.00 Strean with w	etland reget	ation, low	gradio	int, 3	nide
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size:) Absolut. 1	e Dominant Indicator r <u>Species? Status</u>	Dominance Test wo Number of Dominant That Are OBL, FACW	Species	1	_ (A)
2		Total Number of Dom Species Across All St		1	_ (B)

3		Total Number of Dominar Species Across All Strata		(B)
4	= Total Cover	Percent of Dominant Spe That Are OBL, FACW, or		_ (A/B)
Sapling/Shrub Stratum (Plot size:)		Prevalence Index works	sheet:	
1		Total % Cover of:	Multiply by:	
2		OBL species		
3		FACW species		
4		FAC species		
5		FACU species		
620	= Total Cover			
Herb Stratum (Plot size: 6×2)	I. N coli	UPL species		
1. Munulus guttatus	60 Y OBL	Column Totals:	(A)	(B)
2. Juncus effusus	10 W FACW	Prevalence Index :	= B/A =	
3. Scrophylana collomica	5 N FAC	Hydrophytic Vegetation		
4. Departue samentosa	5 N, OBL	1 - Rapid Test for Hy	drophytic Vegetation	
5. Eginsepun telmastei	5 N FACW	2 - Dominance Test		
6		3 - Prevalence Index		
7		4 - Morphological Ad		unnorting
8		data in Remarks	or on a separate shee	upporting et)
		5 - Wetland Non-Vas		
9		Problematic Hydroph		lain)
10		¹ Indicators of hydric soil a		
11		be present, unless distur		ymust
Woody Vine Stratum (Plot size:)	= Total Cover			
1		Hydrophytic	5	
2		Vegetation		
	= Total Cover	Present? Yes	No	
Remarks:		1		
8				
	. 4			
	- 11			

C	0	11	
0	U	IJ	_

Sampling Point: ____

Profile Description: (Describe to the dept	n needed to document the indicator or confirm	
Depth <u>Matrix</u> (inches) <u>Color (moist) %</u>	<u>Redox Features</u> Color (moist) % <u>Type¹ Loc²</u>	Texture Remarks
		1
		<u> </u>
		·
		(
Type: C=Concentration, D=Depletion, RM=I	Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all L		Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	V 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.
estrictive Layer (if present):		
Туре:		1
Depth (inches):		Hydric Soil Present? Yes <u>V</u> No
	iem, includent source and	
YDROLOGY		
/DROLOGY Vetland Hydrology Indicators:		Secondary Indicators (2 or more required)
(DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required;	check all that apply)	Secondary Indicators (2 or more required)
Processing (DROLOGY) Petland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1)	<u>check all that apply)</u> Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required)
IDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2)	check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3)	<u>check all that apply)</u> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	<u>Secondary Indicators (2 or more required)</u> <u></u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	<u>check all that apply)</u> <u>Water-Stained Leaves (B9) (except</u> <u>MLRA 1, 2, 4A, and 4B)</u> <u>Salt Crust (B11)</u> <u>Aquatic Invertebrates (B13)</u>	<u>Secondary Indicators (2 or more required)</u> <u> </u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <u> </u> Drainage Patterns (B10) <u> </u> Dry-Season Water Table (C2)
VDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	<u>check all that apply)</u> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	 <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) Saturation Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	<u>check all that apply)</u> <u>Water-Stained Leaves (B9) (except</u> <u>MLRA 1, 2, 4A, and 4B)</u> <u>Salt Crust (B11)</u> <u>Aquatic Invertebrates (B13)</u>	 <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) Saturation Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	<u>check all that apply)</u> 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 Roc	 <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) Saturation Visible on Aerial Imagery (C9 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	<u>check all that apply)</u> 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 Roc Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	<pre>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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A)</pre>	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	<u>check all that apply)</u> 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 Rocc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Secondary Indicators (2 or more required)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B	<u>check all that apply)</u> 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 Rocc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B field Observations:	<u>check all that apply)</u> 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 Rocc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B Ield Observations: urface Water Present?	check all that apply)	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B ield Observations: urface Water Present? Yes Nater Table Present?	check all that apply)	Secondary Indicators (2 or more required)
Zetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B ield Observations: urface Water Present? Yes Vater Table Present? Yes Naturation Present? Yes Naturation Present? Yes	check all that apply)	
Zetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B ield Observations: urface Water Present? Yes Vater Table Present? Yes Naturation Present? Yes Naturation Present? Yes	check all that apply)	Secondary Indicators (2 or more required)
//DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B ield Observations: urface Water Present? Yes Vater Table Present? Yes Naturation Present? Yes ncludes capillary fringe) Yes	check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Trimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B Tield Observations: Surface Water Present? Yes N Nater Table Present? Yes N Saturation Present? Yes N Saturati	check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B Field Observations: Surface Water Present? Yes Nater Table Present? Yes Naturation Present? Yes Saturation Present?	check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B Field Observations: Surface Water Present? Yes Naturation Present?	check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B Field Observations: Surface Water Present? Yes N Nater Table Present? Yes N Saturation Present? Yes N Saturatio	check all that apply)	Secondary Indicators (2 or more required)
Yetland Hydrology Indicators: rimary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B ield Observations: urface Water Present? Yes Vater Table Present? Yes Naturation Present? Yes Saturation Present? Yes Water Table Present? Yes Naturation Present? Yes Surface Present Yes	check all that apply)	Secondary Indicators (2 or more required)

Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO	Sampling Date: 28 Sept, 2018
Applicant/Owner: RTI / Caltrans, private	State: CA	Sampling Point: 22
Investigator(s): M. Widdowson, S. Spooner	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):
Subregion (LRR): A: Northwest Forests and Coast Lat:	Long:	Datum:
Soil Map Unit Name: 139 - Dystopepts, 30-75	NWI classifica	ation:
Are climatic / hydrologic conditions on the site typical for this time of y Are Vegetation, Soil, or Hydrology significantly Are Vegetation, Soil, or Hydrology naturally p SUMMARY OF FINDINGS – Attach site map showin	y disturbed? Are "Normal Circumstances" p roblematic? (If needed, explain any answer	resent? Yes <u>/</u> No rs in Remarks.)
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes	No
Remarks: Adjacent to EW in stream	at PM 23.00	

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 That Are OBL, FACW, or FAC:
0 0				
2			·	Total Number of Dominant
3	·		· ·	Species Across All Strata: (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		= Total Co	over	That Are OBL, FACW, or FAC:(A/B)
				Prevalence Index worksheet:
1			·	Total % Cover of:Multiply by:
2				OBL species x 1 =
3			· é	FACW species x 2 =
4			· ·	FAC species x 3 =
5		1		FACU species x 4 =
Herb Stratum (Plot size: 5 / Radus)	-	= Total Co	over	UPL species x 5 =
1. Dlans lanatus	40	Y	FAC	Column Totais: (A) (B)
2. Hypochaeine valuato				Prevalence Index = B/A =
3. Kumer acepsella	2	N	FACU	Hydrophytic Vegetation Indicators:
4. Briza mainria	3	N	UPL	1 - Rapid Test for Hydrophytic Vegetation
5. Contodon Sakatiles	30	Y	FACU	$\frac{1}{2}$ - Dominance Test is >50%
6. Cestuca perennis	10	N	FAC	3 - Prevalence Index is $\leq 3.0^{1}$
7. Grosums echinatus	2	N	UPL	4 - Morphological Adaptations ¹ (Provide supporting
8. Bhomus Lodeaceus	3	N	FACU	data in Remarks or on a separate sheet)
9. Linum brenne	5	N	UPL	5 - Wetland Non-Vascular Plants ¹
10. Lotus connentatus	5	N	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
11.			the	¹ Indicators of hydric soil and wetland hydrology must
10	100	= Total Co	Wor	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	100		Wei	
1				Hydrophytic
2.				Manafatian 7
		= Total Co	over	Present? Yes K No
% Bare Ground in Herb Stratum	-			
Remarks:				

Compling	Doint
Sampling	POINT.

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Profile Desc	cription: (Describe	to the de	opth needed to docum	ent the i	ndicator	or confirm	n the absend	e of indicat	ors.)	
Depth	Matrix		Redox	Feature	S					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture		Remarks	
0-8	10 YR 3/2	2					gy los	m		
8-12	10 YR 3/2	90	75125/6	10	C	M	gr los	m		
	10 (p / -			_			0			
			 M=Reduced Matrix, CS:						-Pore Lining, M≠Mat	rix
			II LRRs, unless other			d Gund Of			blematic Hydric Sol	
Black Hi Hydroge Depleted Thick Da Sandy M	(A1) bipedon (A2) istic (A3) en Sulfide (A4) d Below Dark Surfa ark Surface (A12) Aucky Mineral (S1) Gleyed Matrix (S4)	ce (A11)	 Sandy Redox (S Stripped Matrix (Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Surf Depleted Dark S Redox Depression 	(S6) ineral (F1 Matrix (F2 (F3) face (F6) surface (F)	MLRA 1)	Re Ve Ol ³ Indica wet	her (Explain tors of hydro land hydrolo		d
	Layer (if present):									
Type:										
Depth (inc							Hydric Sc	il Present?	Yes / No	
Remarks:							- Hyuno oc			
Remarks:							Tiyuno oo			
Remarks:										
	01									
IYDROLO										
IYDROLO Wetland Hyd	drology Indicators								otoro /2 or more real	
IYDROLO Wetland Hyd Primary Indic	drology Indicators cators (minimum of		ed; check all that apply	a fortal of	(20) (Sec	ondary Indic	ators (2 or more requ	lired)
IYDROLO Wetland Hyo Primary Indic Surface	drology Indicators cators (minimum of Water (A1)		Water-Stain	ned Leave		xcept	Sec	ondary Indic Water-Stain	ed Leaves (B9) (MLF	lired)
IYDROLO Wetland Hyd Primary Indic Surface High Wa	drology Indicators cators (minimum of Water (A1) ater Table (A2)		Water-Stain MLRA 1	ned Leave , 2, 4A, a		xcept	Sec	ondary Indic Water-Stain 4A, and	ed Leaves (B9) (MLF 4B)	lired)
IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)		Water-Stain MLRA 1 Salt Crust (I	ned Leave , 2, 4A, a B11)	and 4B)	xcept	<u>Sec</u>	ondary Indic Water-Stain 4A, and Drainage Pa	ed Leaves (B9) (MLF 4B) tterns (B10)	lired)
IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1)		Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ned Leave , 2, 4A, a B11) ertebrates	and 4B) s (B13)	xcept	<u>Sec</u>	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2)	<u>iired)</u> RA 1, 2,
IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S	ned Leave , 2, 4A, a B11) ertebrates Sulfide Oc	and 4B) s (B13) for (C1)		<u>Sec</u>	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag	<u>iired)</u> RA 1, 2,
IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized RI	ned Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher	nd 4B) s (B13) lor (C1) res along	Living Roc	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2)	<u>iired)</u> RA 1, 2,
IYDROLO Wetland Hyo Primary Indic Surface High Wa Saturatic Water M Sedimer Children Algal Ma	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Microsoft All Aquatic Invo Aquati	ned Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizosphei f Reduce	and 4B) s (B13) dor (C1) res along d Iron (C4	Living Roc	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3)	<u>iired)</u> RA 1, 2,
YDROLO Wetland Hyo Primary Indic Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Water-Stain MLRA 1 Salt Crust (i Aquatic Invo Microsoft All Aquatic Invo Aquati	ned Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce n Reductio	and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tilled	Living Roc I) d Soils (C6	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5)	<u>uired)</u> RA 1, 2, ery (C9
YDROLO Wetland Hyo Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Surface	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	one requir	Water-Stain MLRA 1 Salt Crust (Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S	ned Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce Reductio Stressed	nnd 4B) s (B13) for (C1) res along d Iron (C4 on in Tilleo Plants (D	Living Roc I) d Soils (C6	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A	<u>uired)</u> RA 1, 2, ery (C9
IYDROLO Wetland Hyo Primary Indic Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatio	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial	one require	Water-Stain MLRA 1 MLRA 1 Salt Crust (i Aquatic Inve Mydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce Reductio Stressed	nnd 4B) s (B13) for (C1) res along d Iron (C4 on in Tilleo Plants (D	Living Roc I) d Soils (C6	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5)	<u>uired)</u> RA 1, 2, ery (C9
IYDROLO Wetland Hyo Primary Indic Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial y Vegetated Concav	one require	Water-Stain MLRA 1 MLRA 1 Salt Crust (i Aquatic Inve Mydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce Reductio Stressed	nnd 4B) s (B13) for (C1) res along d Iron (C4 on in Tilleo Plants (D	Living Roc I) d Soils (C6	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A	<u>uired)</u> RA 1, 2, ery (C9
YDROLO Wetland Hyc Primary Indic Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Observ	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial y Vegetated Concav vations:	one require Imagery (I re Surface	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S B7) Other (Expl (B8)	ned Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce Reductio Stressed ain in Re	nnd 4B) s (B13) for (C1) res along d Iron (C4 on in Tilleo Plants (D	Living Roc I) d Soils (C6	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A	<u>uired)</u> RA 1, 2, ery (C9
YDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Vater M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Observ	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial / Vegetated Concav vations: er Present?	Imagery (I 'e Surface Yes	Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rt Presence o Recent Iron Stunted or S B7) Other (Expl (B8)	hed Leave , 2, 4A, a B11) ertebrate: Sulfide Oc hizospher f Reduce a Reductio Stressed ain in Re	and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc I) d Soils (C6 1) (LRR A	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A	<u>uired)</u> RA 1, 2, ery (C9
YDROLO Wetland Hyo Primary Indic Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Observ Surface Water Table	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial y Vegetated Concav vations: er Present?	Imagery (I ve Surface Yes Yes	Water-Stain MLRA 1 Salt Crust (I Aquatic Inva Hydrogen S Oxidized Rł Presence o Recent Iron Stunted or S B7) Other (Expl (B8) No <u>C</u> Depth (incl	hed Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce Reduction Stressed ain in Re hes):	and 4B) s (B13) for (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc i) d Soils (C6 1) (LRR A	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I Frost-Heave	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A Hummocks (D7)	<u>uired)</u> RA 1, 2, ery (C9
YDROLO Wetland Hyo Primary Indic Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Observ Surface Water Table Saturation Pr	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial vegetated Concav vations: er Present? Present?	Imagery (I ve Surface Yes Yes	Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rt Presence o Recent Iron Stunted or S B7) Other (Expl (B8)	hed Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce Reduction Stressed ain in Re hes):	and 4B) s (B13) for (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc i) d Soils (C6 1) (LRR A	<u>Sec</u> 	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I Frost-Heave	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A Hummocks (D7)	<u>uired)</u> RA 1, 2, ery (C9
IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Observ Surface Water Vater Table Saturation Pr (includes cap	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial / Vegetated Concav vations: er Present? Present? present?	Imagery (I re Surface Yes Yes	Water-Stain MLRA 1 Salt Crust (I Aquatic Inva Hydrogen S Oxidized Rł Presence o Recent Iron Stunted or S B7) Other (Expl (B8) No <u>C</u> Depth (incl	hed Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce a Reductio Stressed ain in Re hes): hes):	s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc) d Soils (C6 1) (LRR A	Sec ots (C3))) and Hydrolo	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I Frost-Heave	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A Hummocks (D7)	<u>uired)</u> RA 1, 2, ery (C9
IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Observ Surface Water Vater Table Saturation Pr (includes cap	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial / Vegetated Concav vations: er Present? Present? present?	Imagery (I re Surface Yes Yes	Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S B7) Other (Expl (B8) No <u>C</u> Depth (incl No <u>C</u> Depth (incl	hed Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce a Reductio Stressed ain in Re hes): hes):	s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc) d Soils (C6 1) (LRR A	Sec ots (C3))) and Hydrolo	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I Frost-Heave	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A Hummocks (D7)	<u>uired)</u> RA 1, 2, ery (C9
IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Observ Surface Water Vater Table Saturation Pr (includes cap	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial / Vegetated Concav vations: er Present? Present? present?	Imagery (I re Surface Yes Yes	Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S B7) Other (Expl (B8) No <u>C</u> Depth (incl No <u>C</u> Depth (incl	hed Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce a Reductio Stressed ain in Re hes): hes):	s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc) d Soils (C6 1) (LRR A	Sec ots (C3))) and Hydrolo	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I Frost-Heave	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A Hummocks (D7)	<u>uired)</u> RA 1, 2, ery (C9
IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obsern Surface Wate Water Table Saturation Pr (includes cap Describe Rec	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial / Vegetated Concav vations: er Present? Present? present?	Imagery (I re Surface Yes Yes	Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S B7) Other (Expl (B8) No <u>C</u> Depth (incl No <u>C</u> Depth (incl	hed Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce a Reductio Stressed ain in Re hes): hes):	s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc) d Soils (C6 1) (LRR A	Sec ots (C3))) and Hydrolo	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I Frost-Heave	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A Hummocks (D7)	<u>uired)</u> RA 1, 2, ery (C9
IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obsern Surface Wate Water Table Saturation Pr (includes cap Describe Rec	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial / Vegetated Concav vations: er Present? Present? present?	Imagery (I re Surface Yes Yes	Water-Stain MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S B7) Other (Expl (B8) No <u>C</u> Depth (incl No <u>C</u> Depth (incl	hed Leave , 2, 4A, a B11) ertebrates Sulfide Oc hizospher f Reduce a Reductio Stressed ain in Re hes): hes):	s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc) d Soils (C6 1) (LRR A	Sec ots (C3))) and Hydrolo	ondary Indic Water-Stain 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I Frost-Heave	ed Leaves (B9) (MLF 4B) tterns (B10) Water Table (C2) isible on Aerial Imag Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A Hummocks (D7)	<u>uired)</u> RA 1, 2, ery (C9

Project/Site: RTI Manchester	City/County: Manchester / MEI	NDOCINO	Sampling Date: 28	Sept, 2018
Applicant/Owner: RTI / Caltrans, private		State: CA	Sampling Point:	23
Investigator(s): M. Widdowson, S. Spooner	Section, Township, Range:		14-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	
Landform (hillslope, terrace, etc.): nord shouldes	Local relief (concave, convex,	none):	Slope	(%):
Subregion (LRR): A: Northwest Forests and Coast Lat:			Datum:	
Soil Map Unit Name: 139 - Dystopepts, 30-757	lo Slopes	NWI classific	ation:	_
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Normal	Circumstances" p	present? Yes 🗹	_ No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, e	explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locatio	ons, transects	, important feat	ures, etc.

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) 1) 2			<u>Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant
3				Species Across All Strata:3 (B)
4				
Sapling/Shrub Stratum (Plot size:)		= Total Co		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1				Prevalence Index worksheet:
				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5			ter.	FACU species x 4 =
Herb Stratum (Plot size: 4 × 6)		= Total Co	ver	UPL species x 5 =
1. Cynosins echinati	30	Y	UPC	Column Totals: (A) (B)
2. thomas hordeacens	20	Y	FACY	Prevalence Index = B/A =
3. Troblum repens	5	N.	FAC	Hydrophytic Vegetation Indicators:
4. Briza minor	10	N	FAC	1 - Rapid Test for Hydrophytic Vegetation
	20	Y	FAC	2 - Dominance Test is >50%
6. Loontodon Saxatilis	5	N,	GACU	$3 - Prevalence Index is \leq 3.0^{1}$
7. Geranin core-core	5	N	upe	 4 - Morphological Adaptations¹ (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
11	95	= Total Co		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1			أستني	Hydrophytic
2				Veretation
1.51		= Total Co	ver	Present? Yes No
% Bare Ground in Herb Stratum5				
Remarks:				

이 같은 것 같은	ator or confirm the absence of indicators.)
Depth Matrix Redox Features (inches) Color (moist) % Color (moist) %	pe ¹ Loc ² Texture Remarks
1	
0-6 78 YR 3/2 100	Vorloam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Co	oated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (exc	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Thick Dark Surface (A12) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present):	unless disturbed or problematic.
Type:	1
Depth (inches):	Hydric Soil Present? Yes No 🗸
Remarks: Gravel /old road base at 6.	
IYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9 High Water Table (A2) MLRA 1, 2, 4A, and 4E	Water-Stained Leaves (B9) (MLRA 1, 2,B)4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9 High Water Table (A2) MLRA 1, 2, 4A, and 4E Saturation (A3) Saturation (B11)	 (except
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9 High Water Table (A2) MLRA 1, 2, 4A, and 4E Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13)	Water-Stained Leaves (B9) (MLRA 1, 2, 3) 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9 High Water Table (A2) MLRA 1, 2, 4A, and 4E Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13 Sediment Deposits (B2) Hydrogen Sulfide Odor (C ²))) (except
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9 High Water Table (A2) MLRA 1, 2, 4A, and 4E Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13 Sediment Deposits (B2) Hydrogen Sulfide Odor (C Drift Deposits (B3) Oxidized Rhizospheres alcometers)) (except
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Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO	Sampling Date: 28 Sept, 2018
Applicant/Owner: RTI / Caltrans, private	State: CA	Sampling Point: 25
Investigator(s): M. Widdowson, S. Spooner	Section, Township, Range:	
Landform (hillslope, terrace, etc.): Dank/Show	Local relief (concave, convex, none):	Slope (%): 5
Subregion (LRR): A: Northwest Forests and Coast	Lat: Long:	Datum:
Soil Map Unit Name: 139- Dystopepts, 30.	-75% Slopes NWIG	classification:
Are climatic / hydrologic conditions on the site typical for this t		ain in Remarks.)
Are Vegetation, Soil, or Hydrology sig	nificantly disturbed? Are "Normal Circumsta	nces" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology na	turally problematic? (If needed, explain any	answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	howing sampling point locations, tran	sects, important features, etc.
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes No	within a Wetland? Ye	s No
Wetland Hydrology Present? Yes No		
Remarks: Road shoulder betw	een deep swale and road	

VEGETATION - Use scientific names of plants.

1			Status	Dominance Test workshee Number of Dominant Specie That Are OBL, FACW, or FA	es 7	(A)
2 3			the second se	Total Number of Dominant Species Across All Strata:	6	(B)
4		= Total Co	ver	Percent of Dominant Specie That Are OBL, FACW, or FA		(A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index workshe	et:	
1				Total % Cover of:	Multiply by:	
2		4		OBL species	x 1 =	
3				FACW species		
4			·	FAC species		
5				FACU species		
Herb Stratum (Plot size: 51 radius)		= Total Co	over	UPL species		
1 Core_ core	15	Y	LIPL	Column Totals:		
2. Holans Canatus		Y	FAC	Prevalence Index = B	3/A =	
3. Browns diandmr	15	<u> </u>	upl	Hydrophytic Vegetation Ir		
4. Brza maximic	25	<u> </u>	FAC	1 - Rapid Test for Hydro	ophytic Vegetation	
5. Bromus hordeacens	_5	N	FACU	2 - Dominance Test is :	>50%	
6. Vulpia bromordes	-5	N	FACU	3 - Prevalence Index is	≤3.0 ¹	
7				4 - Morphological Adap data in Remarks or	otations ¹ (Provide sup on a separate sheet)	porting
8				5 - Wetland Non-Vascu	and the state of t	
9				Problematic Hydrophyt		in)
10			·	¹ Indicators of hydric soil and		
11	ne	= Total Co		be present, unless disturbe		indot
Woody Vine Stratum (Plot size: 10 Y 4)	- 85	_= Total Co	ver			
1. Cubles la Sinks	40	Y	GALLA	1		
2. Toxico denaron diversitabin			GA	Hydrophytic Vegetation	1	
2. 18 Mill almann averstore	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Table	the	Present? Yes	No	
% Bare Ground in Herb Stratum15		_= Total Co	iver			
Remarks:						

25

2-7 10 XPE 3/2 102 ype:	inches) Color (moist)	%Co		atures 6Type ¹ _	Loc ²	Texture	Remarks
drdr Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ¹ : Histosol (A1)	2-7 10×R3/2	100				gy loan	
dric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Solls ¹ : Histosol (A1) Stripped Matrix (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S5) Red Parent Material (T2) Black Histic (A3) Loamy Gleyed Matrix (F3) Wery Shallow Dark Surface (T12) Depleted Below Dark Surface (A11) Depleted Matrix (F3) "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) "unless disturbed or problematic. Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Type: Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Type: Depleted Dark Surface (F8) wetland hydrology must be present, unless disturbed or problematic. Type: Depleted Dark Surface (F8) wetland hydrology must be present, unless disturbed or problematic. Surface Water (A1) Water-Stained Leaves (B9) (MLRA 1, 2 Maker A1, 2, 4A, and 4B) Maker A1, 2, 4A, and 4B) Surface Surface (B12) MLRA 1, 2, 4A, and 4B) Maker A1, 2 Maund A1, 2 Sediment Deposits (B3) Oxidiced Rhizospheres and Living Root							
Histozol (A1)					d Sand Grai		
Histic Epipedon (A2) Stripped Matrix (36) Red Parent Material (TF2) Black Histic (A3) Loamy Oleved Matrix (72) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (73) "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mudy Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Type: Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Type: Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Type: Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Type: Depleted Dark Surface (F7) wetland hydrology for more required, the set of the set o	and the second			noted.)			
satrictive Layer (if present): Type: Depth (inches):	 Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface Thick Dark Surface (A12) 	(A11) SI (A11) SI (A1) SI (A11) SI (A1)	ripped Matrix (S6) pamy Mucky Minera pamy Gleyed Matrix epleted Matrix (F3) edox Dark Surface	(F2) (F6)	MLRA 1)	Red Pare Very Sha Other (Ex ³ Indicators of	nt Material (TF2) llow Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and
Type:		Re	edox Depressions (F8)		unless dist	urbed or problematic.
Depth (inches):							
amarks: Gravel/rood base at 7 i.d.es brownel/rood base at 1 i.d.es brownel/r							1
DROLOGY stland Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3)	Depth (inches):					Hydric Soil Pres	ent? Yes No
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Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Depth (inches): Depth (inches): Ater Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Staulable:	DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on _ Surface Water (A1) _ High Water Table (A2)		<u>k all that apply)</u> Water-Stained L MLRA 1, 2, 4	eaves (B9) (ex	cept	Water 4A,	Stained Leaves (B9) (MLRA 1, 2 and 4B)
Iron Deposits (B5)	DROLOGY etland Hydrology Indicators: mary Indicators (minimum of on _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3)		<u>k all that apply)</u> Water-Stained L MLRA 1, 2, 4 Salt Crust (B11)	eaves (B9) (ex A, and 4B)	cept	Water 4A, Drainag	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10)
Inface Water Present? Yes No Depth (inches): Inter Table Present? Yes No Depth (inches): Interaction Present? Yes No Interaction Present? Yes Interaction Present? Yes Interaction Present? Yes <t< td=""><td>DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3)</td><td></td><td><u>k all that apply)</u> Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos</td><td>eaves (B9) (ex A, and 4B) rates (B13) e Odor (C1) pheres along Li</td><td>iving Roots</td><td>Water 4A, Drainag Dry-Se Saturat (C3) Geomo</td><td>Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial Imagery (C rphic Position (D2)</td></t<>	DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3)		<u>k all that apply)</u> Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos	eaves (B9) (ex A, and 4B) rates (B13) e Odor (C1) pheres along Li	iving Roots	Water 4A, Drainag Dry-Se Saturat (C3) Geomo	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial Imagery (C rphic Position (D2)
ater Table Present? Yes No Depth (inches): work b7 turation Present? Yes No Depth (inches): work b7 uturation Present? Yes No Depth (inches): work b7 cludes capillary fringe) Wetland Hydrology Present? Yes No scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	DROLOGY etland Hydrology Indicators: mary Indicators (minimum of on 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 Im	e required; chec 	k all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres	eaves (B9) (ex A, and 4B) rates (B13) e Odor (C1) pheres along Li duced Iron (C4) uction in Tilled sed Plants (D1)	iving Roots Soils (C6)	(C3) C3 FAC-Nu C3 FAC-Nu C4A, Drainag Dry-Se C3 Geomo Shallov FAC-Nu Raised	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial Imagery (C rphic Position (D2) v Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
turation Present? Yes No V Depth (inches): Work by Wetland Hydrology Present? Yes No V cludes capillary fringe) Scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on _ 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 Im _ Sparsely Vegetated Concave and the set of th	e required; chec 	k all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	eaves (B9) (ex A, and 4B) rates (B13) e Odor (C1) pheres along Li duced Iron (C4) uction in Tilled sed Plants (D1) n Remarks)	iving Roots Soils (C6)	(C3) C3 FAC-Nu C3 FAC-Nu C4A, Drainag Dry-Se C3 Geomo Shallov FAC-Nu Raised	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial Imagery (C rphic Position (D2) v Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
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	DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on _ 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 Im _ Sparsely Vegetated Concave side Observations: rface Water Present? Yest	e required; chec 	k all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain ir Depth (inches): Depth (inches):	eaves (B9) (ex A, and 4B) rates (B13) e Odor (C1) pheres along Li Juced Iron (C4) uction in Tilled sed Plants (D1) n Remarks)	iving Roots Soils (C6)) (LRR A)	C3) C3 C3 C3 C3 C3 C3 C3 C3 C3 C3 C3 C3 C4 C3 C3 C4 C3 C4 C3 C4 C4 C3 C4 C4 C4 C4 C4 C4 C4 C4 C4 C4 C4 C4 C4	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial Imagery (C rphic Position (D2) v Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
marks:	DROLOGY etland Hydrology Indicators: mary Indicators (minimum of on 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 Im Sparsely Vegetated Concave Stater Table Present? Yes ater Table Present? Yes turation Present? Yes cludes capillary fringe)	e required; chec 	k all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain ir Depth (inches): Depth (inches):	eaves (B9) (ex A, and 4B) rates (B13) e Odor (C1) pheres along Li buced Iron (C4) uction in Tilled sed Plants (D1) n Remarks)	iving Roots Soils (C6)) (LRR A)	Water 4A, Drainag Dry-Se Saturat (C3) Geomo Shallov FAC-N- Raised Frost-H	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial Imagery (C rphic Position (D2) v Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
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	DROLOGY etland Hydrology Indicators: imary Indicators (minimum of on _ 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 Im _ Sparsely Vegetated Concave eld Observations: urface Water Present? Yes ater Table Present? Yes ater Table Present? Yes cludes capillary fringe) escribe Recorded Data (stream g	e required; chec 	k all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain ir Depth (inches): Depth (inches):	eaves (B9) (ex A, and 4B) rates (B13) e Odor (C1) pheres along Li buced Iron (C4) uction in Tilled sed Plants (D1) n Remarks)	iving Roots Soils (C6)) (LRR A)	Water 4A, Drainag Dry-Se Saturat (C3) Geomo Shallov FAC-N- Raised Frost-H	Stained Leaves (B9) (MLRA 1, 2 and 4B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial Imagery (C rphic Position (D2) v Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)

Project/Site: RTI Manchester		City/County: Manch	ester / MENDOCINO	_ Sampling Date: 23 Sept, 2018
Applicant/Owner: RTI / Caltrans, private			State: CA	_ Sampling Point: 26
			Range:	
Landform (hillslope, terrace, etc.):				
Subregion (LRR): A: Northwest Forests and Coast				
Soil Map Unit Name:				ication:
Are climatic / hydrologic conditions on the site typical for the		1		
Are Vegetation, Soil, or Hydrology				present? Yes <u>/</u> No
Are Vegetation, Soil, or Hydrology Are Vegetation, Soil, or Hydrology			f needed, explain any answ	
SUMMARY OF FINDINGS – Attach site map				
Hydrophytic Vegetation Present? Yes V	a fair and a second second	Is the Samp	Z Wetlan! Yer _	V No -
Hydric Soil Present? Yes			tland? Yes	No V
Wetland Hydrology Present? Yes Remarks: \				
Remarks: Willow woodland/sci	nb - s	alize lasia	ndra	
Upland like Sample	no Pou	\$ 25 m	shouldes	
VEGETATION – Use scientific names of pla				
	Absolute	Dominant Indicat	or Dominance Test wo	rksheet:
Tree Stratum (Plot size: 30 × 30)	10 -	Species? Status	- I Number of Dominant	
i. Salix lasiandra	_ 80	y haci	Mat Are OBL, FACW	$V_{\rm or}$ FAC: (A)
2		·	Total Number of Dom	
3			Species Across All St	rata: (B)
4	80	= Total Cover	Percent of Dominant	
Sapling/Shrub Stratum (Plot size: 30×30)			That Are OBL, FACW	
1. Salix sitchensis	_ 20	Y FACV	Total % Cover of	
2. Kubus parvillons		- Y FACI	OBL species	x1=
3. This is insures		N FAC	EACW species	x 2 =
4. Sambucus racemosa	5	N MAC	V I	x 3 =
5	1.5	= Total Cover	FACU species	x 4 =
Herb Stratum (Plot size: 5 Radus)	-40		UPL species	x 5 =
1. Equisepun telmatei	10	Y FAC	Column Totals:	(A) (B)
2. Dryoptens arguta		N UPL	Prevalence Inde	ex = B/A =
3			Hydrophytic Vegeta	
4				r Hydrophytic Vegetation
5			2 - Dominance T	
6 7			3 - Prevalence Ir	
8			data in Rema	I Adaptations ¹ (Provide supporting rks or on a separate sheet)
9			5 - Wetland Non-	
10				rophytic Vegetation ¹ (Explain)
11		7		oil and wetland hydrology must
	- 11	_= Total Cover	be present, unless di	sturbed or problematic.
Woody Vine Stratum (Plot size:)			1	
			— Hydrophytic Vegetation	1
2		= Total Cover	Present?	Yes No
% Bare Ground in Herb Stratum				
Remarks:				

	n needed to document the indicator or confirm	The absence of maleators.
Depth <u>Matrix</u>	Redox Features	Toutura
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-12 10×R3/2 100		
······································		· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · ·		
	Reduced Matrix, CS=Covered or Coated Sand Gra	
Hydric Soil Indicators: (Applicable to all L	RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	_ Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	_ Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Hydrogen Sulfide (A4)	_ Loamy Gleyed Matrix (F2) _ Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	_ Depleted Marix (F3) _ Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	_ Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
HYDROLOGY Wetland Hydrology Indicators:		
	check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	check all that apply) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one reguired;	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required;</u> Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	 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 Rool 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) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	 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 Rool 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) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations:	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 Rool 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) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	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 Rool Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches):	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Wetla	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Primary Indicators (minimum of one required;	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Wetla	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): More to 12 Depth (inches): More to 12 Wetland	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): More to 12 Depth (inches): More to 12 Wetland	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): More to 12 Depth (inches): More to 12 Wetland	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): Depth (inches): More to 12 Depth (inches): More to 12 Wetland	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: RTI Manchester	City/County: Manchester / ME	NDOCINO	Sampling Date: 10, Oct 2018
Applicant/Owner: RTI / Caltrans, private		State: CA	Sampling Point: 27
Investigator(s): M. Widdowson, J. Mayor	Section, Township, Range:		
Landform (hillslope, terrace, etc.): depression	Local relief (concave, convex	, none):ConC	we Slope (%):%
	t: Long		
Soil Map Unit Name: 225- Windyhollow form	1,0-5% slopes	NWI class	sification:
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes No	(If no, explain i	n Remarks.)
Are Vegetation, Soil, or Hydrology signific	cantly disturbed? Are "Norma	I Circumstance	s" present? Yes 📈 No
Are Vegetation, Soil, or Hydrology natura	Ily problematic? (If needed,	explain any ans	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling point location	ons, transe	cts, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	Is the Sampled Area		

Hydric Soil Present? Wetland Hydrology Present?	Yes No No	Is the Sampled Area within a Wetland?	Yes No	
Remarks: Local depression within		vale adjusent to re	ad	1

VEGETATION – Use scientific names of plants.

2.	rcies FAC: 100 sheet: X1 = X2 =	
Sapling/Shrub Stratum (Plot size:) = Total Cover Percent of Dominant Sperthead Stratum 1. = Total Cover Prevalence Index work 2. OBL species	FAC:	y:
1.	Multiply by x 1 = x 2 =	
3. OBL species 4.	x 2 =	
4.		
5.	x 3 =	
Herb Stratum (Plot size: 3 × 10 ft) = Total Cover UPL species 1. Festura penenics 10 N FAC 2. Lotus connectatus 30 Y FAC 3. Lythum hysso pifolium 2 N OBL 4. Juncus bufonius 20 Y FAC 5. Hoicus lanctus 10 N FAC 6. Plantago lancolata 2 N FAC 7. Vulpia brumoides 2 N FAC		
Herb Stratum (Plot size: 3×10 ft.) 1. Festura penencius 10 N FAC Column Totals: 2. Lotus conniculatus 30 Y FAC Prevalence Index 3. Lythum hysso pifolium 2 N OBL Hydrophytic Vegetation 4. Juncus bufonius 20 Y FAC Hydrophytic Vegetation 5. Itoicus lanatus 10 N FAC 2 - Dominance Test 6. Plantago lanacolata 2 N FAC 3 - Prevalence Index 7. Vulpia bramoldes 2 N FAC 4 - Morphological Action	x 4 =	
1. Festica percencis 10 N FAC Column Totals: 2. Lotus coniculatus 30 Y FAC Prevalence Index 3. Lythum hyssopifolium 2 N 0BL Hydrophytic Vegetation 4. Juncus bufonius 20 Y FAC 1 - Rapid Test for H 5. Itoicus landus 10 N FAC 2 - Dominance Test 6. Plantago lanacolata 2 N FAC 3 - Prevalence Index 7. Vulpia bramoldes 2 N FAC 4 - Morphological Action	x 5 =	
2. Latus conniculatus 30 Y FAC Prevalence Index 3. Lythrum hysso pifolium 2 N OBL Hydrophytic Vegetation 4. Junus bufonius 20 Y FACW 1 - Rapid Test for H 5. Hoicus landus 10 N FAC 2 - Dominance Test 6. Plantago lanceolata 2 N FAC 3 - Prevalence Index 7. Vulpia bramoldes 2 N FAC 4 - Morphological Action	(A)	(B)
3	= B/A =	
4. Juncus bufonius 20 Y FACW 1 - Rapid Test for H 5. Hoikus landus 10 N FAC 2 - Dominance Test 6. Plantago lanceolata 2 N FAC 3 - Prevalence Index 7. Vulpia bromoides 2 N FAC 4 - Morphological Action		
5. Itolicus landus 10 N FAC 2 - Dominance Test 6. Plantago lanceolata 2 N FAC 3 - Prevalence Inder 7. Vulpia bromoldes 2 N FAC 4 - Morphological Au		on
6. <u>Plantaço lanciolata</u> <u>2</u> <u>N</u> <u>FACU</u> <u>3</u> - Prevalence Indez 7. <u>Vulpia bromoides</u> <u>2</u> <u>N</u> <u>FAC</u> <u>4</u> - Morphological Au		
7. Vulpia bromoldes 2 N FAC 4-Morphological Ad		
		supporting
0. Contocon seasching	or on a separate sh	eet)
9. Juncos fensis / N FAC 5-Wetland Non-Va	scular Plants ¹	
10. Briza miner / N FAC Problematic Hydrop	nytic Vegetation ¹ (E:	xplain)
111Indicators of hydric soil		
<i>90</i> = Total Cover be present, unless distu	bed or problematic.	
Woody Vine Stratum (Plot size:)		
1 Hydrophytic		
2 Vegetation Present? Yes	No	
% Bare Ground in Herb Stratum = Total Cover	NU	-
· Remarks:		

inches)	Matrix Color (moist)	%	Redo Color (moist)	%	_Type ¹	Loc ²	Textu	re Remarks
0-17	IOYR %2	98	104R46	2%	C	PL, M	Joam	U
	1010 105	•					*	
								st for
							-	
								¥
		·						V
							1	
ype: C=Con	centration, D=Dep	letion, RM=	Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	rains.	² Location: PL=Pore Lining, M=Matrix.
/dric Soil In	dicators: (Applic	able to all L	.RRs, unless othe	rwise not	ed.)			licators for Problematic Hydric Soils ³ :
_ Histosol (A	the second s		Sandy Redox (2 cm Muck (A10)
_ Histic Epip		-	Stripped Matrix				-	Red Parent Material (TF2)
_ Black Hist			Loamy Mucky I			t MLRA 1)		Very Shallow Dark Surface (TF12)
	Sulfide (A4) Below Dark Surfac	ο (Δ11)	Loamy Gleyed Depleted Matrix	and the second	-)			Other (Explain in Remarks)
The second s	Surface (A12)		Kedox Dark Su				³ In	dicators of hydrophytic vegetation and
	cky Mineral (S1)		Depleted Dark					wetland hydrology must be present,
	yed Matrix (S4)		Redox Depress					unless disturbed or problematic.
estrictive La	yer (if present):							Т.
Type:							1.0	
Depth (inch emarks:	es):			÷			Hydric	soil Present? Yes <u>/</u> No
emarks:				ę			Hydric	s Soil Present? Yes <u> </u>
emarks: DROLOG	Ŷ			÷			Hydric	: Soil Present? Yes <u> </u>
emarks: DROLOG etland Hydr	Y ology Indicators:		check all that app	- 				
DROLOG etland Hydr imary Indica	Y ology Indicators: tors (minimum of c		; check all that app Water-Sta		res (B9) (c	except		Secondary Indicators (2 or more required)
emarks: DROLOG etland Hydr imary Indica _ Surface W	Y ology Indicators: tors (minimum of d /ater (A1)		Water-Sta	ined Leav		except		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
DROLOG etland Hydr imary Indica _ Surface W _ High Wate	Y ology Indicators: tors (minimum of d fater (A1) rr Table (A2)		Water-Sta MLRA	ined Leav 1, 2, 4A,		except		Secondary Indicators (2 or more required)
DROLOG etland Hydr imary Indica _ Surface W _ High Wate _ Saturation	Y ology Indicators: tors (minimum of d fater (A1) rr Table (A2) (A3)		Water-Sta	ined Leav 1, 2, 4A, (B11)	and 4B)	except		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
DROLOG etland Hydr imary Indica _ Surface W _ High Wate _ Saturation _ Water Mar	Y ology Indicators: tors (minimum of d fater (A1) rr Table (A2) (A3)		Water-Sta MLRA Salt Crust	iined Leav 1, 2, 4A, (B11) wertebrate	and 4B) es (B13)	except		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
Permarks: DROLOG fetland Hydr imary Indica Surface W High Wate Saturation Water Mar	Y ology Indicators: tors (minimum of c /ater (A1) er Table (A2) (A3) (A3) rks (B1) Deposits (B2)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leav 1, 2, 4A, (B11) wertebrate Sulfide O	and 4B) es (B13) dor (C1)	except		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
DROLOG etland Hydr imary Indica _ Surface W _ High Wate _ Saturation _ Water Mar _ Sediment _ Drift Depo	Y ology Indicators: tors (minimum of c /ater (A1) er Table (A2) (A3) (A3) rks (B1) Deposits (B2)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leav 1, 2, 4A, (B11) wertebrate Sulfide O Rhizosphe	and 4B) es (B13) dor (C1) eres along	Living Roo		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 (C
DROLOG etland Hydr imary Indica _ Surface W _ High Wate _ Saturation _ Water Mar _ Sediment _ Drift Depo	Y ology Indicators: tors (minimum of c /ater (A1) rr Table (A2) (A3) (A3) (ks (B1) Deposits (B2) sits (B3) or Crust (B4)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduce	and 4B) es (B13) dor (C1) eres along ed Iron (C4	Living Roo		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 (C Geomorphic Position (D2)
DROLOG etland Hydr imary Indica _ Surface W _ High Wate _ Saturation _ Water Mar _ Sediment _ Drift Depo _ Algal Mat _ Iron Depo	Y ology Indicators: tors (minimum of c /ater (A1) rr Table (A2) (A3) (A3) (ks (B1) Deposits (B2) sits (B3) or Crust (B4)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduce	and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille	Living Roo 4)	bts (C3)	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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hydr imary Indica _ Surface W _ High Wate _ Saturation _ Water Mar _ Sediment _ Drift Depo _ Algal Mat _ Iron Depo _ Surface S	Y ology Indicators: tors (minimum of c /ater (A1) rr Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	ne required	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o	ined Leav 1, 2, 4A, (B11) wertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed	and 4B) es (B13) dor (C1) eres along ed Iron (C- ion in Tille I Plants (D	Living Roo 4) d Soils (C6	bts (C3)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) M Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C M Geomorphic Position (D2) Shallow Aquitard (D3) M FAC-Neutral Test (D5)
DROLOG etland Hydr imary Indica _ Surface W _ High Wate _ Saturation _ Water Mar _ Sediment _ Drift Depo _ Algal Mat _ Iron Depor _ Surface S _ Inundatior _ Sparsely \	Y ology Indicators: tors (minimum of o /ater (A1) rr Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) i Visible on Aerial /egetated Concav	ne required	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted ou Other (Ex	ined Leav 1, 2, 4A, (B11) wertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed	and 4B) es (B13) dor (C1) eres along ed Iron (C- ion in Tille I Plants (D	Living Roo 4) d Soils (C6	bts (C3)	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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hydr imary Indica _ Surface W _ High Wate _ Saturation _ Water Mar _ Sediment _ Drift Depo _ Algal Mat _ Iron Depor _ Surface S _ Inundatior _ Sparsely \	Y ology Indicators: tors (minimum of of /ater (A1) or Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3	ne required Imagery (B7 e Surface (E	Water-Sta MLRA Salt Crust Aquatic In Aquatic In Oxidized I Presence Recent Irc Stunted o Other (Ex 8)	ined Leav 1, 2, 4A , (B11) wertebrate Sulfide O Rhizosphe of Reduce on Reduct r Stressed plain in Re	and 4B) es (B13) dor (C1) eres along ed Iron (C- ion in Tille I Plants (D	Living Roo 4) d Soils (C6	bts (C3)	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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hydr imary Indica Surface W High Wate Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depoi Surface S Inundatior Sparsely V eld Observa	Y ology Indicators: tors (minimum of c /ater (A1) rr Table (A2) (A3) (A3) (ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) visible on Aerial /egetated Concav ttions: Present?	Imagery (B7 e Surface (E 'es N	Water-Sta MLRA MLRA Salt Crust Aquatic In Aquatic In Oxidized I Presence Recent Inc Stunted o Other (Ex Ne)	ined Leav 1, 2, 4A , (B11) wertebrate Sulfide O Rhizosphe of Reduce on Reduct r Stressed plain in Re aches):	and 4B) es (B13) dor (C1) eres along ed Iron (C- ion in Tille I Plants (D emarks)	Living Rod 4) d Soils (C0 01) (LRR A	bts (C3)	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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hydr imary Indica Surface W High Wate Saturation Water Mar Sediment Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V eld Observa	Y ology Indicators: tors (minimum of c /ater (A1) rr Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) pil Cracks (B6) visible on Aerial /egetated Concav tions: Present?	Imagery (B7 e Surface (E 'es N 'es N	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex 8)	ined Leav 1, 2, 4A , (B11) wertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re aches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D emarks)	Living Rod 4) d Soils (Cd 11) (LRR A	bts (C3)	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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
DROLOG etland Hydr imary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V eld Observa arface Water fater Table P aturation Pre	Y ology Indicators: tors (minimum of c /ater (A1) rr Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) pil Cracks (B6) r Visible on Aerial /egetated Concav titons: Present? Yesent?	Imagery (B7 e Surface (E 'es N 'es N	Water-Sta MLRA MLRA Salt Crust Aquatic In Aquatic In Oxidized I Presence Recent Inc Stunted o Other (Ex Ne)	ined Leav 1, 2, 4A, (B11) wertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re aches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D emarks)	Living Rod 4) d Soils (Cd 11) (LRR A	bts (C3)	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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG detland Hydr imary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depoi Surface S Inundatior Sparsely V eld Observa urface Water fater Table P aturation Pre poludes capil	Y ology Indicators: tors (minimum of c /ater (A1) rr Table (A2) (A3) (A3) (ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) visible on Aerial /egetated Concav ttions: Present? Y sent? Sent? Y	Imagery (B7 e Surface (E 'es N 'es N	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex 8)	ined Leav 1, 2, 4A, (B11) wertebrate Sulfide O Rhizosphe of Reduce on Reduct r Stressed plain in Re- aches): aches):	and 4B) es (B13) dor (C1) eres along ed Iron (C- ion in Tille I Plants (D emarks)	Living Rod 4) d Soils (Cf 01) (LRR A	bts (C3)	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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) rology Present? Yes No
DROLOG etland Hydr imary Indica _ Surface W _ High Wate _ Saturation _ Water Mar _ Sediment _ Drift Depo _ Algal Mat _ Iron Depo _ Surface S _ Inundatior _ Sparsely W eld Observa auface Water ater Table P aturation Pre	Y ology Indicators: tors (minimum of c /ater (A1) rr Table (A2) (A3) (A3) (ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) visible on Aerial /egetated Concav ttions: Present? Y sent? Sent? Y	Imagery (B7 e Surface (E 'es N 'es N	Water-Sta MLRA MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex) 8	ined Leav 1, 2, 4A, (B11) wertebrate Sulfide O Rhizosphe of Reduce on Reduct r Stressed plain in Re- aches): aches):	and 4B) es (B13) dor (C1) eres along ed Iron (C- ion in Tille I Plants (D emarks)	Living Rod 4) d Soils (Cf 01) (LRR A	bts (C3)	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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) rology Present? Yes No

Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO Sampling Date: 10, Oct 2018
Applicant/Owner: RTI / Caltrans, private	State: <u>CA</u> Sampling Point: <u>28</u>
Investigator(s): M. Widdowson, J. Mayor	Section, Township, Range:
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): Slope (%):
Subregion (LRR): A: Northwest Forests and Coast	it: Long: Datum:
Soil Map Unit Name: 225 - Windyhollow loam, 0	>-52 slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signific	cantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology natura	ally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _	
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No	
Remarks:	

VEGETATION - Use scientific names of plants.

<u>Tree Stratum</u> (Plot size:) 1)	Absolute <u>% Cover</u>	Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
				Total Number of Dominant Species Across All Strata:
4		= Total Co		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1				Prevalence Index worksheet: Total % Cover of:Multiply by:
2		·		OBL species x 1 =
4				FACW species x 2 = FAC species x 3 =
5		= Total Co	ver	FACU species x 4 =
Herb Stratum (Plot size: 5ft radius) 1. Plantago Lanceo lata	40	Y	FACU	UPL species x 5 = Column Totals: (A) (B)
2. Holeus lanatus	30	Y	FAC	Prevalence Index = B/A =
3. Cynosurus echinatus		_N	UPL FAC	Hydrophytic Vegetation Indicators:
4. Lotus contestatus		N	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Darthorte californica		_N	FAL	2 - Dominance Test is >50%
6. Vulpia bruneides		N	PARC	$3 - Prevalence Index is \le 3.0^1$
7. botis or In's dauglasture 8.		N		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 ¹ (Explain)
11			-	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	TD	_= Total Co	ver	
1	2			Hydrophytic
2				Vegetation Present? Yes No
% Bare Ground in Herb Stratum 10	-	_= Total Co	ver	
· Remarks:				

			epth needed to docu			or comm	the absence of in	luicators.)
Depth (inches)	Matri Color (moist)		Color (moist)	ox Feature %	<u>Type</u> ¹	Loc ²	Texture	Remarks
0-4	104R 2/2	100	/					-
4-18	IOYR 9/1	100	1					
					_	Ξ		
ydric Soil Histosol Histic E _l Black Hi Hydroge Depletee	Indicators: (App (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Below Dark Sur	plicable to a face (A11)	M=Reduced Matrix, C II LRRs, unless othe Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyeo Depleted Matr	erwise not (S5) x (S6) Mineral (F ⁷ I Matrix (F2 ix (F3)	ed.) 1) (except)		Indicators fo 2 cm Muc Red Pare Very Sha Other (E)	 PL=Pore Lining, M=Matrix. r Problematic Hydric Soils³: ck (A10) ent Material (TF2) Ilow Dark Surface (TF12) kplain in Remarks) hydrophytic vegetation and
_ Sandy N	ark Surface (A12) /lucky Mineral (S1)	Redox Dark S Depleted Dark	Surface (F			wetland hy	drology must be present,
	Gleyed Matrix (S4	and the second sec	Redox Depres	sions (F8)	· · · · · ·		unless dis	turbed or problematic.
	Layer (if present):						
Type: Depth (in	abaa);						Hydric Soil Pres	ent? Yes No 🗸
emarks:	ciles).						Tryune contries	
	drology Indicato		ed; check all that app				Secondary	Indicators (2 or more required)
Surface High Wa Saturati Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely	Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeri y Vegetated Conc	ial Imagery (Water-Standard Water-Standard Water-Standard MLRA Salt Crus Aquatic In Aquatic In Oxidized Presence Recent In Stunted c B7) Other (Exercised)	ained Leave A 1, 2, 4A, a	and 4B) s (B13) dor (C1) res along l d Iron (C4 on in Tilleo Plants (D'	Living Root) I Soils (C6)	s (C3) S (C3)	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) eason Water Table (C2) tion Visible on Aerial Imagery (C9 orphic Position (D2) w Aquitard (D3) leutral Test (D5) I Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
ield Obser		Var	Na 🔽 Dapth (ii	a a b a a b				· · · · ·
/ater Table aturation P		Yes	No <u></u> Depth (ii No <u></u> Depth (ii No <u></u> Depth (ii	nches): 110			nd Hydrology Pre	sent? Yes No
	corded Data (stre	am gauge, n	nonitoring well, aerial	photos, pre	evious ins	pections), if	f available:	
escribe Re								
Describe Re Remarks:								

Project/Site: RTI Manchester		City/Count	y: Manchest	er / MENDOCINO	Sampling Date: // Oct 2018
Applicant/Owner: RTI / Caltrans, private					Sampling Point: _29
Investigator(s): M. Widdowson, J. Mayor				nge:	
Landform (hillslope, terrace, etc.): _roadside		Local relie	ef (concave, o	convex, none):	Slope (%): _ 2
Subregion (LRR): A: Northwest Forests and Coast	Lat:			Long:	Datum:
Soil Map Unit Name: 144 - Flyneville, day					
Are climatic / hydrologic conditions on the site typical for the					
Are Vegetation, Soil, or Hydrology					
Are Vegetation, Soil, or Hydrology					
SUMMARY OF FINDINGS – Attach site ma					
Hydrophytic Vegetation Present? Yes			•.		
Hydric Soil Present? Yes			he Sampled	Area	
Wetland Hydrology Present? Yes 💥			hin a Wetlar	220 · · · · · · · · · · · · · · · · · ·	The second se
Remarks:				11	1 Day of Probill
Remarks: * = assumed hydrology during drainage to this locattan	y the we	t seaso	~ based	on putterns of ve	getation and optim
analonge to This location	Swall	outch o	f hydroj	phitic vege tarion	FACU DINTS OF
VEGETATION – Use scientific names of pla	ants.		the second second	and the second second second	
Tree Stratum (Plot size:)	Absolute % Cover		t Indicator Status	Dominance Test wor	
1		000000		Number of Dominant S That Are OBL, FACW,	
2					
3				Total Number of Domi Species Across All Str	0
4		_		Percent of Dominant S	Species
Carling/Christian (Distaires)	-	= Total C	over	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index wo	rksheet:
2				1.	Multiply by:
3					x 1 =
4					x 2 =
5					x 3 =
HYL PL.		= Total C	over		x 4 = x 5 =
Herb Stratum (Plot size: 4×6 ft) 1. Symphon-michum chilensis	60	Y	FAC		(A) (B)
2. Robos uninos			The		
3. Holcus lanatus	40	Y	FAC	Prevalence Inde Hydrophytic Vegetat	
4. Jinus balticus	41	-	FACW		Hydrophytic Vegetation
5				2 - Dominance Te	
6				3 - Prevalence Inc	dex is ≤3.0 ¹
7					Adaptations ¹ (Provide supporting
8					ks or on a separate sheet)
9				5 - Wetland Non-V	Vascular Plants' ophytic Vegetation ¹ (Explain)
10			÷		bil and wetland hydrology must
11	100	Tatal O		be present, unless dis	
Woody Vine Stratum (Plot size: 4×6.ft)	100	= Total C			
1. Rubus unstinus	20	Y	FACU	Hydrophytic	
2				Vegetation	es No
W Date Orgund in Light Obsture	20	= Total C	over	Present? Y	es NO
% Bare Ground in Herb Stratum				1	

Profile Desc	ription: (Describ	e to the depth	needed to c	locument the i	indicator	or confirm	the absence	of indicators.)
Depth	Matrix			Redox Feature				
(inches)	Color (moist)	%	Color (mois	st)%	Type ¹	_Loc ²	Texture	Remarks
0-4	10 YR 3/2	100	E 110 4				loim	
4-66	101R 212	98	54R 41		C	PL, M	lam	
6-15	IDYR 2/2	85	5YR 416	15	C	m	loom	
					(-	
							_	
					-		·	· · · · · · · · · · · · · · · · · · ·
1								
	ncentration, D=Doncentration, D=Doncentr					ed Sand Gr		ation: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :
Histosol			Sandy Red		eu.)			Muck (A10)
	pipedon (A2)		Stripped M					Parent Material (TF2)
Black Hi				icky Mineral (F	1) (excep	t MLRA 1)		Shallow Dark Surface (TF12)
Hydroge	n Sulfide (A4)	that J	_ Loamy Gle	eyed Matrix (F2				er (Explain in Remarks)
	Below Dark Surfa	ace (A11) _		Matrix (F3)			3	
A CONTRACT OF A CONTRACT. ON TANTACT OF A CONTRACT OF A CONTRACT. OF A CONTRACT OF A CONTRACT. OF A CONTRACT OF A CONTRACT. OF A CONTRACT OF A CONTRACT OF A	ark Surface (A12)	4		rk Surface (F6)				rs of hydrophytic vegetation and
	lucky Mineral (S1) ileyed Matrix (S4)			Dark Surface (F pressions (F8)	0			nd hydrology must be present, s disturbed or problematic.
	ayer (if present):		Neuton De		(
Type:								
	ches):		3				Hydric Soil	Present? Yes 🖌 No
Remarks:								
1 ionnanner								
HYDROLO	- V-							
	drology Indicator			1				
	ators (minimum of	one required;		and the second se	10 Mar 20 1			dary Indicators (2 or more required)
	Water (A1)			r-Stained Leav		xcept	W	ater-Stained Leaves (B9) (MLRA 1, 2,
Concerned in the second	ter Table (A2)			LRA 1, 2, 4A, a	and 4B)			4A, and 4B)
Saturatio				Crust (B11)	(D40)			rainage Patterns (B10)
and the second second	arks (B1) ht Donosits (B2)			tic Invertebrate				y-Season Water Table (C2) aturation Visible on Aerial Imageny (C9)
	t Deposits (B2)			ogen Sulfide Oo zed Rhizosphe		Living Roo		aturation Visible on Aerial Imagery (C9) eomorphic Position (D2)
	oosits (B3) it or Crust (B4)			ence of Reduce				nallow Aquitard (D3)
	osits (B5)			ent Iron Reducti	100000-000			AC-Neutral Test (D5)
	Soil Cracks (B6)			ted or Stressed				aised Ant Mounds (D6) (LRR A)
	on Visible on Aeria	l Imagery (B7)	12	r (Explain in Re	100.12320.0	., (,		ost-Heave Hummocks (D7)
	Vegetated Conca			(
Field Observ	0		1					
Surface Wate	er Present?	Yes N	o Dep	th (inches):				
Water Table				th (inches): m	ne to 1	5		
Saturation Pr				th (inches): no		and the second second	and Hydrology	Present? Yes No
(includes cap	oillary fringe)						2 - 12 DI 17	
Describe Red	corded Data (strea	m gauge, mon	itoring well, a	erial photos, pr	evious ins	pections),	it available:	
Remarks:			1.1					
Vry S	leason = pri	oblewatic hy	chology					
			2.9					
					_			

Project/Site: RTI Manchester	_ City/County: Manchester / MENDOCINO	Sampling Date: 1/ Oct 2018
Applicant/Owner: RTI / Caltrans, private	State: CA	Sampling Point:30
Investigator(s): M. Widdowson, J. Mayor	_ Section, Township, Range:	
Landform (hillslope, terrace, etc.):	_ Local relief (concave, convex, none):	cave Slope (%):
Subregion (LRR): A: Northwest Forests and Coast Lat:	Long:	Datum:
Soil Map Unit Name: 144 - Auneville day loan,	0-5% Slopes NWI class	sification:
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes No (If no, explain ir	n Remarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstances	s" present? Yes <u> </u>
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, explain any ans	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transec	cts, important features, etc.
Hydrophytic Vegetation Present? Yes No		- 10 ¹
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes	V No
Wetland Hydrology Present? Yes 📝 No 🗰	Yes	• NO
Remarks: * Assured rating season hydrology.		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) 1)	Absolute <u>% Cover</u>		t Indicator <u>Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
2				Total Number of Dominant Species Across All Strata: (B)
4 / Sapling/Shrub Stratum (Plot size:)		= Total C	over	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>678</u> (A/B)
1				Prevalence Index worksheet: Total % Cover of: Multiply by:
2				OBL species x 1 =
			÷	FACW species x 2 =
4				FAC species x 3 =
5			<u> </u>	FACU species x 4 =
Herb Stratum (Plot size: 507 red. 105)		= Total C	over	UPL species x 5 =
	30	Y	FAC	Column Totals: (A) (B)
2. Anthoxan this odwatin	2	N	PACU	Dravelance Index - D/A -
3. Stachys rigida	\$3	1	FACW	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4. Junius balticus	2	N	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Plantago lancedata	3		FACU	\sim 2 - Dominance Test is >50%
6. Bucchenis pilolanis	5	~	UPL	
7. Junius patens	40	Y	FACW	3 - Prevalence index is ≤3.0 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	1912-00	000		¹ Indicators of hydric soil and wetland hydrology must
1	85	= Total Co	over	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5× (0/)	1000			
1. Rubus Ursinus	15	Y	FACU	Hydrophytic
2				Vegetation Present? Yes No
% Bare Ground in Herb Stratum	15	= Total Co	over	Fresent! 165 NU
· Remarks:				

τ,

Depth		Doborno						the absence of	Contract Contract &
		Matrix			ox Features		Loc ²	Texture	Remarks
(inches)	-	(moist) 3/2	<u>%</u>	Color (moist)	%	_Type ¹ _	LUC	loem	
0-4	10YR			m-VA 41					
4-8	IOYR	2/2	85	7.5YR 416	15%	_ <u>C</u>	M	laan	
8-12	IDTR	Ch 2/1	80	7.5YR 4/6	20%	C	M	low	
						_			
							<u> </u>		
-								21	ting M-Matrix
¹ Type: C=C	oncentratio	n, D=Depl	letion, RM	=Reduced Matrix, C	S=Covered	or Coate	d Sand Gra		ation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :
		: (Applica	able to all	LRRs, unless othe		a.)			Muck (A10)
Histosol	(A1) pipedon (A	2)		Sandy Redox (Stripped Matrix					Parent Material (TF2)
	istic (A3)	2)		Loamy Mucky I) (except	MLRA 1)		Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed					r (Explain in Remarks)
	d Below Da		e (A11)	Depleted Matrix					
	ark Surface			X Redox Dark Su					s of hydrophytic vegetation and
	Aucky Mine			Depleted Dark		7)			d hydrology must be present,
	Gleyed Mat			Redox Depress	sions (F8)			unless	disturbed or problematic.
Restrictive	Layer (if p	resent):							
Type:								Undate Call	Present? Yes <u> </u>
Depth (in	ches):		-					Hyuric Soll I	
HYDROLO	6 C	dicators:							
Wetland Hy	drology In		ne require	ed: check all that app	Iv)			Second	dary Indicators (2 or more required)
Wetland Hy Primary Indi	drology In cators (min	imum of o	ne require	ed; check all that app Water-Sta		es (B9) (e	xcept		
Wetland Hy Primary Indi	drology In cators (min Water (A1	<u>iimum of o</u>)	ne require	Water-Sta	ained Leave		kcept		
Wetland Hy Primary Indi Surface High Wa	drology In cators (min Water (A1 ater Table (<u>iimum of o</u>)	ne require	Water-Sta	ained Leave 1, 2, 4A, a		xcept	W	ater-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Indi Surface High Wa	drology In cators (min Water (A1 ater Table (<u>iimum of o</u>)	ne require	Water-Sta MLRA	ained Leave 1, 2, 4A, a t (B11)	nd 4B)	xcept	Wi	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary Indi Surface High Wa Saturati Water M	drology In <u>cators (min</u> Water (A1 ater Table (on (A3)	<u>iimum of o</u>) (A2)	ne require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ained Leave 1, 2, 4A, a t (B11) overtebrates sulfide Od	nd 4B) s (B13) lor (C1)		Wi Dr Sa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De	drology In cators (min Water (A1 ater Table (on (A3) Marks (B1) nt Deposits posits (B3)	i <u>mum of o</u>) (A2) ; (B2)	ne require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ained Leave 1, 2, 4A, a t (B11) overtebrates Sulfide Od Rhizospher	nd 4B) s (B13) lor (C1) res along	Living Roo	Wi Dr Sa Sa ts (C3) Ge	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9) comorphic Position (D2)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal M	drology In cators (min Water (A1 ater Table (on (A3) Marks (B1) nt Deposits posits (B3) at or Crust	i <u>mum of o</u>) (A2) ; (B2)	ne require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence	ained Leave 1, 2, 4A, a (B11) avertebrates Sulfide Od Rhizospher of Reduce	nd 4B) s (B13) lor (C1) res along d Iron (C4	Living Roo)	Wi Dr Dr Sa ts (C3) Ge Sh	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) nallow Aquitard (D3)
Wetland Hy Primary Indi Surface High Wa Saturati Water N Sedime Drift De Algal M Iron De	drology In cators (min Water (A1 ater Table (on (A3) Marks (B1) nt Deposits posits (B3) at or Crust posits (B5)	i <u>mum of o</u>) (A2) ; (B2) (B4)	ne require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc	ained Leave 1, 2, 4A, a (B11) avertebrates Sulfide Oc Rhizospher of Reduce on Reductio	nd 4B) s (B13) lor (C1) res along d Iron (C4 on in Tille	Living Roo) I Soils (C6	Wi Dr Dr Sa ts (C3) Ge Sh) FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal M Surface	drology In cators (min Water (A1 ater Table (on (A3) Marks (B1) nt Deposits (B3) at or Crust posits (B3) at or Crust posits (B5) Soil Crack	imum of o) (A2) s (B2) (B4) s (B6)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ained Leave 1, 2, 4A, a (B11) avertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed	nd 4B) s (B13) lor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo) I Soils (C6	Wi Dr Sa ts (C3) Ge Sh) FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) aallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal M Surface Iron De Inndat	drology In cators (min Water (A1 ater Table (on (A3) Marks (B1) nt Deposits posits (B3) at or Crust posits (B5) • Soil Crack ion Visible	imum of o) (A2) ; (B2) (B4) ;s (B6) on Aerial I	magery (E	Water-Star MLRA Salt Crust Aquatic Im Hydrogen Oxidized I Presence Recent Im Stunted o 37)	ained Leave 1, 2, 4A, a (B11) avertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed	nd 4B) s (B13) lor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo) I Soils (C6	Wi Dr Sa ts (C3) Ge Sh) FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Algal M Iron De Inundat Sparsel	drology In cators (min Water (A1 ater Table (on (A3) Marks (B1) nt Deposits posits (B3) at or Crust posits (B5) Soil Crack ion Visible y Vegetate	imum of o) (A2) ; (B2) (B4) ;s (B6) on Aerial I	magery (E	Water-Star MLRA Salt Crust Aquatic Im Hydrogen Oxidized I Presence Recent Im Stunted o 37)	ained Leave 1, 2, 4A, a (B11) avertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed	nd 4B) s (B13) lor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo) I Soils (C6	Wi Dr Sa ts (C3) Ge Sh) FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) aallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturati Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser	drology In cators (min Water (A1 ater Table (on (A3) Marks (B1) nt Deposits (B3) at or Crust posits (B5) Soil Crack ion Visible y Vegetate rvations:	imum of o) (A2) (B2) (B4) (B4) on Aerial II d Concave	magery (E e Surface (Water-Sta MLRA MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 37)	ained Leave 1, 2, 4A, a 1 (B11) vertebrates Sulfide Oc Rhizospher of Reduces on Reduction r Stressed plain in Ref	nd 4B) s (B13) lor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo) I Soils (C6	Wi Dr Sa ts (C3) Ge Sh) FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) aallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturati Water N Sedime Drift De Algal M Iron De Surface Inundat Field Obser	drology In cators (min Water (A1 ater Table (on (A3) Marks (B1) nt Deposits (B3) at or Crust posits (B3) at or Crust posits (B5) Soil Crack ion Visible y Vegetate rvations: ter Present	imum of o) (A2) ; (B2) (B4) s (B6) on Aerial II d Concave	magery (E e Surface	Water-Sta MLRA MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 37) X Other (Ex (B8)	ained Leave 1, 2, 4A, a 1 (B11) avertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re- mathematical plain in Re-	nd 4B) s (B13) for (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo) I Soils (C6 1) (LRR A)	Wi Dr Sa ts (C3) Ge Sh) FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) aallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
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Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Field Obsen Surface Wal Water Table Saturation F	drology In cators (min Water (A1) ater Table (on (A3) Marks (B1) nt Deposits (B3) at or Crust posits (B5) soil Crack ion Visible y Vegetate rvations: ter Present? Present?	imum of o) (A2) (B4) (B4) on Aerial II d Concave ? Y Y Y	magery (E e Surface es es	Water-Sta MLRA MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 37) X Other (Ex (B8)	ained Leave 1, 2, 4A, a (B11) avertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re- aches):	s (B13) for (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo) I Soils (C6 1) (LRR A)	Wi Dr Sa ts (C3) Ge St) FA Ra Fr	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) aallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturati Saturati Sedime Algal M Iron De Surface Inundat Sparsel Field Obser Surface Wat Water Table Saturation F (includes ca	drology In cators (min Water (A1 ater Table (on (A3) Marks (B1) nt Deposits (B3) at or Crust posits (B3) at or Crust posits (B5) Soil Crack ion Visible y Vegetate vations: ter Present? pillary fring	imum of o) (A2) ; (B2) (B4) s (B6) on Aerial II d Concave ? Yi Yi Yi Yi Yi	magery (E e Surface es es es	Water-Sta MLRA MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Xtunted o Xtunted o Mo Depth (ir No Depth (ir	A contract of the second secon	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo) I Soils (C6 1) (LRR A)		ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9) comorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) hised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
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Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO	Sampling Date: 1 Oct 2018
Applicant/Owner: RTI / Caltrans, private	State: CA	Sampling Point:
Investigator(s): M. Widdowson, J. Mayor	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	_ Local relief (concave, convex, none): 📿	Meare Slope (%):
Subregion (LRR): <u>A: Northwest Forests and Coast</u> Lat:	Long:	Datum:
Soil Map Unit Name: 144 Funeville day loam	0-5% sloper NWI d	assification:
Are climatic / hydrologic conditions on the site typical for this time of y	vear? Yes 🔽 No (If no, expla	in in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Normal Circumstar	nces" 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, trans	sects, important features, etc.
Hydrophytic Vegetation Present? Yes No V Hydric Soil Present? Yes V No /		
Wetland Hydrology Present? Yes No	within a Wetland? Yes	s No
Remarks: In brond swall with mixed ve	getation	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size:)		Species?		Dominance Test worksh Number of Dominant Spec That Are OBL, FACW, or	cies	(A)
2 3				Total Number of Dominan Species Across All Strata:		(B)
4				Percent of Dominant Spec That Are OBL, FACW, or	FAC: <u>50</u>	(A/B)
1				Prevalence Index works	heet:	
1	-/	1	7	Total % Cover of:	Multiply by:	_
2				OBL species	x 1 =	_
3				FACW species	x 2 =	
4		S		FAC species		
5		Series (- <u>16</u>	FACU species		
Mala		= Total Co	over			
Herb Stratum (Plot size: 5 Rdug)	-		-	UPL species		
1. Holcus Janapas		N		Column Totals:	(A)	(B)
2. Juncus Patens	.50	Y	FACW	Prevalence Index =	B/A =	
3				Hydrophytic Vegetation		
4			·	1 - Rapid Test for Hy	drophytic Vegetation	
5				2 - Dominance Test i		
6				3 - Prevalence Index		
7	-,			4 - Morphological Ada	aptations ¹ (Provide su or on a separate sheet	pporting)
9		-		5 - Wetland Non-Vas	cular Plants ¹	
9 10	1.4.10	•		Problematic Hydroph		ain)
11		= Total Co		¹ Indicators of hydric soil a be present, unless disturb	nd wetland hydrology bed or problematic.	must
Woody Vine Stratum (Plot size: 10' radius)		Total CC	lvei			
1. Rubus ursinus	80	Y	FACH	Hydrophytic Vegetation	.1	
2 % Bare Ground in Herb Stratum45		_= Total Co	over	Present? Yes	No	0
Remarks: Vegis mixed						

US Army Corps of Engineers

Sampling Point: 3

n N

Depth Motrix Deduc Sectors	n the absence of indicators.)
Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type ¹ Loc ²	Remarks
0.4 10YR 3 2 100	(
4-8 10YR 3/2 95 7.5YR 4/6 5 C M	C
8-12 10 YR 2/2 80 75 YR 4/6 20 C M	1 mile days
DETE TO THE OUTS THE THE OF THE	more day
	<u></u>
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10) Red Parent Material (TF2)
Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) /Depleted Matrix (F3)	
Depleted Math (15) Thick Dark Surface (A12) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	
Type:	1
Depth (inches):	Hydric Soil Present? Yes V No
Remarks:	
IYDROLOGY Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	
Finally indicators (minimum or one required, check an that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1) Water-Stained Leaves (B9) (except High Water Table (A2) MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
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)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
	 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)
	 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)
	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 Roo 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) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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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 Roo 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) Sparsely Vegetated Concave Surface (B8) Field Observations:	 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)
	 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)
	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 Roo 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) Sparsely Vegetated Concave Surface (B8) Depth (inches): <u>Monte in [7]</u> Water Table Present? Yes No Vater Table Present? Yes Depth (inches): <u>Monte in [7]</u> Wetta Monte in [7] Depth (inches): <u>Monte in [7]</u>	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: RTI Manchester	_ City/County: Manchester / MENDOCINO Sampling Date: 11, Oct						
Applicant/Owner: RTI / Caltrans, private		State:	CA	Sampling Point:			
Investigator(s): M. Widdowson, J. Mayor		_ Section, Township, Range:					
Landform (hillslope, terrace, etc.):		_ Local relief (concave, convex, none): none	2 Slope (%): _2			
Subregion (LRR): A: Northwest Forests and Coast	Lat:	Long:					
Soil Map Unit Name: 144 - Anneville day 1	loam, b	-5 Josloper 1	NWI classifi	cation:			
Are climatic / hydrologic conditions on the site typical for							
Are Vegetation, Soil, or Hydrology	significant	ly disturbed? Are "Normal Circu	umstances"	present? Yes 📈 No			
Are Vegetation, Soil, or Hydrology 🗸			n any answ	ers in Remarks.)			
SUMMARY OF FINDINGS – Attach site ma			transect	s, important features, etc.			
Hydrophytic Vegetation Present? Yes	No	S camping pennice and control of the second se		-,,			
Hydric Soil Present? Yes	No V	Is the Sampled Area		1			
Wetland Hydrology Present? Yes	No 😽	within a Wetland?	Yes	No			
Remarks: " Dry season delineation							
A Dig Seiser							

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size:) 1		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
2			<u> </u>	Total Number of Dominant 3 Species Across All Strata: (B)
4 Sapling/Shrub Stratum (Plot size:)	· `	= Total Co	ver	Percent of Dominant Species 33 ² / ₄ (A/B)
1				Prevalence Index worksheet: 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 =
C G ata	-	= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5 ft rodis) 1. Anthexauthum oderation	10	Y	FACU	Column Totals: (A) (B)
2. Holas lavatos	20	Y	FAC	Prevalence Index = B/A =
3. Vicia Istea	41	N	NL	Hydrophytic Vegetation Indicators:
4	_			1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 ¹
7				 4 - Morphological Adaptations¹ (Provide supporting 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
11	30	= Total Co	ver	be present, unless disturbed or problematic.
<u>Woody Vine Stratum</u> (Plot size: <u>5.4 radius</u>) 1. <u>Robus ursinus</u>	70	Y	FACU	Hydrophytic
2	70	_= Total Co	ver	Vegetation Present? Yes No
% Bare Ground in Herb Stratum70				
Remarks:				

OIL								Sampling Point: 32
Profile Desc	ription: (Describe	o the depth r	needed to docu	ment the i	ndicator	or confirm	n the absend	ce of indicators.)
Depth	Matrix	(*************************************	Rede	x Feature				
(inches)	Color (moist)		Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-12	IOYR 313	100	-	.o				
			-					
								- L
_								-
			1				2 ₁	antion: DI-Doro Lining M-Matrix
	ncentration, D=Depl ndicators: (Application)					d Sand Gi	Indica	ocation: PL=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
								cm Muck (A10)
Histosol	ipedon (A2)		Sandy Redox (Stripped Matrix					ed Parent Material (TF2)
Black His			Loamy Mucky) (excent	MIRA 1)		ery Shallow Dark Surface (TF12)
	n'Sulfide (A4)		Loamy Gleyed	Contraction of the second		. merov ij		ther (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matri					a en la calenda de la calenda de la
	rk Surface (A12)		Redox Dark Su				³ Indica	ators of hydrophytic vegetation and
	ucky Mineral (S1)	-	Depleted Dark		7)		we	lland hydrology must be present,
Sandy G	leyed Matrix (S4)		Redox Depress	sions (F8)			unl	ess disturbed or problematic.
Restrictive L	ayer (if present):							
Type:			-				1.	
Depth (inc	hes):		_				Hydric So	oil Present? Yes No 💆
YDROLO	GY							
	Irology Indicators:	1 2 2 2						
Primary Indic	ators (minimum of o	ne required; ch				1		condary Indicators (2 or more required)
	Water (A1)			ined Leave		xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)			1, 2, 4A, a	ind 4B)			4A, and 4B)
Saturatio			Salt Crust					Drainage Patterns (B10)
Water M	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Aquatic In					Dry-Season Water Table (C2)
	t Deposits (B2)			Sulfide Oc				Saturation Visible on Aerial Imagery (C9)
	osits (B3)			Rhizosphei	CT			Geomorphic Position (D2)
	t or Crust (B4)			of Reduce				Shallow Aquitard (D3)
	osits (B5)			on Reduction				FAC-Neutral Test (D5)
and a second second second	Soil Cracks (B6)			r Stressed		1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial Ir		Other (Ex	plain in Re	marks)			Frost-Heave Hummocks (D7)
	Vegetated Concave	Surface (B8)		_		_		
Field Observ			• • • • • • • • • • • •			1.1		
Surface Wate			Depth (in	and the second sec	-	-		
Water Table			Depth (in					4
Saturation Pr		es No	Depth (in	ches): <u>No</u>	ne to	Z Wetl	and Hydrold	ogy Present? Yes No
includes cap Describe Red	corded Data (stream	gauge, monito	oring well, aerial	photos, pre	evious ins	pections),	if available:	
			Carl Sector					
Remarks:		27.5						
*	day season deli	reation						
	1							

State: <u>CA</u> ion, Township, Range:	Sampling Point:33
ion Townshin Range	
ion, rownship, Nange.	
al relief (concave, convex, none):	Slope (%): _/
Long:	Datum:
natic? (If needed, explain any a	ces" present? Yes <u>Ý</u> No Inswers in Remarks.) ects, important features, etc.
Is the Sampled Area within a Wetland? Yes	No
	Long:

VEGETATION – Use scientific names of plants.

3		<u>Species?</u>		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)
Sapling/Shrub Stratum (Plot size:) 1.				Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 =
5 Herb Stratum (Plot size: <u>5 ft radius</u>) 1. <u>Carex. praegravilis</u> 2. <u>Leontodon sakatis</u>	205	= Total Co	FACU	FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A =
3. Plantago lanceolata 4. Juneus buforius 5. Holeus lanatus 6. Agrostis Stolenifern 7. Studys rigida	5 30 5 5 5	N Y V V	FACU FACU FAC FAC FAC	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹
1		N	FACN	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present unlead distributed or problematic
Woody Vine Stratum (Plot size:) 1		_= Total Co = Total Co		be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No
% Bare Ground in Herb Stratum				

Sampling Point: ______3

(inches)	Matrix Color (moist)	%	Color	(moist)	x Feature %	s Type ¹	Loc ²	Text	ure Remarks
	IDYR 3/2	99		: 416	1	C	m	loan	
4-10	10 YR 2/2	90	iOYR		10	C	m, Pi	loa	54A
10-16	10 4R 2/2	30	StR		20	0	11. 19	loas	
					_				
ydric Soi Histoso Histic E Black F Hydrog Deplete Thick E	Concentration, D=Dep I Indicators: (Applic ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Below Dark Surface Dark Surface (A12) Mucky Mineral (S1)	cable to all	LRRs, ur Sanc Strip Loan Loan Depl <u>*</u> Redo	less othe ly Redox (ped Matrix	rwise not (S6) Mineral (F [.] Matrix (F2 < (F3) rface (F6)	ed.) 1) (excep)	ed Sand Gra t MLRA 1)	In 	² Location: PL=Pore Lining, M=Matrix. dicators for Problematic Hydric Soils ³ : _ 2 cm Muck (A10) _ Red Parent Material (TF2) _ Very Shallow Dark Surface (TF12) _ Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present,
	Gleyed Matrix (S4)			ox Depress		1)			unless disturbed or problematic.
	Layer (if present):							1	
Type:									
Depth (i	nches):							Hydri	c Soil Present? Yes <u> </u>
'DDOI /	COV					-			
	ydrology Indicators:		li abaak a						Secondary Indicators /2 or more required)
Vetland H rimary Ind Surface High W Satural Vater I Sedime Drift De Algal M Iron De Surface Inunda Sparse	ydrology Indicators: licators (minimum of c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ly Vegetated Concav	one required Imagery (B7		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed	and 4B) s (B13) dor (C1) res along ed Iron (C on in Tille Plants (C	Living Root	ts (C3)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
etland H imary Ind Surface High W Satural Vater I Sedime Drift De Algal M Iron De Surface Surface Inunda Sparse	ydrology Indicators: licators (minimum of c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Aat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concav ervations:	one required Imagery (B7 e Surface (F		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed blain in Re	and 4B) s (B13) dor (C1) res along ed Iron (C on in Tille Plants (C	Living Rool 4) d Soils (C6)	ts (C3)	 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)
Vetland Hy rimary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Surface Sparse ield Obse	ydrology Indicators: licators (minimum of d e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ly Vegetated Concav ervations: ater Present?	one required Imagery (B7 e Surface (I /es 1	 	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed blain in Re ches);	and 4B) s (B13) dor (C1) res along dd Iron (C on in Tille Plants (D marks)	Living Root 4) d Soils (C6) 1) (LRR A)	ts (C3)	 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)
Vetland H rimary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Surface Surface Water Table Saturation I ncludes ca	ydrology Indicators: licators (minimum of c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concav ervations: ater Present? Y e Present? Y	Imagery (B7 e Surface (I /es I /es I	7) 388) No No No Vo	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp Depth (in Depth (in Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed blain in Re ches): ches):	and 4B) s (B13) dor (C1) res along dd Iron (C on in Tille Plants (E marks)	Living Root 4) d Soils (C6) 11) (LRR A)	ts (C3)) and Hyd	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)	Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO	Sampling Date: 1, Oct 2018
Landform (hillslope, terrace, etc.): Adjourt to swele Local relief (concave, convex, none): Slope (%): I Subregion (LRR): A: Northwest Forests and Coast Lat: Long: Datum: Soil Map Unit Name: Ithe Flumentle clay loam, 0-5% slopes NWI classification:	Applicant/Owner: RTI / Caltrans, private	State: CA	Sampling Point: 39
Subregion (LRR): <u>A: Northwest Forests and Coast</u> Lat:Long:Datum:	Investigator(s): M. Widdowson, J. Mayor	Section, Township, Range:(
Soil Map Unit Name: 144 - Flumentle day loam, 0-5% slopes NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes	Landform (hillslope, terrace, etc.): adjournt to swele	Local relief (concave, convex, none):	Slope (%):
Are Vegetation, Soil, or Hydrology / naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? Yes No Is the Sampled Area within a Wedland2 Yes No Yes No Is the Sampled Area	Subregion (LRR): A: Northwest Forests and Coast Lat:	Long:	Datum:
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 Yes No Is the Sampled Area within a Wedland? Yes No	Soil Map Unit Name: 144 - Flumeville clay boom.	0-5% stopes NWI	classification:
Are Vegetation, Soil, or Hydrology / naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? Yes No Is the Sampled Area within a Wedland2 Yes No Yes No Is the Sampled Area	the second se		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Yes No Is the Sampled Area within a Wolland2 Yes No	Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are "Normal Circumst	ances" present? Yes 🔽 No
Hydrophytic Vegetation Present? Yes No CZ Wetland Yes Hydric Soil Present? Yes No Is the Sampled Area	Are Vegetation, Soil, or Hydrology _ V naturally	problematic? (If needed, explain an	y answers in Remarks.)
Hydric Soil Present? Yes No	SUMMARY OF FINDINGS – Attach site map show	ing sampling point locations, tra	nsects, important features, etc.
Hydric Soil Present? Yes No Is the Sampled Area	Hydrophytic Vegetation Present? Yes No		es_V
Wetland Hydrology Present? Yes No Within a wetland? Tes No	Hydric Soil Present? Yes No	Is the Sampled Area	in No V
	Wetland Hydrology Present? Yes No	within a wetiand?	es No

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size:)	Absolute <u>% Cover</u>	Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC	1	_ (A)
2				Total Number of Dominant Species Across All Strata:	1	_ (B)
4Sapling/Shrub Stratum (Plot size:)		= Total Co		Percent of Dominant Species That Are OBL, FACW, or FAC		_ (A/B)
1				Prevalence Index workshee	t:	
2		-		Total % Cover of:		
				OBL species	x 1 =	5
3			-	FACW species	x 2 =	-
5.		· <u> </u>	<u> </u>	FAC species	x 3 =	_
	- · · · · · · · · · · · · · · · · · · ·	- Tabal Ca		FACU species	x 4 =	_
Herb Stratum (Plot size: 5 ft radius)		_ = Total Co	ver	UPL species	x 5 =	_
1. Holeus Janatus	85	Y	FAC	Column Totals:	(A)	(B)
2. Plantago lanceolata	5	N	FACU	Prevalence Index = B/A	. =	
3. Londera hispidula	5	N	FACU	Hydrophytic Vegetation Ind		
4. Rubus ursinus	41	N	FACU	1 - Rapid Test for Hydrop		
5				2 - Dominance Test is >5		
6				3 - Prevalence Index is ≤		
7				4 - Morphological Adapta data in Remarks or or	tions ¹ (Provide su	pporting t)
9				5 - Wetland Non-Vascula	r Plants ¹	
10				Problematic Hydrophytic		ain)
11		• • • • • • • • • • • • • • • • • • • •		¹ Indicators of hydric soil and v	wetland hydrology	
	95	= Total Co	ver	be present, unless disturbed	or problematic.	
Woody Vine Stratum (Plot size:)		_ 1000100				1.1
1	_			Hydrophytic		
2				Vegetation	/	
% Bare Ground in Herb Stratum5		_= Total Co	ver	Present? Yes	No	
· Remarks:						

Profile Desc								
Depth (inches)	Matriz Color (moist)	<u>%</u>	Color	Redox Feat (moist) %		Loc ²	Textur	e Remarks
0-12	10 YR 3/2	1)					loam	
							-	
		_						
								21
				Matrix, CS=Cov less otherwise		d Sand Gra	ains. Indi	² Location: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils ³ :
		incable to a		y Redox (S5)	noteu.)			2 cm Muck (A10)
Histosol Histic En	ipedon (A2)			ped Matrix (S6)				Red Parent Material (TF2)
Black His				ny Mucky Minera	(F1) (except	MLRA 1)		Very Shallow Dark Surface (TF12)
	n Sulfide (A4)			y Gleyed Matrix				Other (Explain in Remarks)
	Below Dark Sur	face (A11)		eted Matrix (F3)				
	rk Surface (A12)			x Dark Surface (icators of hydrophytic vegetation and
	ucky Mineral (S1			eted Dark Surfac				vetland hydrology must be present,
	leyed Matrix (S4)		Redo	x Depressions (I	-8)		u T	inless disturbed or problematic.
	ayer (if present.							
Type:	5-000							and and and a state
Depth (inc	:hes):						Hydric	Soil Present? Yes No
Remarks: YDROLO		rs:						
Remarks:	Irology Indicato		ed: check a	II that apply)			S	econdary Indicators (2 or more required)
Remarks: YDROLO Wetland Hyc Primary Indic	Irology Indicato ators (minimum d				eaves (B9) (e	xcept	<u>S</u>	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Remarks: YDROLO Wetland Hyd Primary Indic Surface	Irology Indicato ators (minimum o Water (A1)			Water-Stained L		xcept	<u>S</u>	Water-Stained Leaves (B9) (MLRA 1, 2,
Remarks: YDROLO Wetland Hyc Primary Indic Surface High Wa	Irology Indicato ators (minimum o Water (A1) ter Table (A2)		-	Water-Stained L MLRA 1, 2, 4		xcept	<u>S</u>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Remarks: YDROLO Wetland Hyc Primary Indic Surface V High Wa Saturatio	Irology Indicato ators (minimum o Water (A1) ter Table (A2) m (A3)		_	Water-Stained L MLRA 1, 2, 4 Salt Crust (B11)	A, and 4B)	xcept	<u>S</u>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Remarks: YDROLOO Wetland Hyc Primary Indic Surface V High Wa Saturatio Water M	Irology Indicato ators (minimum d Water (A1) ter Table (A2) m (A3) arks (B1)			Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb	A, and 4B) rates (B13)	xcept	<u>S</u>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Remarks: YDROLO(Wetland Hyc Primary Indic Surface V High Wa Saturatio Water M Sedimen	Irology Indicato ators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)		1.11.1	Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide	A, and 4B) rates (B13) e Odor (C1)			 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Remarks: YDROLOO Wetland Hyc Primary Indic Surface V High Wa Saturatio Water M Sedimen Drift Dep	Irology Indicato ators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3)		1-1111	Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide	A, and 4B) rates (B13) e Odor (C1) pheres along	Living Root		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Remarks: YDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma	Irology Indicato ators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)		1 1111	Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C4	Living Root	 ts (C3)	 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)
Remarks: YDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep	Irology Indicato ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)			Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C4 uction in Tilled	Living Root i) d Soils (C6)	 ts (C3))	 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)
Remarks: YDROLOO Wetland Hyc Primary Indic Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S	Irology Indicato ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	of one requir		Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C4 luction in Tilled sed Plants (D	Living Root i) d Soils (C6)	 ts (C3))	 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)
Remarks: YDROLOO Wetland Hyc Primary Indic Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio	Irology Indicato ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	<u>of one requir</u> al Imagery (— — — — B7)	Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stress	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C4 luction in Tilled sed Plants (D	Living Root i) i Soils (C6)	 ts (C3))	 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)
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Remarks: YDROLOO Wetland Hyo Primary Indic Surface V High Wa Saturatio Water M. Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Wate	Irology Indicato ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeri Vegetated Conc vations: er Present?	<u>of one requir</u> al Imagery (ave Surface Yes	B7)	Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stress Other (Explain in	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C4 uction in Tilled sed Plants (D Remarks)	Living Root i) d Soils (C6) 1) (LRR A)	 ts (C3))	 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)
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Remarks: YDROLOO Wetland Hyd Primary Indic Surface Y High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Field Observ Surface Water Water Table I Saturation Pr (includes cap	Irology Indicato ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeri Vegetated Conc rations: er Present? Present? esent? illary fringe)	al Imagery (ave Surface Yes Yes Yes	B7) (B8) No V No V	Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stress Other (Explain in Depth (inches): Depth (inches):	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C4 uction in Tilled sed Plants (D Remarks)	Living Root) d Soils (C6) 1) (LRR A) 2 2 2 Wetla	und Hydrc	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Project/Site: RTI Manchester	City/County: Manchester / MENDOCINO	Sampling Date: 1/ Oct 2018	
Applicant/Owner: RTI / Caltrans, private	State: CA		
Investigator(s): M. Widdowson, J. Mayor	Section, Township, Range:		
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	care Slope (%):	
Subregion (LRR): A: Northwest Forests and Coast Lat	: Long:	Datum:	
Soil Map Unit Name: 144 - Flume Ville clay loam,	0-570 Slopes NWI class	ification:	
Are climatic / hydrologic conditions on the site typical for this time			
Are Vegetation, Soil, or Hydrology signific	antly disturbed? Are "Normal Circumstances	s" present? Yes 🔽 No	
Are Vegetation, Soil, or Hydrology natural	ly problematic? (If needed, explain any ans	wers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map show	ving sampling point locations, transec	ts, 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? Yes	No 🗸	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) 1.) 2.	Absolute <u>% Cover</u>	<u>Species</u>		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: I (A) Total Number of Dominant Species Across All Strata:
4/ Sapling/Shrub Stratum (Plot size:)		_ = Total C	over	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1				Prevalence Index worksheet: Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species
4			<u></u>	FAC species x 3 =
5				FACU species x 4 =
classic classic		_ = Total C	over	UPL species x 5 =
Herb Stratum (Plot size: 5'radins) 1. Holais lanatos	40	V	FAC	Column Totals: (A) (B)
2. Plantago lancesiata	40	Y	FACU	
3. Lotus Corniculatus	2	N	FAC	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4. Rosa californias	41	N	FAL	1 - Rapid Test for Hydrophytic Vegetation
5. Romer acctoselà	<i>c</i> 1	N	FACU	2 - Dominance Test is >50%
6				3 - Prevalence Index is $\leq 3.0^{1}$
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
	82	= Total C	over	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes No
% Bare Ground in Herb Stratum		_= Total C	over	
· Remarks:				

Depth		to mo do	pin needed i				or comm		ence of indicators.)
inches)	Matrix Color (moist)	%	Color (m		x Feature %	Type ¹	Loc ²	Textur	e Remarks
0-6	104R 3/2	98	7.5YR		2	e	m	10an	concentrations
6-12	IOYR 3/2	45		410	5	C	т	loam	
	·								
ydric Soil	oncentration, D=De Indicators: (Appli		l LRRs, unle	ss othe	rwise not		d Sand G	Indi	² Location: PL=Pore Lining, M=Matrix. icators for Problematic Hydric Soils ³ :
 Black Hi Hydroge Depletee 	oipedon (A2) istic (A3) en Sulfide (A4) d Below Dark Surfa	ce (A11)	Strippe Loamy Loamy Deplete	Gleyed ed Matrix	(S6) Aineral (F Matrix (F2 (F3)		MLRA 1)		2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
_ Sandy M _ Sandy G	ark Surface (A12) Aucky Mineral (S1) Gleyed Matrix (S4)			ed Dark	rface (F6) Surface (I sions (F8)	F7)		v	icators of hydrophytic vegetation and vetland hydrology must be present, inless disturbed or problematic.
estrictive	Layer (if present):								- A-
Type:									a contract of the second
Type: Depth (in- Remarks:	ches):		_					Hydric	Soil Present? Yes <u>// No // No // </u>
Depth (in emarks: /DROLO	GY							Hydric	Soil Present? Yes <u> </u>
Depth (in Remarks: YDROLO Vetland Hy	GY drology Indicators								
Depth (in emarks: /DROLO /etland Hy rimary India Surface	GY			ater-Sta		res (B9) (e: and 4B)	kcept		Soil Present? Yes <u>No</u> No econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Depth (in emarks: YDROLO Yetland Hyr rimary India Surface High Wa Saturatio	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)		W Sa	ater-Stal MLRA alt Crust	ined Leav 1, 2, 4A, (B11)	and 4B)	kcept	S	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Depth (in emarks: /DROLO /etland Hy rimary India Surface High Wa Saturatia Water M	GY drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) larks (B1)		W Sa Ad	ater-Stai MLRA alt Crust quatic Inv	ined Leav 1, 2, 4A, (B11) vertebrate	and 4B) es (B13)	kcept	S	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (in emarks: //DROLO /etland Hy rimary India Surface High Wa Saturatia Water M Sedimen	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		W Sa Ac Hy	ater-Stal MLRA alt Crust quatic Inv ydrogen	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O	and 4B) es (B13) dor (C1)		§	econdary 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
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Project/Site: RTI Manchester		_ City/County	: Manchester / ME	ENDOCINO	Sampling Date	e: 11 Oct 2018
Applicant/Owner: RTI / Caltrans, private				State: CA	Sampling Poir	it: 36
Investigator(s): M. Widdowson, J. Mayor		_ Section, To	wnship, Range: _			
Landform (hillslope, terrace, etc.): Shallow Swale	1	_ Local relie	f (concave, conve>	k, none):	ne :	Slope (%):
Subregion (LRR): A: Northwest Forests and Coast	Lat:		Long	j:	Da	atum:
Soil Map Unit Name: 144- Flumeville day	loam,	0-5%	Slopes	NWI class	ification:	
Are climatic / hydrologic conditions on the site typical for	this time of	year? Yes _	No	(If no, explain ir	n Remarks.)	-
Are Vegetation, Soil, or Hydrology	_ significant	ly disturbed?	Are "Norma	al Circumstance:	s" present? Yes	No
Are Vegetation, Soil, or Hydrology _	_ naturally p	problematic?	(If needed,	explain any ans	wers in Remarks.)	
SUMMARY OF FINDINGS – Attach site ma	p showin	ng samplir	ng point locati	ons, transed	ts, important	features, etc.
Hydrophytic Vegetation Present? Yes	No 🖌					
Hydric Soil Present? Yes	No 🔽		he Sampled Area		No	/
Wetland Hydrology Present? Yes	No 🔽		hin a Wetland?	Yes	No	
Remarks:						

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) 1 2	Absolute <u>% Cover</u>	Species?	<u>Status</u>	Table	(A)
3				Total Number of Dominant Species Across All Strata:	(B)
4Sapling/Shrub Stratum (Plot size:)		= Total Co	over	Percent of Dominant Species That Are OBL, FACW, or FAC:	(A/B)
1				Prevalence Index worksheet:	
2	· · · · ·			Total % Cover of:Multiply by:	-
3				OBL species x 1 =	
4				FACW species x 2 =	
5				FAC species x 3 =	
A CONTRACT OF		= Total Co	over	FACU species x 4 =	
Herb Stratum (Plot size: <u>5 ft vaduus</u>) 1. <u>Holcus I chartus</u>	40	Y	FAC	UPL species x 5 = Column Totals: (A)	
2. Plantago lanceolata	35	Y	FACU	Prevalence Index = B/A =	
3. Romen acetosella	2	L	FALU	Hydrophytic Vegetation Indicators:	-
4. Lotus comiculatus	3	N	FAC	1 - Rapid Test for Hydrophytic Vegetation	
5. Linum bienne	4	N	NL	2 - Dominance Test is >50%	
6. Anthoxanthim odoration	10	N	FACU	3 - Prevalence Index is ≤3.0 ¹	
7				4 - Morphological Adaptations ¹ (Provide supp data in Remarks or on a separate sheet)	porting
9				5 - Wetland Non-Vascular Plants ¹	
10		1		Problematic Hydrophytic Vegetation ¹ (Explain	n)
11		= Total Co		¹ Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic.	nust
Woody Vine Stratum (Plot size:)		-			
	· · · · · ·			Hydrophytic Vegetation	
2 % Bare Ground in Herb Stratum		_= Total Co	over	Present? Yes No	
Remarks:					10

OIL						the second second				
Profile Descrip			lepth need	ded to document the i		confirm the a	bsence o	f indicators.)		
Depth _	Matrix			Redox Features	Type ¹ L		xture		Remarks	
(inches)	Color (moist)	%		or (moist) %	<u></u>	<u>.oc 1e</u>	xture		Remarks	
0-12	IDYR 3/2	100								
<u></u>					<u> </u>					
									1	
			_							
			-							
	pontration D=D		M-Roduo	ed Matrix, CS=Covered	or Costed S	and Grains	21 002	tion: PL=Pore	Lining M=M	atrix
				unless otherwise note				for Problem		
Histosol (A	10			andy Redox (S5)				Muck (A10)		
Histic Epipe				ripped Matrix (S6)				arent Materia	I (TF2)	
Black Histic				amy Mucky Mineral (F1) (except ML			Shallow Dark S)
_ Hydrogen S	Sulfide (A4)			amy Gleyed Matrix (F2)			Other	(Explain in Re	emarks)	
	elow Dark Surf	ace (A11)		epleted Matrix (F3)			3		Sector California	
	Surface (A12)		_	edox Dark Surface (F6)	7)			of hydrophyti		
	ky Mineral (S1) yed Matrix (S4)			epleted Dark Surface (F edox Depressions (F8)	()			d hydrology m disturbed or p		,
	/er (if present)	-				1	unicaa	distance of p	robiernado.	
Type:	for (ii procein)									
- 1. A.	es):					Hvo	Iric Soil P	resent? Ye	s N	0 ~
emarks:								10001111 10		-
DROLOG	Y								_	1-
Vetland Hydro	ology Indicator									
Vetland Hydro	ology Indicator ors (minimum o		ired; checł	The second se				ary Indicators		
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Project/Site: RTI Manchester	(City/County: Manchester / MENDOCINO	_ Sampling Date: // Oct 2018
Applicant/Owner: RTI / Caltrans, private		State: CA	Sampling Point: 37
Investigator(s): M. Widdowson, J. Mayor		Section, Township, Range:	
Landform (hillslope, terrace, etc.): roadside bothm, fi	odplane	Local relief (concave, convex, none):	Slope (%): 40 ?
Subregion (LRR): A: Northwest Forests and Coast			Datum:
Soil Map Unit Name: 209 - Stornetta fine So	indy lo	am, 0-2% stopes NWI classifi	cation:
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes 🔽 No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology si	ignificantly	disturbed? Are "Normal Circumstances"	present? Yes <u> </u>
Are Vegetation, Soil, or Hydrology na	aturally pro	blematic? (If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing	sampling point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes No	D 0		
Hydric Soil Present? Yes No	o *	Is the Sampled Area	No. V
	0 *	within a Wetland? Yes	No

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 × 40)	Absolute %	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Salix sitchensis	35	Y	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2. Salix lasiandra (lucida)	35	Y	FACW	
3.			200	Total Number of Dominant Species Across All Strata:
4.				
Sapling/Shrub Stratum (Plot size: 20 × 40)	70	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC:/(A/B)
1. Salix hookeniana	30	Y	FACW	Prevalence Index worksheet:
				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4		÷		FAC species x 3 =
5	100	-		FACU species x 4 =
Herb Stratum (Plot size: 574 ra)	100	= Total Co	ver	UPL species x 5 =
1. Delatrea odorata	*	N	UPL	Column Totals: (A) (B)
2	·		المستعمل	Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4			<u></u>	1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				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
		= Total Cov	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1. Rubus unsinus	50	Y	FACU	Hydrophytic
2. Rubus puriflorus	5	N	FACU	Vegetation
% Bare Ground in Herb Stratum 10 0	55	_= Total Cov	ver	Present? Yes No No
Demarket				
* Not included because unable to tell	where it	is rooted	, therfore	: not representing the ecology



OIL	the peopled to document the indicator of	Sampling Point: 37
	oth needed to document the indicator or conf	im the absence of indicators.)
DepthMatrix(inches)Color (moist)%	<u>Redox Features</u> Color (moist) % <u>Type¹ Loc²</u>	
	· · · ·	
	·	
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histosol (77) Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	=,,,
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		1
Type:		and the second sec
		Unders Call Dresent2 Ves No
Depth (inches):		Hydric Soil Present? Yes No
YDROLOGY		
Wetland Hydrology Indicators:	d; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	d; check all that apply) Water-Stained Leaves (B9) (except	
Wetland Hydrology Indicators: Primary Indicators (minimum of one require		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one require</u> Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one require</u> Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one require</u> Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R	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)
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)	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)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 coots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
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)	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 (Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) coots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6)
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Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one require</u> 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	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 (Stunted or Stressed Plants (D1) (LRR 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) coots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) Raised Ant Mounds (D6) (LRR A)
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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 Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes Water Table Present? Yes	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 (Stunted or Stressed Plants (D1) (LRR Stanted or Stressed Plants (D1) (LRR Stanted or Stressed Plants) Other (Explain in Remarks) B8)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) coots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) Raised Ant Mounds (D6) (LRR A)
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 Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes	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 (Stunted or Stressed Plants (D1) (LRR Stanted or Stressed Plants (D1) (LRR Stanted or Stressed Plants) Other (Explain in Remarks) B8)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) coots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Bild Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, m	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 (Stunted or Stressed Plants (D1) (LRR Stanted or Stressed Plants (D1) (LRR Stanted or Stressed Plants (D1) (LRR Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) coots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) ✓ ✓ FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Mater Table Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Remarks: Mater Table Present? Yes	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 (Stunted or Stressed Plants (D1) (LRR Stunted or Stressed Plants) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Mo Depth (inches): Value on Interview Inspections Depth bust on Ind Support	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Soots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Mater Table Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Remarks: Mater Table Present? Yes	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 (Stunted or Stressed Plants (D1) (LRR Stunted or Stressed Plants) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Mo Depth (inches): Value on Interview Inspections Depth bust on Ind Support	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Soots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Bield Observations: Surface Water Present? Yes Saturation Present? Yes	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 (Stunted or Stressed Plants (D1) (LRR Stanted or Stressed Plants (D1) (LRR Stanted or Stressed Plants (D1) (LRR Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Soots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Junty: Manchester / MENDOCINO Sampling Date: 2018 State: CA Sampling Point: 38 , Township, Range:
elief (concave, convex, none): <u>Convex</u> Slope (%): <u>2</u> Long: Datum: Datum:
Long: Datum: NWI classification:
NWI classification:
ed? Are "Normal Circumstances" present? Yes No
c? (If needed, explain any answers in Remarks.)
ling point locations, transects, important features, etc.
CZ Wetland Yes
is the Sampled Area within a Wetland? Yes No V

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>10×30 ft</u>) 1. <u>outside</u> plot & night of way 2 3		<u>Species?</u>	<u>Status</u> .	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: 3 (B)
4		_= Total Co		Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)
1. Salix lasiolepis	45	Y	FACW	Prevalence Index worksheet:
2. Franquia californialia	5	N	UPL	Total % Cover of: Multiply by:
3				OBL species x 1 =
4.				FACW species x 2 =
5.				FAC species x 3 =
5×10	150	= Total Co	ver	FACU species x 4 =
Herb Stratum (Plot size: 1000) (Plot size:				UPL species x 5 =
1. Caresi Obnusta	40	Y	OBL	Column Totals: (A) (B)
2. Pteridium aquilinum	41	N	FACU	Prevalence Index = B/A =
3. Symphesitrichen chilinses	65	N	FAC .	Hydrophytic Vegetation Indicators:
4. Holas lanatus	1005	N	FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Achillea wilefolia	41	N	FACU	2 - Dominance Test is >50%
6. Agrostis stanifera	61	N	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		p. Are		Problematic Hydrophytic Vegetation ¹ (Explain)
11			1	¹ Indicators of hydric soil and wetland hydrology must
	50	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		_ 10101 00	101	
1. Rubus ursinus	20	Y	FACU	Hydrophytic
2.				Vegetation
% Bare Ground in Herb Stratum50	20	_= Total Co	ver	Present? Yes <u>No</u> No
· Remarks:				

		e to the dep	oth needed to docu			or comm	the absen	ce of indicators.)
Depth	Matrix	0/		ox Features		1 0 0 2	Tautura	Domorka
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	Texture	Remarks
0-8	10YR 3/2	100		· · · · · ·			loam	
8-12	10YR 3/2	50					loam	
8-12	104R 5/8	- 30-						
5-12	10 YR 6/2	20	10YR 5/8	30	CICS	m	clay	pockets of clay wy said
5 10	in it	000	10110		-1		Circy	
			·					components at depthy
	A							possibly exogeners from
			e)		read construction
	the second second			. <u> </u>				
			=Reduced Matrix, C			d Sand Gra		Location: PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
		cable to all	LRRs, unless othe		ea.)			
Histosol			Sandy Redox (cm Muck (A10)
	ipedon (A2)		Stripped Matrix					Red Parent Material (TF2)
Black His			Loamy Mucky			WILRA 1)		/ery Shallow Dark Surface (TF12)
	n Sulfide (A4) Below Dark Surfa	00 (011)	Loamy Gleyed Depleted Matrix)			Other (Explain in Remarks)
	rk Surface (A12)	56 (ATT)	Redox Dark Su				³ Indic	ators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark		7)			etland hydrology must be present,
	leyed Matrix (S4)		Redox Depress					less disturbed or problematic.
	ayer (if present):	-	_	x ,				
Type:		A						
Dopth (inc	hach						Hydric S	oil Present? Yes No
Depth (inc Remarks:	hes):						Hydric S	oil Present? Yes No
Remarks:							Hydric S	oil Present? Yes No
Remarks: YDROLO		:					Hydric S	oil Present? Yes No
Remarks: YDROLO(Wetland Hyc	GY Irology Indicators		d; check all that app	ly)				oil Present? Yes No
Remarks: YDROLO(Wetland Hyd	GY Irology Indicators ators (minimum of		and a second of the second second second	Contraction of the second	es (B9) (e	xcept		condary Indicators (2 or more required)
Remarks: YDROLO(Vetland Hyd Primary Indic Surface \	GY Irology Indicators ators (minimum of Water (A1)		Water-Sta	ined Leave		xcept		condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
Primary Indic Surface V Metland Hyco Primary Indic	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2)		Water-Sta MLRA	ined Leave 1, 2, 4A, a		xcept		condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Primarks: YDROLO(Vetland Hyc Primary Indic Surface N High Wa Saturatio	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) m (A3)		Water-Sta MLRA Salt Crust	nined Leave 1, 2, 4A, a (B11)	and 4B)	xcept	<u>Ser</u>	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
Remarks: YDROLO(Vetland Hyc Primary Indic Surface N — High Wa — Saturatio — Water Mi	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) m (A3) arks (B1)		Water-Sta MLRA Salt Crust Aquatic In	ined Leave 1, 2, 4A, a (B11) vertebrate	and 4B) s (B13)	xcept	<u>Ser</u>	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Remarks: YDROLO(Vetland Hyc Primary Indic Surface N United Status Saturatio Water Ma Sedimen	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leave 1, 2, 4A, a (B11) overtebrates Sulfide Oc	and 4B) s (B13) lor (C1)		<u>Ser</u>	condary 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 (C3
Remarks: YDROLO(Vetland Hyd Primary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher	and 4B) s (B13) lor (C1) res along	Living Rool	<u>Ser</u>	condary 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 (C3 Geomorphic Position (D2)
Remarks: YDROLO(Vetland Hyd Primary Indic Surface N High Wa' Saturatio Water Ma Sedimen Drift Dep Algal Ma	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce	nd 4B) s (B13) dor (C1) res along d Iron (C4	Living Rool)	<u>Se</u>	condary 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3)
Remarks: YDROLO(Vetland Hyc Primary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In	ined Leave 1, 2, 4A, a (B11) wertebrate: Sulfide Oc Rhizospher of Reduce on Reductio	and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tilled	Living Rool) I Soils (C6)	<u>Sea</u> is (C3)	condary 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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOO Vetland Hyc Ydrary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	one require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed	nd 4B) s (B13) for (C1) res along d Iron (C4 on in Tilleo Plants (D	Living Rool)	<u>Sea</u> is (C3)	condary 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOO Vetland Hyc Ydrary Indic Surface V High Wa Saturatio Water Ma Sedimen Orift Dep Algal Ma Iron Dep Surface S Inundatic	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial	one require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o 7 Other (Ex)	ined Leave 1, 2, 4A, a (B11) wertebrate: Sulfide Oc Rhizospher of Reduce on Reductio	nd 4B) s (B13) for (C1) res along d Iron (C4 on in Tilleo Plants (D	Living Rool) I Soils (C6)	<u>Sea</u>	condary 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primarks: Primary Indic Primary In	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav	one require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o 7 Other (Ex)	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed	nd 4B) s (B13) for (C1) res along d Iron (C4 on in Tilleo Plants (D	Living Rool) I Soils (C6)	<u>Sea</u>	condary 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: YDROLOO Vetland Hyc Primary Indic Surface N High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely ield Observ	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav rations:	one require Imagery (B re Surface (Water-Sta MLRA MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or 7) Other (Ex) B8)	ined Leave 1, 2, 4A, a (B11) vertebrater Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re	nd 4B) s (B13) for (C1) res along d Iron (C4 on in Tilleo Plants (D	Living Rool) I Soils (C6)	<u>Sea</u>	condary 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: YDROLOO Vetland Hyd Primary Indic Surface N High Wa' Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S inundatic Sparsely Surface Water	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present?	Imagery (B re Surface (Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted or 7) Other (Ex B8)	ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re aches);	and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tilleo Plants (D marks)	Living Rool) 1 Soils (C6) 1) (LRR A)	<u>Sea</u>	condary 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: YDROLOO Vetland Hyco Primary Indic Primary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Vater Table I Saturation Pr	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present?	Imagery (B ve Surface (Yes Yes	Water-Sta MLRA MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or 7) Other (Ex) B8)	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re uches):	s (B13) dor (C1) res along d Iron (C4 on in Tilleo Plants (D marks)	Living Rool) J Soils (C6) 1) (LRR A)	<u>Sea</u>	condary 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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: YDROLOO Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Nater Table I Saturation Princludes cap	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? esent? illary fringe)	Imagery (B re Surface (Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or 7) Other (Ex) B8) No X Depth (in No X Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re uches): aches):	s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Rool) I Soils (C6) (LRR A)	Sea is (C3) j j und Hydrole	condary 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: YDROLOO Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Nater Table I Saturation Princludes cap	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? esent? illary fringe)	Imagery (B re Surface (Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or 7) Other (Ex) B8)	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re uches): aches):	s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Rool) I Soils (C6) (LRR A)	Sea 	condary 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: YDROLOO Vetland Hyco Primary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Vater Table I Saturation Princludes cap Describe Reco	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? esent? illary fringe)	Imagery (B re Surface (Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or 7) Other (Ex) B8) No X Depth (in No X Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re uches): aches):	s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Rool) I Soils (C6) (LRR A)	Sea 	condary 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: YDROLOO Wetland Hyco Primary Indic Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Nater Table I Saturation Princludes cap Describe Reco	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? esent? illary fringe)	Imagery (B re Surface (Yes Yes n gauge, mo	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or 7) Other (Ex) B8) No X Depth (in No X Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re uches): aches):	s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Rool) I Soils (C6) (LRR A)	Sea 	condary 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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: RTI Manchester	Cit	y/County: Manchester / MENDO	OCINO	Sampling Date: 2 Oct 2018		
Applicant/Owner: RTI / Caltrans, private		State: CA Sampling Point: 39				
Investigator(s): M. Widdowson, J. Mayor	Se	ection, Township, Range:				
Landform (hillslope, terrace, etc.): _ coastal terrace	Lo	ocal relief (concave, convex, noi	ne): <u>Cover</u>	Slope (%):/		
Subregion (LRR): A: Northwest Forests and Coast	Lat:	Long:		Datum:		
Soil Map Unit Name: 214 - Tropaquepts, O	-15705	lopes	NWI classific	ation:		
Are climatic / hydrologic conditions on the site typical for this Are Vegetation, Soil, or Hydrologys Are Vegetation, Soil, or Hydrologyr SUMMARY OF FINDINGS – Attach site map	ignificantly di naturally probl	sturbed? Are "Normal Cir ematic? (If needed, expl	cumstances" p ain any answe	present? Yes No rs in Remarks.)		
		CZ Wetland Is the Sampled Area within a Wetland?	Yes Yes	No		
Remarks:						

VEGETATION – Use scientific names of plants.

	Absolute	Dominant		Dominance Test worksh	eet:		
Tree Stratum (Plot size:)		Species?		Number of Dominant Spe	cies	-	
1. outside plot + night of way				That Are OBL, FACW, or	-AC:	2	(A)
2				Total Number of Dominan	ł	3	
3				Species Across All Strata:		5	(B)
4							
		= Total Co	ver	Percent of Dominant Spec That Are OBL, FACW, or		66	(A/B)
Sapling/Shrub Stratum (Plot size: 5 x 30.Ft)				Prevalence Index works	12. AU 11.		(100)
1. Salix lasiolepis	45	Y	FACW			Hishi hu	
2. Franquia porsh californica	5		UPL	Total % Cover of:			
3				OBL species			
4				FACW species			
5		·	-	FAC species	x 3 = _		-8-11
5	50	= Total Co		FACU species	x 4 = _		-
Herb Stratum (Plot size: 5 × 10 Ct)	20	$_{=}$ = 1 otal Co	ver	UPL species	x 5 =		
1. Cares obrupta	60	Y	OBL	Column Totals:			
2. Agrestis stulant fra	<1		FAC				
3. Pferidium aguilium	41		FACU	Prevalence Index =	· · · ·		-
4. Jiners patens	<1	·	FACW	Hydrophytic Vegetation			
5. Symphonitrichum chilenses			FAC	1 - Rapid Test for Hy		egetation	
		·		🔀 2 - Dominance Test is			
6				3 - Prevalence Index			
7				4 - Morphological Ada	aptations ¹ (F	Provide sup	porting
8		<u> </u>		data in Remarks of		· · · · · · · · · · · · ·	
9				5 - Wetland Non-Vas			
10				Problematic Hydroph			
11				¹ Indicators of hydric soil a			nust
	60	= Total Co	ver	be present, unless disturt	ed or proble	ematic.	
Woody Vine Stratum (Plot size: 5 × 30 (*)		c)					
1. Rubus urstnus	20	Y	FACU	Hydrophytic			
2				Veretation	V		
% Bare Ground in Herb Stratum4o	Y	_= Total Co	ver	Present? Yes	V No	°	
· Remarks:							

Sampling Point: _

39

Depth (index) Matrix (add model) % Code (model) % Type! Loc (add model) % Code (model) % Type! ////////////////////////////////////	Profile Desc	cription: (Describe	to the depth	needed to docume	ent the indicate	or or confirm	the absence of	indicators.)
<i>∂</i> - <i>f</i> 0 <i>µ</i> 0 ± <i>f</i> 2 ± <i>f</i> 2 <i>µ</i> 0 ± <i>µ</i> 0						1 2	Testere	Descention
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coaled Sand Grains. **Location: PL=Pore Lining, M=Matrix **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coaled Sand Grains. **Location: PL=Pore Lining, M=Matrix **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, (S5)	(inches)			Color (moist)	%Туре			Kemarks
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epideon (A2) Stripped Matrix (S6)	0-17	10 YR 12	100				10km	
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epipedon (A2) Stripped Matrix (S6) 2 on Muck (A10) Red Parent Matchal (TF2) Hydrogen Sulfac (A4) Loamy Gleyed Matrix (F3)								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epipedon (A2) Stripped Matrix (S6) 2 on Muck (A10) Red Parent Material (TF2) Black Histic (A3)								
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epipedon (A2) Stripped Matrix (S6) 2 on Muck (A10) Red Parent Matchal (TF2) Hydrogen Sulfac (A4) Loamy Gleyed Matrix (F3)								
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epideon (A2) Stripped Matrix (S6)								
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Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epideon (A2) Stripped Matrix (S6)								
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epipedon (A2) Stripped Matrix (S6) 2 on Muck (A10) Red Parent Matchal (TF2) Hydrogen Sulfac (A4) Loamy Gleyed Matrix (F3)								
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epipedon (A2) Stripped Matrix (S6) 2 on Muck (A10) Red Parent Matchal (TF2) Hydrogen Sulfac (A4) Loamy Gleyed Matrix (F3)								
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epideon (A2) Stripped Matrix (S6)								
	'Type: C=Co	oncentration, D=Dep	etion, RM=R	educed Matrix, CS=	Covered or Coa	ated Sand Gra		
			able to all LI					A CONTRACTOR OF
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulface (A1) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Dark Surface (F6) Indicators of hydrophytic vegetation and welland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Type:								
Hydrogen Suffide (A4) Loamy Gleved Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A12) Redx Dark Surface (F6) *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redx Depressions (F8) unless disturbed or problematic. Restrictive Layer (If present): Type:			-		A CONTRACTOR OF A DESCRIPTION OF			
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) **Indicators of hydrophytic vegetation and sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) **Indicators of hydrophytic vegetation and welland hydrology must be present, welland hydrology for problematic. Restrictive Layer (if present): Type:			-			pt MLRA 1)		
			e (A11)				³ Indicators	of hydrophylic vegetation and
Restrictive Layer (If present): Type:			-					
Type:			-					
Depth (inches): Hydric Soil Present? Yes No Remarks: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Sait Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imager Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Elfeld Observations: No Depth (inches):		Luyer (in present).						
Remarks: AYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3)				-			Hudric Soil Dr	acont? Voc No
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3)		cnes):						
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Depth (inches): <u>wase to 12</u> Wetland Hydrology Present? Yes No No Saturation Present? Yes No Depth (inches): <u>wase to 12</u> Wetland Hydrology Present? Yes No No Saturation Present? Yes No Depth (inches): <u>wase to 12</u> Wetland Hydrology Present? Yes No No		122 Augustant and	_					
Surface Water (A1)				check all that apply)			Seconda	ary Indicators (2 or more required)
High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imager Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Depth (inches): <u>www_to 12</u> Wetland Hydrology Present? Yes No Saturation Present? Yes No Depth (inches): <u>www_to 12</u> Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Staulable:			ino roquito al		ed Leaves (B9)	(except		
Water Marks (B1)		and the second			a second second second second			
 Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Mater Table Present? Yes No Mater Table Present? Yes No No No No No No No No <								
 Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Concave Surface (B8) Water Table Present? Yes No Concave Depth (inches): Mater Table Present? Yes No Concave Depth (inches): Mo Concave Surface (Inche	10 C							
Iron Deposits (B5)								
Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): <u>Noce to 12</u> Saturation Present? Yes No Depth (inches): <u>Noce to 12</u> Saturation Present? Yes No Depth (inches): <u>Noce to 12</u> (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	the second s	States and the state of the states of the	magan (D7)					
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): to 12 Saturation Present? Yes No Depth (inches): to 12 Saturation Present? Yes No Depth (inches): to 12 (includes capillary fringe) Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					in in iternarks)		1103	(-ricave ridinihoeks (D7)
Surface Water Present? Yes No // Depth (inches): Water Table Present? Yes No // Depth (inches): Noc to 12 Saturation Present? Yes No // Depth (inches): Noc to 12 Saturation Present? Yes No // Depth (inches): Noc to 12 (includes capillary fringe) Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			e Sunace (bo)				
Water Table Present? Yes No Depth (inches): Noc to 12 Saturation Present? Yes No Depth (inches): Noc to 12 (includes capillary fringe) Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				V Deall de l				- 8
Saturation Present? Yes No Depth (inches): www to 12 Wetland Hydrology Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				and the second se		12		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							San Arrest	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			es No	Depth (inch	es): none to	Wetla	and Hydrology P	resent? Yes No
Remarks:	Describe Re	corded Data (stream	gauge, moni	toring well, aerial pho	otos, previous i	nspections), i	f available:	
	Domorker							
	Remarks:							

Project/Site: RTI Manchester		(City/Count	ty: Mancheste	er / MENDOCINO	_ Sampling Date:	12, Oct 2018
Applicant/Owner: RTI / Caltrans, private		State: CA Sampling Point: 郑 *					
nvestigator(s): M. Widdowson, J. Mayo		_ Section, Township, Range:					
andform (hillslope, terrace, etc.):	ustal terrace		Local relie	ef (concave, o	convex, none):	iex S	lope (%):
Subregion (LRR): <u>A: Northwest Forest</u>	ts and Coast	Lat:			Long:	Dat	tum:
Soil Map Unit Name: 214 - Tro	paquents,	0-15%	slopes	5	NWI classif	ication:	
Are climatic / hydrologic conditions on							
Are Vegetation, Soil, or					Normal Circumstances"		No
Are Vegetation, Soil, o					eded, explain any answ		
SUMMARY OF FINDINGS – A	Attach site m	ap showing	sampli	ng point le	ocations, transect	s, important	reatures, etc.
Hydrophytic Vegetation Present?	Yes		le	the Sampled	Aroa		
Hydric Soil Present?	Yes	No V		thin a Wetlar	nd? Yes_	No	
Wetland Hydrology Present? Remarks:	Yes	NO					_
VEGETATION - Use scientifi			Dominar	nt Indicator	Dominance Test wo	rksheet:	
Tree Stratum (Plot size:		<u>% Cover</u>	Species	? <u>Status</u>	Number of Dominant That Are OBL, FACW		2 (A)
23			-		Total Number of Dom Species Across All St		(B)
4			-		Percent of Dominant That Are OBL, FACW		0 (A/B)
Sapling/Shrub Stratum (Plot size: _					Prevalence Index we		
1					Total % Cover of	: Multi	iply by:
2					OBL species		
					FACW species	x 2 =	
4			· · · · · · · · · · · · · · · · · · ·		FAC species		
	1		= Total C	Cover	FACU species		
<u>Herb Stratum</u> (Plot size: 3×10	4)		v	1.00	UPL species		
1. Briza maxima		30	1	UPL	Column Totals:	(A)	(B)
2. Plantago lanceolata		20	<u> </u>	FACU	Prevalence Inde	ex = B/A =	
3. Holars landris		5	N	FAC	Hydrophytic Vegeta	tion Indicators:	
4. Agrostis stolonfora			-N	FAC	1 - Rapid Test fo		etation
5. Achillen wilefolin			N	FACU	2 - Dominance T		
					3 - Prevalence In		
7					data in Rema	I Adaptations ¹ (Pr rks or on a separa	ovide supporting ate sheet)
89					5 - Wetland Non-		
10					the second se	rophytic Vegetatic	on ¹ (Explain)
11					¹ Indicators of hydric s be present, unless di	soil and wetland h sturbed or probler	ydrology must natic.
Woody Vine Stratum (Plot size: 6	YISCH)	60	_= Total C	Cover	a star a substant of		
1. Rubus ursinus		10	Y	FACU	Hydrophytic		
2		10			Vegetation Present?	Yes No	~
	1.0	10	_= Total C	over	1000		
% Bare Ground in Herb Stratum	40						

Depth _	Matrix		Redo	ox Features	5 To 1	12	Territore	Demarks
(inches)	Color (moist)		Color (moist)	%	_Type'	Loc	Texture	Remarks
1	VA							
								~
vne C=Con	centration, D=Dep	etion. RM=R	educed Matrix. C	S=Coverec	or Coate	d Sand Gra	ins. ² Loca	ation: PL=Pore Lining, M=Matrix.
	dicators: (Application						Indicator	s for Problematic Hydric Soils ³ :
Histosol (A			Sandy Redox (2 cm	Muck (A10)
Histic Epip			_ Stripped Matrix				Red I	Parent Material (TF2)
Black Histi			Loamy Mucky	Mineral (F1) (except	MLRA 1)		Shallow Dark Surface (TF12)
_ Hydrogen	Sulfide (A4)	- E	Loamy Gleyed	Matrix (F2))		Othe	r (Explain in Remarks)
	Below Dark Surface	e (A11) 📃	_ Depleted Matri				2	
	Surface (A12)	4	_ Redox Dark Su					s of hydrophytic vegetation and
	cky Mineral (S1)		_ Depleted Dark		7)			d hydrology must be present,
	yed Matrix (S4) yer (if present):		_ Redox Depress	sions (F8)			uniess	disturbed or problematic.
							Under Oall	No. No.
Depth (inch	es):						Hydric Soll H	Present? Yes No 💆
emarks:	excavete in	raadsid	e fil.					
emarks: Cannot	exande in	raadsid	r fill.					
emarks: Cannot 'DROLOG	exande in	raadsid	r f.n.					
emarks: Cannot /DROLOG /etland Hydr	excande in Y			lγ)				dary Indicators (2 or more required)
emarks: Cannot DROLOG Vetland Hydr	excavely in Y ology Indicators: tors (minimum of o				es (B9) (e	xcept	Second	
emarks: Cannot DROLOG Vetland Hydr rimary Indicat _ Surface W	excavely in Y ology Indicators: tors (minimum of o		check all that app			xcept	<u>Second</u>	
Emarks: Cannot DROLOG Vetland Hydr rimary Indicat _ Surface W	Y ology Indicators: tors (minimum of o fater (A1) r Table (A2)		check all that app	ined Leave 1, 2, 4A, a		xcept	<u>Second</u>	ater-Stained Leaves (B9) (MLRA 1, 2,
emarks: Cannot DROLOG Vetland Hydr rimary Indicat _ Surface W _ High Wate	Y ology Indicators: tors (minimum of o fater (A1) r Table (A2) (A3)		check all that app Water-Sta MLRA	ined Leave 1, 2, 4A, a (B11)	nd 4B)	xcept	<u>Second</u> Wa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
TOROLOG Tetland Hydr Cannot Tetland Hydr Cimary Indicat Surface W High Wate Saturation Water Mar	Y ology Indicators: tors (minimum of o fater (A1) r Table (A2) (A3)		check all that app Water-Sta MLRA Salt Crust	ined Leave 1, 2, 4A, a (B11) vertebrates	nd 4B) s (B13)	xcept	<u>Second</u> Wa Dr Dr	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
TOROLOG Tetland Hydr Cannot Tetland Hydr Cimary Indicat Surface W High Wate Saturation Water Mar	Y ology Indicators: tors (minimum of o later (A1) or Table (A2) (A3) ks (B1) Deposits (B2)		check all that app Water-Sta Salt Crust Salt Crust Aquatic In Hydrogen	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc	nd 4B) s (B13) lor (C1)	xcept	<u>Second</u> Wa Dr Dr Sa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
emarks: Cannot CDROLOG Vetland Hydr rimary Indicat Surface W High Wate Saturation Water Mar Sediment Drift Depo	Y ology Indicators: tors (minimum of o later (A1) or Table (A2) (A3) ks (B1) Deposits (B2)		check all that app Water-Sta Salt Crust Aquatic In Hydrogen Oxidized I	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc	nd 4B) s (B13) lor (C1) res along	Living Root	<u>Second</u> Wa Dr Dr Sa s (C3) Ge	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) ituration Visible on Aerial Imagery (C9
emarks: Cannot DROLOG Vetland Hydr rimary Indicat Surface W High Wate Saturation Water Mar Sediment Drift Depo	Y ology Indicators: tors (minimum of o fater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4)		check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence	ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher of Reduce	nd 4B) s (B13) lor (C1) res along d Iron (C4	Living Root	<u>Second</u> Wa Dr Dr Sa s (C3) Ge Sh	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) tturation Visible on Aerial Imagery (C9 comorphic Position (D2)
emarks: Cannot Conno	Y ology Indicators: tors (minimum of o fater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)	ne required; d	check all that app Water-Sta Salt Crust Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed	nd 4B) s (B13) lor (C1) res along d Iron (C4 on in Tilleo Plants (D	Living Root	<u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Second</u> <u>Se</u>	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) xC-Neutral Test (D5) hised Ant Mounds (D6) (LRR A)
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es No ed? Are ' tic? (If ne pling point I Is the Sampled within a Wetlan	(If no, explain in Remarks.) Normal Circumstances" present? Yes No eeded, explain any answers in Remarks.) ocations, transects, important features, etc. I Area nd? Yes No Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
ed? Are ' tic? (If ne pling point I Is the Sampled within a Wetlan inant Indicator ties? <u>Status</u>	Normal Circumstances" present? Yes <u>Ves</u> No eeded, explain any answers in Remarks.) ocations, transects, important features, etc. I Area nd? Yes <u>No</u> No Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
inant Indicator	beded, explain any answers in Remarks.) ocations, transects, important features, etc. Area hd? Yes No Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
pling point l Is the Sampled within a Wetlan inant Indicator cies? <u>Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
Is the Sampled within a Wetlan inant Indicator dies? <u>Status</u>	Area nd? Yes No Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
within a Wetlan inant Indicator cies? <u>Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
within a Wetlan inant Indicator cies? <u>Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
inant Indicator bies? <u>Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
sies? <u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
sies? <u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
sies? <u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
	That Are OBL, FACW, or FAC: (A)
	Total Number of Dominant
	Species Across All Strata: (B)
al Cover	Percent of Dominant Species 100 (A/B)
	Prevalence Index worksheet:
	Total % Cover of:Multiply by:
	OBL species x 1 =
	FACW species x 2 =
	FAC species x 3 =
	FACU species x 4 =
arcover	UPL species x 5 =
FAIC	Column Totals: (A) (B)
J FACW	Prevalence Index = B/A =
FACW	Hydrophytic Vegetation Indicators:
	1 - Rapid Test for Hydrophytic Vegetation
	✓ 2 - Dominance Test is >50%
	3 - Prevalence Index is ≤3.0 ¹
	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
	5 - Wetland Non-Vascular Plants ¹
	Problematic Hydrophytic Vegetation ¹ (Explain)
	¹ Indicators of hydric soil and wetland hydrology must
	be present, unless disturbed or problematic.
al Cover	
FACU	Hydrophytic
	Vegetation
al Cover	Present? Yes No No
	al Cover

Sampling Point: ______

	Matrix r (moist)	%		ov Conturn				
0-10 101	2 2/01		Oplan (mart 1)	ox Feature		1 2	Touture	Bomarka
		05	Color (moist)	%	Type ¹	Loc ²		Remarks
10-14 109R		95	5YR 4/6	5	C	m	loam	
	Ma 3/2	85	7.5YR 5/8	15	C	m	Clay-loam	
¹ Type: C=Concentral						d Sand G		PL=Pore Lining, M=Matrix.
Hydric Soil Indicato	rs: (Applica	able to all L			ed.)			Problematic Hydric Soils ³ :
Histosol (A1)		-	_ Sandy Redox				2 cm Muck	
Histic Epipedon (Disale Listic (A2)	A2)	-	_ Stripped Matrix _ Loamy Mucky		1) (avean			t Material (TF2) ow Dark Surface (TF12)
Black Histic (A3) Hydrogen Sulfide	(04)	1	_ Loamy Mucky _ Loamy Gleyed			WILKA I)		lain in Remarks)
Depleted Below I		(A11)	Depleted Matri		.)			aut in recinance,
Thick Dark Surfa			Redox Dark Si				³ Indicators of h	ydrophytic vegetation and
Sandy Mucky Mir	neral (S1)	-	_ Depleted Dark		-7)			rology must be present,
Sandy Gleyed Ma			_ Redox Depres	sions (F8)			unless distu	rbed or problematic.
Restrictive Layer (if	present):							
Туре:								
Depth (inches): Remarks:							Hydric Soil Prese	nt? Yes <u> </u>
YDROLOGY Wetland Hydrology	Indicators:							
Primary Indicators (m		ne required;	check all that app	ly)			Secondary II	ndicators (2 or more required)
Surface Water (A				ained Leav	es (B9) (e	xcept	Water-S	tained Leaves (B9) (MLRA 1, 2,
High Water Table			MLRA	1, 2, 4A, a	and 4B)		4A, a	and 4B)
Saturation (A3)			Salt Crus	t (B11)			Drainage	e Patterns (B10)
Water Marks (B1)		Aquatic Ir	nvertebrate	s (B13)			son Water Table (C2)
Sediment Deposi				Sulfide Od				on Visible on Aerial Imagery (C9)
Drift Deposits (B3				Rhizosphe	0	•		phic Position (D2)
Algal Mat or Crus				of Reduce				Aquitard (D3) utral Test (D5)
Iron Deposits (B5 Surface Soil Crack	•			on Reduction or Stressed				Ant Mounds (D6) (LRR A)
Inundation Visible		nadery (B7)		plain in Re	2	I) (LICICA		eave Hummocks (D7)
Sparsely Vegetat				plainini	, nano,			
Field Observations:								
Surface Water Preser	nt? Ye	es No	o 📩 Depth (ir	nches):		_		
Water Table Present?	Ye Ye	es No	Depth (ir	nches): <u>m</u>	ne toll			
Saturation Present?		es No	Depth (ir	nches): 🛌	ne to li	👍 Wet	land Hydrology Pres	ent? Yes 📈 🛛 No 📶
Gataration resent	ge) ata (stroam	gauge, mon	toring well, aerial	photos, pr	evious ins	pections),	, if available:	
(includes capillary frin	ala (sileani							
(includes capillary frin Describe Recorded D								
(includes capillary frin Describe Recorded D		reation						
(includes capillary frin Describe Recorded D		reation						
(includes capillary frin Describe Recorded D		reation						

Project/Site: RTI Manchester		City/County	: Mancheste	er / MENDOCINO Sampling Date: Oct 2018
Applicant/Owner: RTI / Caltrans, private				State: CA Sampling Point: 43-
		Section, To	ownship, Rar	nge:
				convex, none): Slope (%):
				Long: Datum:
				NWI classification:
Are climatic / hydrologic conditions on the site typical for				
				Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology				eded, explain any answers in Remarks.)
		samplir	ng point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No	ls f	he Sampled	Area
Hydric Soil Present? Yes	_ No		hin a Wetlar	
Wetland Hydrology Present? Yes				
Remarks:				
e i e fer al come de la				
VEGETATION – Use scientific names of	nlante			
VEGETATION - Use scientific fiames of	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species		Number of Dominant Species
1				That Are OBL, FACW, or FAC:
2				Total Number of Dominant
3		·	<u></u>	Species Across All Strata: (B)
4				Percent of Dominant Species
STATES AND		_ = Total C	over	That Are OBL, FACW, or FAC:(A/B)
Sapling/Shrub Stratum (Plot size: 15×20 fr) 1. Franjula culifornika		Y	UPL	Prevalence Index worksheet:
2. Bacchais pilolais	10	Y	UPL	Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =
5				FAC species x 3 =
and the second	20	= Total C	over	FACU species x 4 =
Herb Stratum (Plot size: 5 A rod by	-			UPL species x 5 =
1. Pterdium aquilinum	50	Y	FACU	Column Totals: (A) (B)
2. Holas, lanatus	20	Y	FACE	Prevalence Index = B/A =
3. Anthoxarthin colorahm	<1		- FAU	nyuropnyuro rogotation matoatoroi
4		-)		1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8				5 - Wetland Non-Vascular Plants ¹
9				Problematic Hydrophytic Vegetation ¹ (Explain)
11.				¹ Indicators of hydric soil and wetland hydrology must
11.	70	= Total C	over	be present, unless disturbed or problematic.
and the second second state of the second				
Woody Vine Stratum (Plot size: 15 + 20 ft)		Y	FACU	Hydrophytic
1. Rubus Ursinus	50			
				Vegetation
1. Rubus UrBinus	50	_= Total C	over	

Sampling Point: 42-

(inches)	Matrix		Red	ox Feature	S			
0-10	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²		Remarks
	104R 2/2	100	_			·	loam	
10-108	10 YR 3/2	78					loam	
	10YR 4/3	20	STR SIG	2	0	m	loam	
	1040 445	-9	518 510				_	
		<u> </u>				_		
Type: C=Co	oncentration, D=De	pletion, RM=	Reduced Matrix, C	S=Covere	d or Coate	d Sand Gra		tion: PL=Pore Lining, M=Matrix.
lydric Soil I	Indicators: (Appli	cable to all	LRRs, unless othe	rwise not	ed.)		Indicators	for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (Muck (A10)
	bipedon (A2)		Stripped Matrix					arent Material (TF2)
Black His			Loamy Mucky			MLRA 1)		Shallow Dark Surface (TF12)
	n Sulfide (A4) Below Dark Surfa	ce (A11)	Loamy Gleyed Depleted Matri		-)		Outer	(Explain in Remarks)
	ark Surface (A12)		Redox Dark Su				³ Indicators	of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Depleted Dark				wetland	I hydrology must be present,
	Bleyed Matrix (S4)		Redox Depres	sions (F8)			unless	disturbed or problematic.
lestrictive L	_ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil P	resent? Yes No
YDROLO	GY drology Indicators	:		1				
rimary Indic	ators (minimum of	one required	l; check all that app	ly)		4	Second	ary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	oc (RQ) (o			
Ounace	tor Table (A2)			micu Leav	Co (Do) (C.	kcept	Wa	ter-Stained Leaves (B9) (MLRA 1, 2,
High Wa	iter rable (AZ)			1, 2, 4A, a		kcept		ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
				1, 2, 4A, a		kcept	Dra	4A, and 4B) inage Patterns (B10)
High Wa Saturatic Water M	on (A3) arks (B1)		MLRA	1, 2, 4A, a (B11)	and 4B)	kcept	Dra Dry	4A, and 4B) inage Patterns (B10) -Season Water Table (C2)
High Wa Saturatio Water M Sedimen	on (A3) arks (B1) nt Deposits (B2)		MLRA Salt Crust Aquatic In Hydrogen	1, 2, 4A, a (B11) wertebrate Sulfide O	and 4B) s (B13) dor (C1)		Dra Dry Sat	4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9
High Wa Saturatic Water M Sedimen Drift Dep	on (A3) arks (B1) nt Deposits (B2) posits (B3)		MLRA Salt Crust Aquatic In Hydrogen Oxidized	1, 2, 4A, a (B11) wertebrate Sulfide O Rhizosphe	and 4B) as (B13) dor (C1) res along	Living Root	Dra Dry Sat s (C3) Get	4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2)
High Wa Saturatic Water M Sedimen Drift Dep	on (A3) arks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence	1, 2, 4A, a (B11) wertebrate Sulfide O Rhizosphe of Reduce	and 4B) as (B13) dor (C1) res along ad Iron (C4	∟iving Root	Dra Dry Sat s (C3) Geo Sha	4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) illow Aquitard (D3)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep	on (A3) arks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In	1, 2, 4A, a (B11) wertebrate Sulfide Ou Rhizosphe of Reduce	and 4B) es (B13) dor (C1) res along ed Iron (C4 on in Tilleo	Living Root) I Soils (C6)	Dra Dry Sat s (C3) Geo Sha FA0	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)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface	on (A3) arks (B1) tt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	Imagery (B3	MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o	1, 2, 4A, a (B11) wertebrate Sulfide Ou Rhizosphe of Reduction Reduction r Stressed	and 4B) is (B13) dor (C1) res along ed Iron (C4 on in Tilleo Plants (D	∟iving Root	Dra Dry Sat s (C3) Ger Sha FA(Rai	4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) ullow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface	on (A3) arks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex	1, 2, 4A, a (B11) wertebrate Sulfide Ou Rhizosphe of Reduction Reduction r Stressed	and 4B) is (B13) dor (C1) res along ed Iron (C4 on in Tilleo Plants (D	Living Root) I Soils (C6)	Dra Dry Sat s (C3) Ger Sha FA(Rai	4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) ullow Aquitard (D3) C-Neutral Test (D5)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface	on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial v Vegetated Concav		MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex	1, 2, 4A, a (B11) wertebrate Sulfide Ou Rhizosphe of Reduction Reduction r Stressed	and 4B) is (B13) dor (C1) res along ed Iron (C4 on in Tilleo Plants (D	Living Root) I Soils (C6)	Dra Dry Sat s (C3) Ger Sha FA(Rai	4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) ullow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic Sparsely	on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial v Vegetated Concav vations:		MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irro Stunted o 7) Other (Ex 38)	1, 2, 4A, a (B11) wertebrate Sulfide Or Rhizosphe of Reduce on Reducti r Stressed plain in Re	and 4B) is (B13) dor (C1) res along ed Iron (C4 on in Tilleo Plants (D	Living Root) I Soils (C6)	Dra Dry Sat s (C3) Ger Sha FA(Rai	4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) ullow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic Sparsely	on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present?	ve Surface (I Yes I	MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irro Stunted o 7) Other (Ex 38)	1, 2, 4A, a (B11) wertebrate Sulfide Or Rhizosphe of Reduce on Reducti r Stressed plain in Re	and 4B) is (B13) dor (C1) res along ed Iron (C4 on in Tilleo Plants (D marks)	Living Root:) I Soils (C6) I) (LRR A)	Dra Dry Sat s (C3) Ger Sha FA(Rai	4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) ullow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface 9 Surface 9 Surface Water Saturation Pr includes cap	on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present?	ve Surface (I Yes I Yes I Yes I	MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o 7) Other (Ex 38) No Depth (inc No Depth (inc No Depth (inc)	1, 2, 4A, a (B11) wertebrate Sulfide Ou Rhizosphe of Reduce on Reducti r Stressed plain in Re aches): aches):	and 4B) as (B13) dor (C1) res along ad Iron (C4 on in Tilled Plants (D marks) marks)	Living Root:) I Soils (C6) I) (LRR A)	Mathematical sector of the sec	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)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface 9 Surface 9 Surface Water Saturation Pr includes cap	on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present?	ve Surface (I Yes I Yes I Yes I	MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o 7) Other (Ex 38) No Depth (in No Depth (in	1, 2, 4A, a (B11) wertebrate Sulfide Ou Rhizosphe of Reduce on Reducti r Stressed plain in Re aches): aches):	and 4B) as (B13) dor (C1) res along ad Iron (C4 on in Tilled Plants (D marks) marks)	Living Root:) I Soils (C6) I) (LRR A)	Mathematical Science S	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)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic Sparsely Field Observ Surface Water Vater Table Saturation Pr includes cap Describe Rec	on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial vegetated Concav vations: er Present? Present? Present? pillary fringe) corded Data (stream	re Surface (I Yes I Yes I Yes I n gauge, mo	MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o 7) Other (Ex 38) No Depth (inc No Depth (inc No Depth (inc)	1, 2, 4A, a (B11) wertebrate Sulfide Ou Rhizosphe of Reduce on Reducti r Stressed plain in Re aches): aches):	and 4B) as (B13) dor (C1) res along ad Iron (C4 on in Tilled Plants (D marks) marks)	Living Root:) I Soils (C6) I) (LRR A)	Mathematical Science S	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)
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic Sparsely Field Observ Surface Water Vater Table Saturation Pr includes cap Describe Rec	on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present?	re Surface (I Yes I Yes I Yes I n gauge, mo	MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o 7) Other (Ex 38) No Depth (inc No Depth (inc No Depth (inc)	1, 2, 4A, a (B11) wertebrate Sulfide Ou Rhizosphe of Reduce on Reducti r Stressed plain in Re aches): aches):	and 4B) as (B13) dor (C1) res along ad Iron (C4 on in Tilled Plants (D marks) marks)	Living Root:) I Soils (C6) I) (LRR A)	Mathematical Science S	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)

er / MENDOCINO Sampling Date: 12/2 Oct 2018 State: CA Sampling Point:43 Sonvex, none):Slope (%):Slope (%):Slope (%):Slope (%):Sonvex, none;Slope (%):Sonvex, none;Slope (%):Slope (%):Sonvex, none;Slope (%):Slope (%):Sonvex, none;Sonvex, none;Slope (%):Sonvex, none;Slope (%):Sonvex, none;Sonvex, none;
convex, none): Slope (%): Long: Datum: NWI classification: (If no, explain in Remarks.)
Long: Datum: NWI classification: (If no, explain in Remarks.)
NWI classification: (If no, explain in Remarks.)
(If no, explain in Remarks.)
(If no, explain in Remarks.)
A second s
Normal Circumstances" present? Yes No
eded, explain any answers in Remarks.)
ocations, transects, important features, etc.
Area nd? Yes No
nd? Yes No

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) 1		Species	nt Indicator <u>Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata:	/ (A)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:	50 (A/B)
1 2 3				Prevalence Index worksheet:	
4 5 <u>Herb Stratum</u> (Plot size: <u>5 ft putine</u>)		_ = Total	Cover	FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A)	
1. Juncos effsus 2. Pteridium aquilinum	50	N	UPL	Prevalence Index = B/A =	
3. Anthoxarthm odoratum 4. Holws lanatus 5.				Hydrophytic Vegetation Indicator 1 - Rapid Test for Hydrophytic 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations1 data in Remarks or on a seg 5 - Wetland Non-Vascular Plan Problematic Hydrophytic Vege 1Indicators of hydric soil and wetland be present, unless disturbed or pro	Vegetation (Provide supporting parate sheet) nts ¹ tation ¹ (Explain) nd hydrology must
1. Lobos orsinos 2.	65	 _= Total (FAcv Cover	Hydrophytic Vegetation Present? Yes	No
Remarks:				,	

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OIL							the second se
	e to the dep			dicator c	r confirm	the absence	of indicators.)
Depth <u>Matrix</u>	0/			Tupol	1.002	Texture	Romarke
				Type	LUC		
0 10 10 10 10		= = =/			-		0 111
0-16 104R 21	99	54R 316		C	M	Toam	few mottlery
The Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Texture Remarks AD Texture Remarks AD Advantary Advantary Texture Remarks Advantary Advantary Advantary Advantary Advantary Texture Remarks Advantary Advantary Advantary Advantary Advantary							
ype: C=Concentration, D=De	pletion, RM=	Reduced Matrix, CS	=Covered c	or Coated	I Sand Gr	ains. ² Lo	cation: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Appli	cable to all	LRRs, unless other	wise noted	l.)		Indicate	ors for Problematic Hydric Soils ³ :
_ Histosol (A1)							
Histic Epipedon (A2)		the second s	· · · · · · · · · · · · · · · · · · ·				
_ Black Histic (A3)			the probability of the second s	(except	MLRA 1)		
_ Hydrogen Sulfide (A4)						Oth	er (Explain in Remarks)
	ce (A11)					31	as of budeophytic us solution and
프랑 날리에서 여기 소리가 잘 하나면 것이 없다. 동안에							
							, , , , , , , , , , , , , , , , , , , ,
		neuox Depiess					
and the second						Hydric Soil	Present? Yes No
						Tiyune oon	
Dark high - organ	ic soil a	1 very few mot	Hes at	deptl			
/DROLOGY		I very few mot	Hes at	deptl			
/DROLOGY Vetland Hydrology Indicators	;;			deptl		Seco	ndary Indicators (2 or more required)
/DROLOGY /etland Hydrology Indicators rimary Indicators (minimum of	;;	t; check all that apply	0				ndary Indicators (2 or more required)
/DROLOGY /etland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1)	;;	<u>l; check all that apply</u> Water-Stai	/) ned Leaves	; (B9) (ex			Vater-Stained Leaves (B9) (MLRA 1, 2,
DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2)	;;	<u>l; check all that apply</u> Water-Stai MLRA [/]	/) ned Leaves 1, 2, 4A, an	; (B9) (ex		v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
DROLOGY Tetland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)	;;	l; check all that apply Water-Stai MLRA Salt Crust	/) ned Leaves 1, 2, 4A, an (B11)	; (B9) (ex d 4B)		V C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10)
/DROLOGY /etland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	;;	i <u>; check all that apply</u> Water-Stai MLRA · Salt Crust Aquatic Inv	/) ned Leaves 1, 2, 4A, an (B11) vertebrates (: (B9) (ex d 4B) (B13)		V [Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
/DROLOGY /etland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		t; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3	/) ned Leaves 1, 2, 4A, an (B11) vertebrates (Sulfide Odo	; (B9) (ex d 4B) (B13) r (C1)	cept	V C S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
DROLOGY fetland Hydrology Indicators <u>rimary Indicators (minimum of</u> _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3)		t; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R	/) ned Leaves 1, 2, 4A, an (B11) vertebrates (Sulfide Odo thizosphere:	; (B9) (ex d 4B) (B13) r (C1) s along L	cept iving Roc	V C C S	Vater-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)
/DROLOGY /etland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		<u>d; check all that apply</u> Water-Stai Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence o	/) ned Leaves 1, 2, 4A, an (B11) vertebrates (Sulfide Odo thizosphere: of Reduced	; (B9) (ex d 4B) (B13) r (C1) s along L Iron (C4)	cept iving Roc	V C S S S	Vater-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)
/DROLOGY /etland Hydrology Indicators rimary Indicators (minimum of 		t: check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence c Recent Iro	/) ned Leaves 1, 2, 4A, an (B11) vertebrates (Sulfide Odo thizospheres of Reduced n Reduction	: (B9) (ex d 4B) (B13) r (C1) s along L Iron (C4) a in Tilled	cept iving Roc Soils (C6	V C S ots (C3) S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Gaturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5)
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DROLOGY etland Hydrology Indicators imary Indicators (minimum of 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 Sparsely Vegetated Concar eld Observations: urface Water Present? Vater Table Present?	i i i i i i i i i i i i i i i i i i i	t; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence of Recent Iroi Stunted or 7) Other (Exp 38) No Depth (inc	/) ned Leaves 1, 2, 4A, an (B11) vertebrates (Sulfide Odo thizosphere: of Reduced n Reduction Stressed P lain in Rem ches):	(B9) (ex d 4B) (B13) r (C1) s along L lron (C4) h in Tilled lants (D1 arks)	cept iving Roc Soils (C6) (LRR A	V C S ots (C3) C S ;) F F	Vater-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) AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
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YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of 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 Sparsely Vegetated Concar Field Observations: Surface Water Present? Vater Table Present? Saturation Present	i m gauge, mc	d; check all that apply	() ned Leaves 1, 2, 4A, an (B11) vertebrates (Sulfide Odo thizospheres of Reduced n Reduction Stressed P lain in Rem ches): ches):	(B9) (ex) (d 4B) (B13) (C1) s along L Iron (C4) h in Tilled Iants (D1) Iants (D1) Ian	cept iving Roc Soils (C6) (LRR A		Vater-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) AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of 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 Sparsely Vegetated Concar ield Observations: urface Water Present? Vater Table Present? vater Table Present? vater Table Recorded Data (streat	i m gauge, mc	d; check all that apply	() ned Leaves 1, 2, 4A, an (B11) vertebrates (Sulfide Odo thizospheres of Reduced n Reduction Stressed P lain in Rem ches): ches):	(B9) (ex) (d 4B) (B13) (C1) s along L Iron (C4) h in Tilled Iants (D1) Iants (D1) Ian	cept iving Roc Soils (C6) (LRR A		Vater-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) AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of 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 Sparsely Vegetated Concar ield Observations: urface Water Present? vater Table Present? aturation Present? ncludes capillary fringe) rescribe Recorded Data (streat	i m gauge, mc	d; check all that apply	() ned Leaves 1, 2, 4A, an (B11) vertebrates (Sulfide Odo thizospheres of Reduced n Reduction Stressed P lain in Rem ches): ches):	(B9) (ex) (d 4B) (B13) (C1) s along L Iron (C4) h in Tilled Iants (D1) Iants (D1) Ian	cept iving Roc Soils (C6) (LRR A		Vater-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) AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)

Project/Site: RTI Manchester		Citv/Count	v: Mancheste	er / MENDOCINO	_ Sampling Date:	? Oct 2018
				State: CA		200 A 2
A4 14/11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		20.00		nge:		
Landform (hillslope, terrace, etc.): Clasta knau					(mare Slope	: (%): 5
Subregion (LRR): <u>A:</u> Northwest Forests and Coast						
Soil Map Unit Name: 132 - Crispin loam, o						
Are climatic / hydrologic conditions on the site typical for the						
Are Vegetation, Soil, or Hydrology				Normal Circumstances"		No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If ne	eded, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing	sampli	ng point le	ocations, transects	s, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No No	ls t wit	Z Wetta the Sampled thin a Wetlar	Area Area Yes	No	
Remarks: Roadside slope adjacent to low-1		l season	ally pord	led area in field	d out of Right	-of-lugg.
VEGETATION – Use scientific names of pla		B	1 1. 0 1		1. I	
Tree Stratum (Plot size:)		Species	nt Indicator ? <u>Status</u>	Dominance Test wor Number of Dominant S That Are OBL, FACW,	Species	(A)
2 3				Total Number of Domi	nant / *	(B)
		_ = Total C	cover	Species Across All Str Percent of Dominant S That Are OBL, FACW,	Species	(B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index wo	rksheet:	
1				Total % Cover of:	Multiply	by:
2		() 		OBL species	x 1 =	
3				FACW species	x 2 =	
4				FAC species	x 3 =	4
5		= Total (FACU species	x 4 =	
Herb Stratum (Plot size: 2 × 10 ft_)		_ = Total C	Jover	UPL species	x 5 =	
1. Lotus angustissimus (non-native)	60	Y	UPL	Column Totals:	(A)	(B)
2. Rosa californica	10	N	FAC	Prevalence Inde	x = B/A =	
3. Plagio bothyrus undulatus *.	50	Y	OBL	Hydrophytic Vegetat		
4. Polypogon monospeliensis	1	N	FACW	1 - Rapid Test for	Hydrophytic Vegeta	tion
5			_	2 - Dominance Te		
6				3 - Prevalence Inc	dex is ≤3.0 ¹	
7				4 - Morphological	Adaptations ¹ (Provid ks or on a separate s	de supporting
8				5 - Wetland Non-Y		sneet)
9	Cherd D	1		Problematic Hydr		(Evalaia)
10. It Likely dominating in growing season by 11. during the dry season. Litus not incl	uded in do	numerice f	est_	¹ Indicators of hydric so be present, unless dis	oil and wetland hydro	ology must
	121	= Total C	over			0.
Woody Vine Stratum (Plot size:)				Cher Strate		
		·		Hydrophytic Vegetation		
2		- Total C			'es No	

= Total Cover

Disturbed from maintenance musing along roadway

% Bare Ground in Herb Stratum

0

Remarks:

rofile Description: (D		the deptr				or comm	in the absence	s or maleators.
DepthColor (i	Matrix moist)	%	Color (moist)	ox Feature %	s Type ¹	Loc ²	Texture	Remarks
0-10 IDYR.		99.5		0.5	C	m	loam	full of racks and cobble
0-16 104R 3	-	98	54R 4/0	2	C	m	Isan	from roadside prism
						_		· · · · · · · · · · · · · · · · · · ·
ype: C=Concentration ydric Soil Indicators: _ Histosol (A1) _ Histic Epipedon (A2	(Applicat	ble to all L	RRs, unless othe Sandy Redox Stripped Matri	erwise not (S5) x (S6)	ed.)		Indicat 2 c Re	cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ : m Muck (A10) d Parent Material (TF2)
 Black Histic (A3) Hydrogen Sulfide (A Depleted Below Da Thick Dark Surface Sandy Mucky Miner Sandy Gleyed Matri 	rk Surface ((A12) ral (S1) ix (S4)	(A11) _ - - -	Loamy Mucky Loamy Gleyed Depleted Matr Redox Dark S Depleted Dark Redox Depres	l Matrix (F2 ix (F3) urface (F6) s Surface (F	:)	t MLRA 1)	Oth ³ Indicat weth	y Shallow Dark Surface (TF12) her (Explain in Remarks) ors of hydrophytic vegetation and and hydrology must be present, ss disturbed or problematic.
Restrictive Layer (if pr	esent):							
Туре:							100.00.00.00	*
Depth (inches): temarks: On bottom of mated hydrophy	slope a	adjacen Auton,	A to seas Soils centain	ionally abunda	floode	ed (like		I Present? Yes <u>No</u> <u>No</u> rameter) wethed with obsides of roadside pricm.
emarks: On bottom of mated hydrophy (DROLOGY		adjacen tation,	A to seas Soils centrin	ionally abunda	floode at rock	ed (like ks from		rometer) wethod with obnices of roadside pricm.
temarks: On bottom of method hydrophy YDROLOGY Vetland Hydrology Ind	dicators:				flavde A rock	ed (like tes from "	ly 3- par building =	
emarks: On bottom of mated hydrophy (DROLOGY Vetland Hydrology Inc	dicators:		check all that app	oly)			ly 3- part building a	raweter) wethod with obrides of roadside prism.
emarks: On bottom of mated hydrophy YDROLOGY Vetland Hydrology Ind Primary Indicators (mini	dicators: mum of one		check all that app Water-St		es (B9) (e		ly 3- part building a	rameter) wethod with obrides of roadside pritm.
emarks: On bottom of mated hydrophy YDROLOGY Vetland Hydrology Ind rimary Indicators (mini Surface Water (A1)	dicators: mum of one		check all that app Water-St	bly) ained Leav A 1, 2, 4A, a	es (B9) (e		ly 3 - pau Swilding = <u>Secc</u> <u>×</u>	andary Indicators (2 or more required) Nater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Permarks: On bottom of mated hydrophy YDROLOGY Vetland Hydrology Ind rimary Indicators (mini- Surface Water (A1) High Water Table (/	dicators: mum of one		<u>check all that app</u> Water-St MLRA Salt Crus Aquatic II	oly) ained Leav A 1, 2, 4A, a ti (B11) nvertebrate	es (B9) (e and 4B) s (B13)		ly 3 - par Swilding = <u>Secc</u> <u>×</u> v 	andary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Con bottom of matka hydrophy YDROLOGY Vetland Hydrology Ind Primary Indicators (mini Surface Water (A1) High Water Table (/ Saturation (A3) Water Marks (B1) Sediment Deposits	dicators: mum of one A2)		<u>check all that app</u> Water-St Salt Crus Salt Crus Aquatic Ii Hydroger	oly) ained Leav A 1, 2, 4A, a tt (B11) nvertebrate n Sulfide Oo	es (B9) (¢ and 4B) es (B13) dor (C1)	except	ly 3 - par Swilding = <u>Secc</u> <u>×</u> v <u>×</u> v	meter) wethod with chrises of roadside pritm. Indary 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)
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Armarks: On bottom of mated hydrophy Armary Indicators (mining - Surface Water (A1) - High Water Table (A - Saturation (A3) - Water Marks (B1) - Sediment Deposits (B3) - Algal Mat or Crust (- Iron Deposits (B3) - Algal Mat or Crust (- Iron Deposits (B5) - Surface Soil Cracks - Inundation Visible of - Sparsely Vegetated - Sturface Water Present? - Surface Water Present? - Saturation Present?	dicators: mum of one (B2) (B2) (B2) (B2) (B2) (B2) (B2) (B2)	agery (B7) Surface (B8) Surface N	check all that app Water-St MLRA Salt Crus Aquatic li Hydroger Oxidized Presence Recent lr Stunted o Other (E) 3) bo X Depth (i bo X Depth (i	oly) ained Leav A 1, 2, 4A, a it (B11) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reduce on Reducti or Stressed xplain in Re nches):	es (B9) (e and 4B) es (B13) dor (C1) res along ed Iron (C- on in Tille Plants (D emarks)	Eliving Roo 4) ed Soils (Cf 01) (LRR A	$\frac{y - y - y}{y - y} = \frac{y}{y - y}$ $\frac{y - y}{y - y} = \frac{y}{y - y}$ $\frac{y}{y - y} = $	andary Indicators (2 or more required) Mater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Project/Site: RTI Manchester		City/County: Manchester / MENDOCINO	Sampling Date: 12, Oct 2018
Applicant/Owner: RTI / Caltrans, private			Sampling Point: 45
Investigator(s): M. Widdowson, J. Mayor		Section, Township, Range:	
Landform (hillslope, terrace, etc.):	terrace	Local relief (concave, convex) none):	Slope (%): 10
Subregion (LRR): A: Northwest Forests and	Coast Lat:	Long:	0.upo (16) Datum:
Soil Map Unit Name: 132 - Crispin 1	000, 0-5 70.0	opes NWI	
Are climatic / hydrologic conditions on the site Are Vegetation, Soil, or Hydro Are Vegetation, Soil, or Hydro SUMMARY OF FINDINGS – Attack	ology significantly ology naturally pr	v disturbed? Are "Normal Circumsta oblematic? (If needed, explain any	ances" present? Yes <u>//</u> No y answers in Remarks.)
Hydrophytic Vegetation Present?YeHydric Soil Present?Ye	es No es No es No	Is the Sampled Area	es No
VEGETATION – Use scientific nan	nes of plants		

Tree Stratum (Plot size:) 1	Absolute <u>% Cover</u>		nt Indicator ? <u>Status</u>	Dominance Test worksho Number of Dominant Spec That Are OBL, FACW, or F	ies .	(A)
1				Total Number of Dominant Species Across All Strata:	3	(B)
Sapling/Shrub Stratum (Plot size:)		= Total C		Percent of Dominant Speci That Are OBL, FACW, or F	AC: 33 10	(A/B)
1				Prevalence Index worksh Total % Cover of:		
2				OBL species		
				FACW species		
4				FAC species		
J		-		FACU species		
Herb Stratum (Plot size: 4×8 ft)		= Total C	over	UPL species		
1. Junius patens	50	Y	FACW	Column Totals:		
2. Brize maximas	50	Y	UPL			
3. Holeus laratis	41	N	FAC	Prevalence Index = E	3/A =	
4. Avena sp.	41	N	UPL	Hydrophytic Vegetation I		
5	1000	_		1 - Rapid Test for Hydr		n
6				2 - Dominance Test is		
7				3 - Prevalence Index is		
8		-		4 - Morphological Adap data in Remarks or	otations' (Provide :	supporting
9	-			5 - Wetland Non-Vascu	and the second second second	
10				Problematic Hydrophyt		nlain)
11			-	¹ Indicators of hydric soil and		
Charles of the assessed of	100	= Total Co	ver	be present, unless disturbe	d or problematic.	jy must
Woody Vine Stratum (Plot size: 4 × 8 ft)		i otar ot				
1. Rubus Ursinus	15	Y	FACU	Hydrophytic		
2 % Bare Ground in Herb Stratum	15	= Total Co	ver	Vegetation Present? Yes	No	-
Remarks:						

-	-		
	()		ь.
0	J	L	-

ofile Description: (Desc	ribe to the dep	oth needed to document the indicator or co	ninn the abser	
epth Mat		Redox Features		and the second se
nches) Color (mois		Color (moist) % Type ¹ Loo		Tooks and cobble (20%)
1-10 10YR 3/2	100		Dam	Taks we work (ours
			_	<u> </u>
vpe: C=Concentration, D	=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sa	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (A	pplicable to al	I LRRs, unless otherwise noted.)	mun	cators for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)		Stripped Matrix (S6)		Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Black Histic (A3)		Loamy Mucky Mineral (F1) (except MLF		Other (Explain in Remarks)
Hydrogen Sulfide (A4)	1.7.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	Loamy Gleyed Matrix (F2)		
_ Depleted Below Dark S		Depleted Matrix (F3)	³ Indi	icators of hydrophytic vegetation and
_ Thick Dark Surface (A1		— Redox Dark Surface (F6) Depleted Dark Surface (F7)		vetland hydrology must be present,
_ Sandy Mucky Mineral (Depleted Dark Surface (F7) Redox Depressions (F8)		inless disturbed or problematic.
_ Sandy Gleyed Matrix (S		Redux Depressions (10)		
estrictive Layer (if prese	enc).			
Туре:		/	1 Advantages	Soil Present? Yes No
			HVaric	Soll Presentry 165
Depth (inches): temarks: Road fill gravel a	ad cobble	prevented dep encavation	Нуапс	Soil Present? Yes No
emarks: Road fill gravel a	ad cubble	prevented dep encavation	нуапс	Soli Presentr Tes No
Road fill gravel of YDROLOGY		prevented dep excavation		
Road fill gave a YDROLOGY Vetland Hydrology Indica	ators:			Secondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimu	ators:	ed; check all that apply)	§	
YDROLOGY Vetland Hydrology Indica Surface Water (A1)	ators: m of one requir	ed; check all that apply) Water-Stained Leaves (B9) (excep	§	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimu Surface Water (A1) High Water Table (A2)	ators: m of one requir	ed; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)	§	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
YDROLOGY YDROLOGY Vetland Hydrology Indica Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3)	ators: m of one requir	ed; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	§	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY YDROLOGY Vetland Hydrology Indica Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ators: m of one requir	ed; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	§	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
YDROLOGY Vetland Hydrology Indica Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ators: m of one requir	ed; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	ot	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 (C Geomorphic Position (D2)
Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	ators: m of one requir 2)	ed; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir	ot	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 3 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3)
Road fill gravel of YDROLOGY YDROLOGY Vetland Hydrology Indicators (minimule) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4)	ators: m of one requir 2)	ed; check all that apply) — Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Livir — Presence of Reduced Iron (C4)	ot ng Roots (C3)	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 (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Appendix E Ordinary High Water Mark (OHWM) Delineation Datasheets

OHWM Del	ineation Cover Sheet	Page <u>1</u> of <u>9</u>
Project: MANCHESTER SUBSEA CABLES	Date:6/26/18	
Location: Manchester, Mendocino County_	Investigator(s):D. Jokerst, M.	Widdowson
Project Description:		
Delineation for fiber cable installation project along SR 1 and som	e adjacent properties	
Describe the river or stream's condition (disturbances,	, in-stream structures, etc.):	
Perennial streams are in functioning condition. Some roa	dside non-wetland waters are disturbed from roadsid	e maintenance.
Off site Information		
Off-site InformationRemotely sensed image(s) acquired?XYesNolocations of transects, OHWM, and any other features of i		
Aerial		
Hydrologic/hydraulic information acquired? Yes below.] Description:	No [If yes, attach information to da	tasheet(s) and describe
List and describe any other supporting information re-	ceived/acquired:	
Instructions: Complete one cover sheet and one or more datasheet characteristics of the OHWM along some length of a given stream.	. Complete enough datasheets to adequately do	ocument up- and/or
downstream variability in OHWM indicators, stream conditions, et coordinates noted on the datasheet.	c. Transect locations can be marked on a recei	it aerial image or their GPS

Datasheet # PM	23.74	OHW	M Delineation D	atasheet		Page <u>2</u> of <u>9</u>
Transect (cross-s some distance; lab						haracteristics over of transect length)
						/
		L	/			
	de carlos			1		Sheet 1
Break in Slope at Notes/Description		Sharp (> 60°) [Moderate (30–	60°) 🗌 Gentle	e (< 30°) [] None
riotes, Description						
Sediment Texture	e: Estimate perc	entages to describ	e the general sedi	ment texture abov	e and below the	ne OHWM
	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	-loa		Ziiiii iciii	1 Toom	> Toem	Y
Below OHWM	1100	m				N
Vegetation: Estir	nate absolute per	rcent cover to desc	ribe general vege	tation characterist	ics above and	below the OHWM
	Tree (%)		Herb (%)			
Above OHWM	90	5D	60	40	Salix	, Rubus wit
Below OHWM		-		100		
Notes/Description	se shade	of Salix				
Not	hing i cha	nnel				
					used to support	t your delineation
Other Evidence:	List/describe an	v additional field	evidence and/or m	nes of reasoning t		i your defineation
Other Evidence:				1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	ised to support	your defineation
				1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		your defineation
		y additional field		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		your donnearion
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				1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	ised to support	
				1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	ised to support	

Datasheet #

OHWM Delineation Datasheet

Page <u>3</u> of <u>9</u>

M Assessm	nent regi	ires tre 10-12'e		outoide	Row, de	23.74 ense vegetet
Break in Slope at Notes/Description:		Sharp (> 60°)	Moderate (30–	.60°) 🗌 Gen	tle (< 30°) [Sheet None
Padiment Texture	. Entimote and	antages to descri	he the general as d	mont toyture al-	and holow f	he OHWM
Sediment Texture	Clay/Silt	Sand	Gravel	Cobbles	Boulders	Developed Soil
	<0.05mm	0.05 - 2mm	2mm – 1cm	1-10 cm	>10cm	Horizons (Y/N)
Above OHWM	Obs	curred by	regetation			
Below OHWM	70	15			15	
Vegetation: Estim	nate absolute per Tree (%)	ccent cover to des	scribe general vege Herb (%)	tation character Bare (%	the second se	below the OHWM
Above OHWM	95	60	40			3
Below OHWM	1	1		100		
Notes/Description:	Ly Salix Lasiolepi	K.p	arsinus arviflorus	P. minut Marah	lum	
		1111 1 1 1 1	I and day as and/au 12	ines of reasoning	used to suppor	t your delineation
Other Evidence:	List/describe an	y additional field	i evidence and/or in	nes of reasoning		t your definication

D-4-14.11	
Datasheet #	

OHWM Delineation Datasheet

Page 4 of 9

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length) E5-1 TOB OHWMS 2 Deeply huser, roadsile scorment Sheet 1 Break in Slope at OHWM: \square Sharp (> 60°) \square Moderate (30–60°) \square Gentle (< 30°) None Notes/Description: Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM Clay/Silt Cobbles Boulders **Developed** Soil Sand Gravel <0.05mm 0.05 - 2mm2mm - 1cm1-10 cm >10cm Horizons (Y/N) 40 30 20 10 Above OHWM 5 40 15 Below OHWM 40 Notes/Description: Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM Tree (%) Shrub (%) Herb (%) Bare (%) 70 Above OHWM 25 50 Below OHWM Notes/Description: Anthonoxum Jeratum 67 Rubus ursinus Polychehom munitur Toxi codende livers lobium Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation Scone, sediment sorting, change - soil + vegetation

RTI Manchester **OHWM Delineation Datasheet** Page 5 of 9 Datasheet # Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length) PM 22.92 Culvert, Ephenneral Stream ES-2 2' wide, in asid below advert Sheet 3 24 Break in Slope at OHWM: \square Sharp (> 60°) \square Moderate (30–60°) \square Gentle (< 30°) \square None Notes/Description: Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM Cobbles **Developed** Soil Clay/Silt Boulders Sand Gravel 1 - 10 cm>10cm Horizons (Y/N) <0.05mm 0.05 - 2mm2mm - 1cmgo loam. Above OHWM 30 N 50 40 Below OHWM 20 Notes/Description: Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM Herb (%) Shrub (%) Bare (%) Tree (%) Above OHWM 8D 0 40 D 0 D 100 Below OHWM D Notes/Description: Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation Scow, change i vegetation, sals, sediment sorting

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Datasheet #		OHW	M Delineation I	Datasheet	-	Page <u>6</u> of <u>9</u>
some distance; lab	el the OHWM a		of interest along t			haracteristics over of transect length) Sheet 4
Bridge Abutment						overflow
OHWM 7	1. Low F	low chamed Sharp (> 60°)		4.		overflow
Notes/Description: Sediment Texture	e: Estimate pero Clay/Silt	Sand	Gravel	Cobbles	Boulders	Developed Soil
	<0.05mm	0.05 – 2mm	2mm - 1cm	1-10 cm	>10cm	Horizons (Y/N)
Above OHWM	-	loan -	-	6		Y
Below OHWM		15	40	30	5	
Above OHWM	Tree (%)	rcent cover to dese Shrub (%)	cribe general veg Herb (%)	Bare (%	80	below the OHWM
Below OHWM	100			~100		
Other Evidence: Wa	Alnus nut List/describe ar wtCr frese road are	ent i low f a below O	evidence and/or I Cow chan HWM wit	ines of reasoning vel. Lgravel,	used to suppor	t your delineation
Of abutmen		miterstic	s present	: hrater m		brage

Datasheet #

OHWM Delineation Datasheet

Page <u>7</u> of <u>9</u>

Transect (cross-so some distance; lab						
		m = Unna 5 under SR-				
Chife Moo			1 - abl	The sectore 7	t or itil	< ~ 1
PM 22.9-	f. Crosse	s under SK-	-1 h 00h	ne anter	i paravel	s roza
			5			
		1 4 Fe	iet 1			Sheet 6
Break in Slope at Notes/Description:		Sharp (> 60°) [] None
Sediment Texture						
	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles $1 - 10$ cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM		O To loam		1 1000		×
Below OHWM	195		5			N
Notes/Description:			-			
Vegetation: Estin	nate absolute per Tree (%)	cent cover to descr Shrub (%)	ibe general vege Herb (%)	etation characteri Bare (%		below the OHWM
Above OHWM		100				
Below OHWM		100				
Notes/Description	ce Salix	canopy, no	t rooted	below OH	WM	
Other Evidence: OHVV Se		y additional field e tenshis; Satting				

RTI, Manchester

Datasheet #		OHWI	M Delineation I	Datasheet		Page 8 of 9
Transect (cross-so some distance; lab	el the OHWM a	nd other features o	of interest along the			
Brush G L. Bann	reek Pe	erennial S	stream			R bank
		755	(
715				~	-15	
X						
Bridge	7				Ne	Conte
Bridge Abutment		Am	A		X	('sack-crete') imporcement
			obble	low-flow the		
Break in Slope at	OHWM:	Sharp (> 60°) [Moderate (30-	-60°) [] Gentl	e (< 30°) ∟] None
Notes/Description:	OHWM I	s or abut	ments or	born ba	nks at br	dge
Sediment Texture						
	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles $1 - 10$ cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM		or loan -			1000	Y ₍
Below OHWM	10	10	10	50	20	N
Notes/Description:	C	* C				
).					
			A.	an start		
Vegetation: Estin	nate absolute per	cent cover to desc	cribe general vege	etation characteris	tics above and	below the OHWM
	Tree (%)	Shrub (%)	Herb (%)	Bare (%)	0)	
Above OHWM	50	70	50	50	Drech	ans - Rubus us,
Below OHWM	50	40	20	80		
Notes/Description:		in the lost	and other	Λ		
Open	- Almus	nubra bel	ion vinn			
Other Evidence:	List/describe an	y additional field	evidence and/or l	ines of reasoning	used to suppor	t your delineation
E.	alunc h	rater 9/2	8/2018	Stelinia	Scour	
1	the stage of the	101-111	0/00.0.	ciating	,	
Sed.	ment sort	hàn				
				C		
Lo	n flow c	hannels	at both	sides, ~	- 10 Ft v	nde

Datasheet #

OHWM Delineation Datasheet

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length) Perennial Stream = Manchester = Unnamed Stream 4 PM 20.62 6 Ft Segment E (upstrean) of SR 1 Sheet 12 Break in Slope at OHWM: Sharp (> 60°) | Moderate (30–60°) | Gentle (< 30°) | None Notes/Description: Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM Clay/Silt Sand Gravel Cobbles Boulders Developed Soil <0.05mm 0.05 - 2mm1-10 cm Horizons (Y/N) 2mm - 1cm>10cm Above OHWM Below OHWM Notes/Description: Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM Herb (%) Tree (%) Shrub (%) Bare (%) Above OHWM 100 DO Below OHWM Notes/Description: Dense should tree layer - Salix Usileps, Rubus paraflons, Rubus wising ". Rooted above Other Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation OHWM characteristics: Scour, Shelning, change in Soil, cediment sorting, change i veg

Appendix F Representative Photographs

Appendix F Representative Photographs



Photograph 1: Cable landing parcel, showing flat topography and velvet grass-dominated areas of meadow; facing east (June, 26, 2018)



Photograph 2: Cable landing parcel; facing west toward Pacific Ocean, visible in distance (June 27, 2018)



Photograph 3: Cable landing parcel, view of wetland complex from State Route 1 fence line, showing patches dominated by rush at locations of sampling points 29, 30, 31, and 32; facing northwest (June 27, 2018)



Photograph 4. Cable landing parcel wetland complex, showing surveyor investigating sampling point 27 in small emergent wetland; facing west (June 27, 2018)



Photograph 5: Roadside ditch D-1a along east side of State Route 1; facing south (June 27, 2018)



Photograph 6: Roadside ditch D-1a at culvert under residence access road; facing north (July 31, 2018)



Photograph 7: Roadside ditch D-1b that flows to Unnamed Stream 1, an intermittent stream IS-1 in far distance; facing south (July 31, 2018)



Photograph 8: Unnamed Stream 1, IS-1, a deeply down cut intermittent stream under dense willow canopy; facing southwest (July 31, 2018)



Photograph 9: Emergent wetland EW-4, with dense willow canopy associated with Unnamed Stream 1 visible in background, near location of sampling point 10.



Photograph 10: Facing south, emergent wetland EW-4 with Roadside ditch D-3 in background on east side of State Route 1 (June 27, 2018)



Photograph 11: Emergent wetland EW-4 near locations of sampling points 6 and 7; facing south (April 4, 2018)



Photograph 12: Upper end of Roadside ditch D-3 near location of sampling points 8 and 9, facing south (April 4, 2018)



Photograph 13: Seasonal wetland SW-1, facing north, formed on compacted soils in a pull out; this feature and similarly situated feature SW-2 lacked hydric soils (see sampling points 2 and 3) (June 27, 2018)



Photograph 14: View south on State Route 1, emergent wetlands EW-5 and EW-6 are located on road shoulder on east side of road (April 4, 2018)



Photograph 15: Facing north, riparian canopy dominated by red alder, associated with Unnamed Stream 2 (July 31, 2018) (Note: Unnamed Stream 2 does not surface in the survey area.)



Photograph 16: Willow canopy, associated with perennial stream PS-1, facing northeast (September 28, 2018)



Photograph 17: Emergent wetland EW-7 in stream channel at location of sampling points 21, 22, and 23 (2018 Field Season)



Photograph 18 Alder Creek bridge, showing dense alder- and willow-dominated riparian forest, facing south (July 31, 2018)



Photograph 19: Alder Creek viewed from State Route 1 bridge, showing cobble channel; facing southwest (April 4, 2018)



Photograph 20: Alder Creek bridge showing dense riparian forest canopy associated with Alder Creek, facing north (April 4, 2018)



Photograph 21: Valley of Alder Creek, with scrub shrub willows associated with the floodplain of Alder Creek; facing north (April 4, 2018)



Photograph 22: Intermittent stream IS-2a, which flows along east side of State Route 1 into Unnamed Stream 3, an intermittent stream (IS-3); facing north (September 28, 2018)



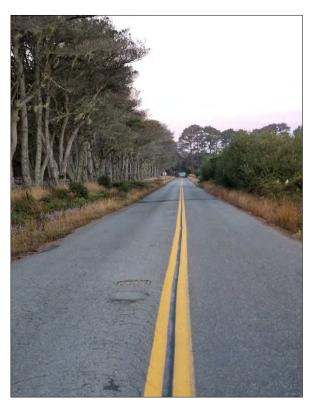
Photograph 23: Channel of intermittent stream IS-3 (Unnamed Stream 3) showing distinct bed and bank with scour, sediment deposition, and water marks visible at the ordinary high water mark; facing north (September 28, 2018)



Photograph 24: View of scrub shrub willows on left (west side of State Route 1 [SR-1]) and right (east side of SR 1) associated with Unnamed Stream 3, facing north (September 28, 2018) (Note: Intermittent stream IS-2a flows along east of SR 1 in upper right of picture).



Photograph 25: View of scrub shrub willows associated with Unnamed Stream 3, facing north (September 28, 2018)



Photograph 26: Kinney Road viewed from junction with State Route 1, showing nonnative pines on south (left) and scrub shrub willows along north side of Kinney Road; facing west (September 12, 2018)



Photograph 27: Intermittent stream IS-4a, channeled along south side of Kinney Road; facing west (October 12, 2018)



Photograph 28. Willow canopy associated with intermittent stream IS-4b along north side of Kinney Road near junction with State Route 1, facing north (October 12, 2018)

RTI Infrastructure, Inc.



Photograph 29: Willow canopy associated with intermittent stream IS-4 along north side of Kinney Road near junction with State Route 1, facing northeast (October 12, 2018)



Photograph 30: Emergent wetland EW-9 at location of sampling point 41 on road shoulder, on south side of Kinney Road; facing west (October 12, 2018)



Photograph 31: Brush Creek, showing dense riparian forest canopy dominated by red alder and willows; facing north (September 12, 2018)



Photograph 32: Brush Creek, showing dense riparian forest canopy dominated by red alder and willows; facing south (April 4, 2018)



Photograph 33: Channel of Brush Creek dominated by cobble, under dense riparian red alder forest canopy (April 4, 2018)



Photograph 34: Unnamed Stream 4 (perennial stream PS-5) in Manchester, showing small patch of willows on east side of State Route 1 associated with the stream (October 12, 2018)



Photograph 35: Roadside ditch D-7 along east side of State Route 1 at south end of Manchester, facing north (October 12, 2018)

Appendix G Plant Species Observed in the Biological Survey Area

Scientific Name ^a	Common Name	Wetland Indicator Status ^b
Ferns		
Dennstaedtiaceae	Bracken family	
Pteridium aquilinum var. pubescens	Bracken fern	FACU
Dryopteridaceae	Wood Fern Family	
Dryopteris arguta	Coast woodfern	FACU
Polystichum munitum	Sword fern	FACU
Equisetaceae	Horsetail Family	
Equisetum arvense	Common horsetail	FAC
Equisetum telmateia subsp. braunii	Giant horsetail	FACW
Polypodiaceae	Polypody Family	
Polypodium sp.	Polypody fern	
Pteridaceae	Brake Family	
Adiantum aleuticum	Five-finger fern	FAC
Pentagramma triangularis	Goldenback fern	UPL
Gymnosperms		
Cupressaceae	Cypress Family	
Hesperocyparis macrocarpa	Monterey cypress	UPL
Pinaceae	Pine Family	
Picea sitchensis	Sitka spruce	FAC
Pinus contorta	Lodgepole pine	UPL
Pinus radiata	Monterey pine	UPL
Pseudotsuga menziesii var. menziesii	Douglas-fir	FACU
Eudicots		
Adoxaceae	Muskroot Family	
Sambucus racemosa	Red elderberry	FACU
Aizoaceae	Iceplant Family	
Carpobrotus chilensis	Sea fig	FAC
Carpobrotus edulis	Iceplant	UPL
Anacardiaceae	Sumac Family	
Toxicodendron diversilobum	Poison-oak	FAC
Apiaceae	Carrot Family	
Conium maculatum	Poison hemlock	FAC
Daucus pusillus	Rattlesnake weed	UPL
Foeniculum vulgare	Fennel	UPL
Heracleum maximum	Common cowparsnip	FAC
Oenanthe sarmentosa	Water parsley	OBL

Scientific Name ^a	Common Name	Wetland Indicator Status ^b
Apocynaceae	Dogbane Family	
Vinca major	Periwinkle	UPL
Asteraceae	Sunflower Family	
Achillea millefolium	Yarrow	FACU
Agoseris heterophylla var. heterophylla	Annual agrostis	UPL
Anaphalis margaritacea	Pearly everlasting	FACU
Anthemis cotula	Dog fennel	FACU
Artemisia douglasiana	California mugwort	FACW
Baccharis pilularis	Coyote brush	UPL
Carduus pycnocephalus	Italian thistle	UPL
Centaurea solstitialis	Yellow star-thistle	UPL
Cirsium vulgare	Bull thistle	FACU
Corethrogyne filaginifolia	Common sandaster	UPL
Crepis capillaris	Smooth hawksbeard	FACU
Delairea odorata	Cape ivy	UPL
Erigeron canadensis	Sneezeweed	FACU
Erigeron glaucus	Seaside daisy	FACU
Eriophyllum lanatum	Woolly sunflower	UPL
Eriophyllum staechadifolium	Lizard tail	UPL
Grindelia stricta var. stricta	Coastal gum plant	FACW
Helminthotheca echioides	Bristly ox-tongue	FAC
Hypochaeris glabra	Smooth cats ear	UPL
Hypochaeris radicata	Rough cat's ear	FACU
Lactuca saligna	Willow lettuce	FACU
Lactuca serriola	Prickly lettuce	FACU
Leontodon saxatilis	Hawkbit	FACU
Leucanthemum vulgare	Ox eye daisy	FACU
Madia sativa	Coastal tarweed	UPL
Matricaria discoidea	Pineapple weed	FACU
Psilocarphus brevissimus	Woolly marbles	FACW
Senecio glomeratus	Cutleaf burnweed	UPL
Senecio minimus	Coastal burnweed	FACU
Senecio vulgaris	Common groundsel	FACU
Silybum marianum	Milk thistle	UPL
Sonchus oleraceus	Sow thistle	UPL
Symphyotrichum chilense	Pacific aster	FAC
Symphyotrichum subspicatum	Douglas aster	FACW
Taraxacum officinale	Red-seeded dandelion	FACU
Betulaceae	Birch Family	
Alnus rubra	Red alder	FAC
Boraginaceae	Borage Family	
Plagiobothrys undulatus	Coast allocarya	OBL

Scientific Name ^a	Common Name	Wetland Indicator Status
Brassicaceae	Mustard Family	
Brassica rapa	Common mustard	FACU
Raphanus sativus	Jointed charlock	UPL
Sinapis arvensis	Charlock	UPL
Caprifoliaceae	Honeysuckle Family	
Lonicera hispidula	Pink honeysuckle	FACU
Lonicera involucrata var. ledebourii	Twinberry honeysuckle	FAC
Caryophyllaceae	Pink Family	
Polycarpon tetraphyllum	Four leaved allseed	UPL
Spergularia rubra	Purple sand spurry	FAC
Stellaria media	Chickweed	FACU
Convolvulaceae	Morning-Glory Family	
Calystegia purpurata subsp. purpurata	Pacific false bindweed	UPL
Convolvulus arvensis	Field bindweed	UPL
Crassulaceae		
Dudleya farinosa	Bluff lettuce	UPL
Euphorbiaceae	Spurge Family	
- Euphorbia lathyris	Gopher plant	UPL
Euphorbia peplus	Petty spurge	UPL
Fabaceae	Pea Family	
Acmispon americanus var. americanus	Spanish lotus	FACU
Cytisus scoparius	Scotch broom	UPL
Cytisus scoparius	Scotch broom	UPL
Hosackia gracilis	Harlequin lotus	FACW
Lathyrus hirsutus	Caley pea	FAC
Lathyrus polyphyllus	Oregon pea	UPL
Lotus angustissimus	Slender lotus	UPL
Lotus corniculatus	Birdfoot trefoil	FAC
Lupinus albifrons var. collinus	Silver bush lulpine	UPL
Lupinus arboreus	Yellow bush lupine	UPL
Medicago lupulina	Black medic	FACU
Medicago polymorpha	Common burclover	FACU
Melilotus albus	White sweetclover	FACU
Melilotus indica	Annual yellow sweet clover	FACU
Trifolium campestre	Hop clover	UPL
Trifolium dubium	Suckling clover	FACU
Trifolium fragiferum	Strawberry clover	FACU
Trifolium glomeratum	Clustered clover	UPL
Trifolium hirtum	Rose clover	UPL
Trifolium pratense	Red clover	FACU
Trifolium repens	White clover	FAC
Trifolium variegatum var. major	Large variegated clover	FAC

Scientific Name ^a	Common Name	Wetland Indicator Status ^t
Vicia benghalensis	Purple vetch	UPL
Vicia gigantea	Giant vetch	FACU
Vicia lutea	Yellow vetch	UPL
Vicia sativa subsp. nigra	Smaller common vetch	FACU
Vicia sativa subsp. sativa	Common vetch	FACU
Vicia villosa subsp. varia	Smooth vetch	FACU
Garryaceae	Silk Tassel Family	
Garrya elliptica	Coast silk tassel	UPL
Geraniaceae	Geranium Family	
Geranium core-core	Alderney crane's bill	UPL
Geranium dissectum	Cutleaf geranium	UPL
Pelargonium grossularioides	Gooseberry geranium	UPL
Grossulariaceae	Gooseberry Family	
Escallonia rubra	Red claws	UPL
Lamiaceae	Mint Family	
Mentha pulegium	Pennyroyal	OBL
Stachys rigida var. quercetorum	Rough hedgenettle	FACW
Linaceae	Flax Family	
Mentha pulegium	Pennyroyal	OBL
Montiaceae	Miner's Lettuce Family	
Claytonia perfoliata	Miner's lettuce	FAC
Myricaceae	Mulberry Family	
Morella californica	California wax myrtle	FACW
Myrsinaceae	Myrsine Family	
Lysimachia arvensis	Scarlet pimpernel	FAC
Myrtaceae	Myrtle Family	
Eucalyptus globulus	Blue gum	UPL
Onagraceae	Evening-Primrose Family	
Clarkia purpurea subsp. quadrivulnera	Purple clarkia	UPL
Clarkia rhomboidea	Tongue clarkia	UPL
Epilobium campestre	Smooth boisduvalia	OBL
Epilobium densiflorum	Willow herb	FACW
Orobanchaceae	Broomrape Family	
<i>Castilleja affinis</i> subsp <i>. affinis</i>	Coast Indian paintbrush	UPL
Castilleja mendocinensis	Mendocino coast paintbrush	UPL
Parentucellia viscosa	Yellow parentucellia	FAC
Oxalidaceae	Oxalis Family	
Oxalis pes-caprae	Bermuda buttercup	UPL
Lythraceae	Loosestrife Family	
Lythrum hyssopifolia	Hyssop loosestrife	OBL
	nyssop loosesti lie	ODL

Scientific Name ^a	Common Name	Wetland Indicator Status ^b
Papaveraceae	Poppy Family	
Eschscholzia caespitosa	Tufted eschscholzia	UPL
Eschscholzia californica	California poppy	FACU
Phrymaceae	Lopseed Family	
Diplacus aurantiacus var. aurantiacus	Bush monkeyflower	UPL
Erythranthe guttata	Seep spring monkeyflower	OBL
Plantaginaceae	Plantain Family	
Kickxia elatine	Sharp-leaved fluellin	FAC
Plantago lanceolata	English plantain	FACU
Plantago subnuda	Tall coastal plantain	FACW
Veronica americana	American brooklime	OBL
Veronica arvensis	Speedwell	FACU
Polemoniaceae	Phlox Family	
Navarretia pubescens	Purple navarretia	UPL
Polygonaceae	Buckwheat Family	
Eriogonum latifolium	Coast buckwheat	UPL
Polygonum aviculare	Prostrate knotweed	FAC
Rumex crassus	Willow leaved dock	FACW
Rumex crispus	Curly dock	FAC
Rumex transitorius	Willow dock	FACW
Eriogonum latifolium	Coast buckwheat	UPL
Rhamnaceae	Buckthorn Family	
Ceanothus thyrsiflorus var. griseus	Carmel ceanothus	UPL
Frangula californica ssp. californica	California coffeeberry	UPL
Rosaceae	Rose Family	
Cotoneaster hodjingensis	Earthquake cotoneaster	UPL
Cotoneaster pannosus	Woolly cotoneaster	UPL
Horkelia californica var. californica	California horkelia	UPL
Potentilla anserina	Silver weed cinquefoil	OBL
Pyracantha sp.	Firethorn	UPL
Rosa californica	California rose	FAC
Rubus armeniacus	Himalayan blackberry	FAC
Rubus parviflorus	Thimbleberry	FACU
Rubus spectabilis	Salmon berry	FAC
Rubus ursinus	California blackberry	FACU
Rubiaceae	Madder Family	
Galium aparine	Cleavers	FACU
Sherardia arvensis	Field madder	UPL

Scientific Name ^a	Common Name	Wetland Indicator Status ^b
Salicaceae	Willow Family	
Salix hookeriana	Dune willow	FACW
Salix lasiandra	Shining willow	FACW
Salix lasiolepis	Arroyo willow	FACW
Salix scouleriana	Scouler willow	FAC
Salix sitchensis	Sitka willow	FACW
Sapindaceae	Soapberry Family	
Acer macrophyllum	Bigleaf maple	FACU
Scrophulariaceae	Figwort Family	
Scrophularia californica	California beeplant	FAC
Solanceae	Nightshade Family	
Solanum americanum	White nightshade	FACU
Urticaceae	Nettle Family	
Urtica dioica	Stinging nettle	FAC
Monocots		
Agavaceae	Century Plant Family	
Chlorogalum pomeridianum var. divaricatum	Spreading soap plant	UPL
Amaryllidaceae		
Nerine bowdenii	Nerine lily	UPL
Cyperaceae	Sedge Family	
Carex obnupta	Slough sedge	OBL
Carex praegracilis	Field sedge	FACW
Carex tumulicola	Foothill sedge	FACU
Cyperus eragrostis	Tall flat sedge	FACW
Cyperus involucratus	Umbrella sedge	FACW
Isolepis cernua	Low bulrush	OBL
Scirpus microcarpus	Mountain bog bulrush	OBL
Carex obnupta	Slough sedge	OBL
Iridaceae	Iris Family	
Iris douglasiana	Douglas iris	UPL
Sisyrinchium bellum	Blue-eyed grass	FACW
Juncaceae	Rush Family	
Iris douglasiana	Douglas iris	UPL
Sisyrinchium bellum	Blue-eyed grass	FACW
Juncus balticus	Baltic rush	FACW
Juncus bolanderi	Bolander's rush	OBL
Juncus bufonius var. bufonius	Toad rush	FACW
Juncus capitatus	Leafy-bracted dwarf rush	FACU
Juncus effusus	Soft rush	FACW
Liliaceae	Lily Family	
Agapanthus africanus	Lily of the Nile	UPL

Scientific Name ^a	Common Name	Wetland Indicator Status ^t
Poaceae	Grass Family	
Agrostis capillaris	Colonial bentgrass	FAC
Agrostis capillaris	Redtop	FAC
Ammophila arenaria	European beachgrass	FACU
Anthoxanthum odoratum	Sweet vernal grass	FACU
Arrhenatherum elatius	Tall oatgrass	UPL
Avena fatua	Wild oat	UPL
Briza maxima	Quaking grass	UPL
Briza minor	Little quaking grass	FAC
Bromus diandrus	Ripgut brome	UPL
Bromus hordeaceus	Soft chess	FACU
Calamagrostis nutkaensis	Pacific reedgrass	FACW
Cynodon dactylon	Bermuda grass	FACU
Cynosurus echinatus	Hedgehog dog-tail grass	UPL
Dactylis glomerata	Orchard grass	FACU
Danthonia californica	California oatgrass	FAC
Elymus caput-medusae	Medusa-head	UPL
Elymus elymoides	Squirreltail grass	FACU
Elymus glaucus	Blue wildrye	FACU
Elymus trachycaulus subsp. trachycaulus	Slender wheatgrass	FAC
Festuca bromoides	Brome fescue	FAC
Festuca myuros	Rattail sixweeks grass	FACU
Festuca perennis	Perennial ryegrass	FAC
Gastridium phleoides	Nitgrass	FACU
Holcus lanatus	Common velvet grass	FAC
Hordeum marinum subsp. gussoneanum	Mediterranean barley	FAC
Hordeum murinum subsp. leporinum	Farmer's foxtail	FAC
Paspalum dilatatum	Dallis grass	FAC
Poa pratensis	Kentucky blue grass	FAC
Polypogon monspeliensis	Annual rabbit's-foot grass	FACW
Rumex acetosella	Sheep sorrel	FACU
Rytidosperma penicillatum	Purple-awned wallaby grass	UPL
Themidaceae	Broadiaea Family	
Triteleia laxa	Ithuriel's spear	UPL

online by the Jepson Flora Project (2018).

^b Wetland plant indicator statuses follow the *National Wetland Plant List* (Lichvar et al. 2016).

WETS Station: FORT BRAGG 5 N, CA

Requested years: 1900 -2018

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	55.2	39.8	47.5	7.70	4.54	9.35	11	0.1	
Feb	56.4	40.7	48.5	6.02	3.49	7.32	9	0.0	
Mar	57.4	41.6	49.5	5.46	3.35	6.61	10	0.0	
Apr	59.0	42.9	50.9	2.97	1.60	3.61	6	0.0	
May	61.3	45.7	53.5	1.42	0.58	1.69	3	0.0	
Jun	63.8	48.2	56.0	0.62	0.19	0.71	2	0.0	
Jul	64.9	49.3	57.1	0.10	0.04	0.10	0	0.0	
Aug	65.2	49.6	57.4	0.25	0.04	0.21	0	0.0	
Sep	65.6	49.0	57.3	0.58	0.15	0.65	1	0.0	
Oct	63.3	46.6	54.9	2.59	1.13	3.07	4	0.0	
Nov	59.1	43.3	51.2	5.39	3.08	6.54	9	0.0	
Dec	55.5	40.4	48.0	7.08	4.05	8.61	11	0.0	
Annual:					34.68	45.31			
Average	60.6	44.8	52.7	-	-	-	-	-	
Total	-	-	-	40.16			66	0.1	

GROWING SEASON DATES

Years with missing data:	24 deg = 46	28 deg = 46	32 deg = 47
Years with no occurrence:	24 deg = 73	28 deg = 65	32 deg = 2
Data years used:	24 deg = 73	28 deg = 73	32 deg = 72
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	No occurrence	No occurrence	2/25 to 12/12: 290 days
70 percent *	No occurrence	No occurrence	2/12 to 12/25: 316 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
1895					1.90	0.05	M0.40	0.02	M3. 40	0. 09	M2. 55	M4. 84	13. 25
1896	M10.02	M2.97	M4.64	M6.06	M4.88		0.04	M0.19	M0. 47	M1. 39	M7. 61	M9. 53	47. 80
1897	M2.66	M11.31	M6.27	M1.28	M0.62	M1.04	0.01	0.11	M1. 15	M2. 75	M2. 92	M2. 28	32. 40
1898	M1.46	M7.50	0.79	M1.09	M4.03	0.25			1. 77	M1. 51	M3. 09	M2. 14	23. 63
1899	M9.98	M0.62	M8.83	M1.05						4. 38	M13. 06	6.23	44. 15
1900	M3.44	M2.37	M3.85										9.66
1901													
1902	M2.50	M14.84	5.93	4.76	M1.97			Т		M2. 90	10. 66	7.05	50. 61
1903	8.54	2.16	5.37	MT							M5. 98	M3. 39	25. 44

1904	M4.91	M15.15	M12.41	4.10					2. 55	M3. 97	M3. 96	M5. 84	52. 89
1905	8.42	1.68	7.97	0.67	4.24					0. 81	4.09	3.38	31. 26
1906	10.12	4.81		0.65	4.33	1.13	0.00	0.00	0. 18	0. 00	M1. 55	9.82	32. 59
1907	M5.76	10.36	13.07									M10. 68	39 87
1908	7.73	5.32	1.43	0.70	2.12	0.00	0.00	0.00	0. 16	2. 42	4.34	M3. 55	27 77
1909	27.02	12.45	5.27	0.00	0.28	0.20	0.00	M0.00	1. 80	4. 02	10. 30	5.23	66 57
1910	M7.91	6.85	4.04	2.82	0.45	0.50			T	1. 20	5.02	2.30	31 09
1911	M10.69	M4.18	3.89	2.80	M1.62				0. 25	1. 71	M2. 17	5.36	32 67
1912	M8.29	2.86	M3.49	4.18	1.41	0.88			3. 80	2. 85	7.11	5.30	40 17
1913	8.49	0.56	2.89	2.93	1.07	0.50	0.15	0.10	0. 23	1. 38	7.34	11. 18	36
1914	17.91	5.64	3.17	3.17	0.79	1.80			0.	4.	M2.	7.13	46
1915	14.57	17.39	3.75	1.03	4.38				23	19 0.	70 M4.	7.76	73 53
1916	M14.70	M4.97	3.19	M0.85	0.76	2.14	M0.96	0.16	M0.	31 T	17 M4.	5.28	36
1917	M3.77	M8.84	M2.55	M4.03	0.95				11 M1.		79 M4.	M2.	91 28
1918	M2.44	6.24	3.52	M1.89		M0.12	MT		30 M2.	M1.	64 M3.	19 M5.	27 27
1919	M9.29	M10.78	M6.35	M2.35	M0.44	M0.04			85 M1.	67 M0.	58 M2.	07 M4.	38 37
1920	M0.45	M1.62	M5.36	M3.10		M1.05	M1.42	MT	29 M1.	08 5.	25 M11.	32 M12.	19 42
1921	M9.46	4.10	M5.20	M0.68	1.57	M0.29			11 M0.	30 M1.	06 M4.	23 M5.	70 33
1922	M2.51	M7.03	M6.00	M1.25	M0.82	M0.08			63 M0.	37 M4.	71 M3.	90 M9.	91 35
1923	M3.85	M1.53	M0.88	M4.40	M0.85	M0.82		M0.23	41 M1.	80 M1.	11 M2.	45 2.94	46 21
1924	M3.24	3.86	1.53	M0.22	0.08			M0.25	49 0.	96 7.	26 4.39	M7.	21 28
1925	M3.03	M12.56	M2.62	M6.05	4.60			M0.35	22 M1.	14 M1.	M5.	23 M3.	16 39
1926	7.09	M7.14	0.52	M3.14	M1.48				51 M1.	11 1.	03	09 M3.	95 37
1927	10.61	M11.30	M6.71	1.76	0.39	0.41			13	74 1.	11 8.60	79 5.99	14 48
1928	M5.03	3.76	7.06	3.55	0.25	0.11	т		36 0.	95 M1.	5.56	6.33	08
1928	M3.03	4.07	2.34	1.76	M0.66	2.31	I		31	34 M0.	5.50	0.33 M9.	19 25
						2.31			1	33	140	03	27
1930	M6.10	M5.64	2.32	2.78	0.64	0.00			1. 43	0. 39	M2. 14	2.17	23 61
1931	6.16	2.37	3.39	1.01	1.41	0.62			0. 10	2. 31	3.77	M10. 81	31 95
1932	6.84	0.55	1.50	3.70	0.97			_		0. 23	2.48	5.68	21 95
1933	M9.86	2.37	7.06	0.38	3.98	0.13		Т	0. 27	2. 02		9.34	35 41
1934	1.72	4.70	3.42	2.90	0.80	0.36		т	0. 77	4. 46	7.95	4.19	31 27
1935	M7.40	M2.99	4.48	5.78	0.14				1. 32	M2. 18	M3. 04	4.91	32 24
1936	11.80	M9.31	2.21	2.17	1.85	M1.13	0.48	Т		0. 54	Т	3.56	33 05
1937	4.80	10.62	6.53	M3.44	M0.33	2.45			0. 44	3. 01	M10. 58	6.57	48 77

1938	6.76	11.19	M10.82	2.86	0.60				0. 45	M3. 25	M3. 35	M5. 77	45. 05
1939	5.76	2.91	M2.48		M1.15			Т	Т	M0. 09	M0. 40	M2. 19	14. 98
1940	M7.32	12.36	5.79	1.84	M2.36	0.43			M0. 57	M4. 25	2.78	12. 15	49. 85
1941	11.88	10.85	M7.29	M6.21	3.34	1.67		Т	M0. 11	M1. 70	4.83	M13. 24	61. 12
1942	M7.33	M8.79	1.78	6.79	4.57	0.17	0.04		0. 05	1. 74	7.90	M7. 31	46. 47
1943	8.56	3.05	4.89	2.44	1.67	1.07		0.05		M6. 80	2.69	2.59	33. 81
1944	5.41	3.91	2.03	2.29	1.42	1.28	0.10		0. 21	2. 81	10. 15	7.39	37. 00
1945	M2.15	M4.39	M7.41	M1.00	M2.48				M0. 18	M5. 43	M8. 09	M15. 15	46. 28
1946	M4.26	M5.18	M4.44	M0.26	M0.51	M0.15	M0.45		0. 47	1. 85	4.57	2.23	24. 37
1947	2.74	3.24	5.13	1.61	0.45	1.89	0.04	0.06	0. 14	6. 81	1.41	3.28	26. 80
1948	4.54	6.79	5.09	6.86	1.86	0.32	0.05	0.02	M1. 31	1. 49	2.74	6.58	37. 65
1949	1.82	7.02	M13.46	0.32	1.28	0.11	0.10	0.03	0. 07	0. 92	2.46	3.08	30. 67
1950	9.48	4.76	6.79	1.86	0.80	0.21	0.00	0.04	0. 09	7. 15	5.09	6.11	42. 38
1951	9.96	M6.44	3.20	1.49	1.85	0.02	0.03	0.03	0. 04	3. 44	6.60	13. 41	46. 51
1952	10.00	4.90	4.23	1.99	0.90	1.69	Т	0.01	0. 10	0. 14	4.20	14. 97	43. 13
1953	12.94	1.21	5.14	4.82	2.50	1.48	0.00	0.94	0. 02	2. 49	6.77	2.57	40. 88
1954	11.64	3.85	5.81	4.36	Т	2.21	0.02	2.45	0. 15	1. 56	7.69	9.28	49. 02
1955	M4.59	2.19	0.91	5.09	0.00	0.02	0.01	Т	0. 61	1. 49	7.75	13. 40	36. 06
1956	14.92	7.05	0.93	0.71	0.70	0.44	Т	Т	0. 02	3. 67	0.43	1.70	30. 57
1957	5.08	5.24	7.84	2.59	4.57	0.08	0.20	0.00	2. 05	7. 36	3.03	5.24	43. 28
1958	8.31	19.53	6.90	5.63	0.50	1.20	0.06	0.08	0. 18	0. 22	2.04	2.54	47. 19
1959	11.93	7.27	2.65	0.41	0.35	0.07	0.03	0.04	1. 89	0. 87	0.08	2.53	28. 12
1960	7.22	7.89	7.71	2.16	2.02	0.00	0.09	0.09	0. 06	2. 09	6.20	6.37	41. 90
1961	4.24	7.03	7.38	2.15	2.66	0.24	0.05	0.27	0. 51	M1. 79	M6. 48	4.61	37. 41
1962	3.44	7.18	5.53	1.44	0.39	0.03	0.09	1.98	1. 07	6. 43	3.16	4.35	35. 09
1963	2.79	3.86	7.02	9.43	0.98	0.14	0.01	0.07	0. 19	5. 30	10. 10	2.18	42. 07
1964	7.58	0.79	3.99	0.64	1.29	0.60	0.18	0.07	0. 06	2. 57	9.63	14. 58	41. 98
1965	5.27	1.87	2.06	4.96	0.13	0.14	0.11	0.24	0. 14	0. 73	10. 31	3.94	29. 90
1966	8.39	4.83	3.71	2.18	0.22	0.10	0.03	0.22	0. 44	0. 12	9.92	7.22	37. 38
1967	9.28	1.03	9.33	7.59	1.12	0.33	0.06	0.02	0. 45	3. 60	3.90	6.51	43. 22
1968	8.05	4.33	4.43	0.56	1.19	0.09	0.05	1.34	0. 43	1. 84	4.88	12. 81	40. 00
1969	13.50	10.67	2.33	3.23	0.29	0.44	0.02	0.03	0. 58	2. 77	2.76	14. 30	50. 92
1970	13.43	3.28	3.25	0.59	0.40	0.37	0.00	0.03	0. 07	3. 32	8.76	10. 81	44. 31
1971	8.56	1.54	8.35	2.33	0.83	0.48	0.03	0.76	0. 47	1. 16	3.89	5.79	34. 19

1972	4.78	5.79	3.83	2.17	0.71	0.50	0.04	0.22	2. 69	3. 18	8.02	6.28	38 21
1973	10.80	7.87	5.30	0.92	0.49	0.06	0.08	0.16	1. 46	5. 67	12. 98	7.39	53 18
1974	7.60	5.18	9.84	4.37	0.31	0.34	0.85	0.18	0. 13	2. 41	1.92	6.62	39 75
1975	4.32	10.22	11.38	2.47	0.34	0.17	0.53	0.49	0. 12	4. 72	2.59	3.96	41 31
1976	1.31	7.56	2.30	4.08	0.19	0.05	0.36	1.58	0. 10	0. 19	2.61	0.68	21 01
1977	1.94	2.43	2.45	0.57	1.93	0.06	0.03	0.58	3. 09	2. 38	3.83	8.37	27 66
1978	11.24	6.59	5.60	6.23	0.69	0.07	0.07	0.40	2. 48	0. 04	1.26	2.11	36 78
1979	7.73	10.84	4.91	2.37	1.91	0.03	0.35	0.01	0. 31	6. 00	9.72	4.78	48 96
1980	3.23	9.42	3.31	3.90	0.50	0.26	0.03	0.01	0. 12	2. 41	1.49	4.47	29 15
1981	8.89	4.73	3.98	0.58	1.87	0.14		0.06	1. 63	4. 55	8.25	8.10	42 78
1982	M5.70	4.31	7.16	4.75	0.01	M0.43	0.06	0.06	0. 29	4. 73	9.34	7.42	44 26
1983	7.36	11.67		4.84	M1.10	0.16	0.46	3.00	0. 37	0. 86	11. 44	M13. 53	54 79
1984	0.55	3.63	3.67		1.32	0.76	0.04	0.09	0. 51	3. 54	13. 64		27 75
1985	1.26	3.82	6.46	0.24	0.39	0.06	0.10	0.14	0. 91	2. 58	4.78	4.09	24 83
1986	6.81	11.83	7.91	0.98	0.68	0.28	M0.00	0.07	2. 40	M1. 70	1.39	5.34	39
1987	7.54	5.28	8.25	0.68	0.77	0.17	0.28	0.06	0. 00	0. 88	5.24	M11. 30	40 4
1988									M0. 09	1. 22	11. 46	M5. 41	18
1989	3.08	1.89	12.53	2.49	0.96	0.57	0.00	0.24	2. 40	6. 96	1.97	0.32	33
1990	7.85	3.72	3.31	1.32	9.46	0.21	0.06	0.16	M0. 22	1. 92	0.98	2.45	31 61
1991	1.49	3.65	10.06	1.57	1.43	0.50	0.12	0.28	0. 02	1. 95	2.21	4.71	27
1992	4.01	9.88	5.39	2.43	0.00	1.82	0.13	0.08	0. 09	3. 58	1.88	12. 42	41
1993	12.14	5.72	5.67	3.54	5.25	1.17	0.03	0.11	0. 03	0. 52	1.93	7.01	43 12
1994	6.59	7.71	1.55	3.47	1.74	0.18	0.04	0.02	0. 05	0. 41	6.20	5.65	33
1995	20.67	2.30	14.40	5.74	1.74	1.34	0.16	0.00	T	0. 11	1.07	14. 37	61 91
1996	9.29	9.46	4.42	4.79	2.31	0.03	0.09	0.03	0. 67	1. 86	3.61	18. 72	55 28
1997	10.77	3.05	3.04	3.43	1.93	1.27	M0.00	1.14	0. 86	3. 60	9.74	M6. 17	45
1998	21.50	16.83	11.09	3.68	4.25	0.27	0.09	0.01	0. 08	1. 51	8.17	4.68	72 10
1999	5.74	14.54	9.17	2.97	0.48	0.22	0.10	0.11	0. 11	1. 72	8.77	2.32	46
2000	9.65	11.10	2.81	2.98	M2.59	0.41	M0.08	0.03	0. 45	4. 78	2.16	2.51	39
2001	4.82	9.33	4.11	2.23	0.28	1.70	0.11	M0.24	0. 04	0. 75	10. 48	13. 32	47
2002	6.63	5.34	3.51	1.20	0.53	0.00	0.02	0.15	0. 05	0. 09	5.22	21. 60	44 34
2003	6.42	4.41	5.86	11.64	0.88	0.04	0.02	0.03	0. 54	0. 00	4.64	12. 06	46
2004	7.08	9.76	1.86	1.58	0.23	M0.05	0.08	0.19	M0. 18	5. 77	1.64	9.30	37
2005	5.57	5.00	6.79	3.73	M3.32	3.50	0.11	0.03	0.	1.	6.05	M16.	52 30

2006	9.36	5.16	12.64	M7.28	0.85	0.22	0.00	0.02	0. 04	0. 64	5.63	7.53	49. 37
2007	1.28	M7.86	1.23	3.17	0.80	0.33	M0.06	0.03	0. 28	4. 93	1.46	M8. 01	29. 44
2008	M7.74	M3.23	2.56	0.84	0.16	0.04	0.00	0.02	0. 13	M1. 41	M3. 68	M4. 65	24. 46
2009	1.38	M4.86	M3.18	M0.72	3.37	0.03	0.03	0.03	0. 37	M3. 62	M2. 88	5.73	26. 20
2010	M9.65	M4.94	6.19	M6.68	1.99	1.95	0.01	0.02	M0. 10	7. 66	4.29	M11. 52	55. 00
2011	1.88	4.40	13.55	2.05	2.08	M1.24	M0.35	0.02	M0. 30	M6. 12	4.47	1.53	37. 99
2012	M5.42	2.95	11.71	2.94	0.51	M0.55	M0.16	M0.12	M0. 15	M2. 48	M7. 47	12. 02	46. 48
2013	1.33	0.98	3.19	M1.58	M1.18	M1.35	0.05	0.25	M0. 95	M0. 00	1.45	M0. 27	12. 58
2014	M2.21	M7.69	8.46	M1.71	0.24	0.18	M0.01	M0.00	1. 44	M3. 93	6.48	14. 84	47. 19
2015	1.29	M6.03	M1.86	3.51	M0.16	0.04	M0.47	M0.27	0. 64	M0. 51	3.94	M14. 98	33. 70
2016	13.59	M2.46	12.81	M2.50	1.22	M0.71	0.06	M0.17	M0. 01	9. 31	7.51	7.07	57. 42
2017	13.68	13.29	5.95	5.28	0.59	M0.45	M0.02	M0.00	0. 30	M1. 16	M7. 69	M1. 06	49. 47
2018	M9.18	M0.96	7.92	7.06	M0.62	M0.32	M0.03	M0.07	M0. 16	M1. 08			27. 40

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: 2016-07-22